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FINAL SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT SITE 19 FORMER DERECKTOR SHIPYARD WITH TRANSMITTAL NS NEWPORT RI
12/6/2012
TETRA TECH

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C-NAVY-12-12-5169W

December 6, 2012

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Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Order WE61

SUBJECT: Final Supplemental Sediment Investigation Report
Installation Restoration Site 19, Former Derecktor Shipyard
Naval Station (NAVSTA) Newport, Rhode Island

Dear Ms. Keckler and Ms. Crump:

Tetra Tech is pleased to present the subject document, on behalf of Mr. Dominic O'Connor, U.S. Navy Naval Facilities Engineering Command Mid-Atlantic (NAVFAC). This investigation was initiated in order to support remedial decision-making in portions of the study area that are affected by site related contaminants and to utilize this data to support remedy selection and design. As such, potential remedial actions are continuing to be evaluated with your input. In accordance with our agreements at the meeting held August 16, 2012, we are providing a final document with your comments included as Appendix D.

Please contact me at 978-474-8434 or stephen.parker@tetratech.com should you have any questions.

Very truly yours,

/for

Stephen S. Parker, LSP
Project Manager

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Supplemental Sediment Investigation Report

for

Installation Restoration Site 19 – Former Derecktor Shipyard

Naval Station (NAVSTA) Newport, Rhode Island

Naval Facilities Engineering Command Mid-Atlantic

Contract Number N62470-08-D-1001
Contract Task Order WE61

December 2012

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SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

FOR

INSTALLATION RESTORATION SITE 19
FORMER DERECKTOR SHIPYARD

NAVAL STATION (NAVSTA) NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

SUBMITTED TO:
NAVAL FACILITIES ENGINEERING COMMAND MID-ATLANTIC
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DECEMBER 2012

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ACRONYMS

ACM	Asbestos-containing material
ADCP	Acoustic Doppler Current Profiler
BPRG	Baseline Project Remediation Goal
CLEAN	Comprehensive Long-Term Environmental Action Navy
cm/sec	Centimeters Per Second
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
DQO	Data Quality Objectives
ERA	Ecological Risk Assessment
FFA	Federal Facilities Agreement
FMR	Field Modification Record
FS	Feasibility Study
GC/MS	Gas Chromatograph/Mass Spectrometry
HHRA	Human Health Risk Assessment
HMW	High Molecular Weight
HQ	Hazard quotient
ICP/MS	Inductively Coupled Plasma/Mass Spectrometry
IRP	Installation Restoration Program
MLLW	Mean Lower Low Water
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAVSTA	Naval Station Newport
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effects Concentration
NOS	National Ocean Survey
NPL	National Priorities List
PA	Preliminary Assessment
PAH(s)	Polyaromatic Hydrocarbon(s)
PCB(s)	Polychlorinated Biphenyl
PRG(s)	Preliminary Remediation Goal(s)
PWD	Public Works Department
QA/QC	Quality Assurance/Quality Control
RIDEM	Rhode Island Department of Environmental Management
RIPAEDC	Rhode Island Port Authority Economic Development Corporation
RPRG	Recommended Project Remediation Goal
SA	Study Area
SAIC	Science Applications International Corporation
SAP	Sampling and Analysis Plan
SASE	Study Areas Screening Evaluation
SDG	Sample Data Group
SEDZLJ	Sediment Transport Model developed by Ziegler, Lick and Jones
SER	Shore Establishment Realignment
SIM	Select Ion Monitoring
TAL	Target Analyte List
TBT	Tributyltin
Tetra Tech	Tetra Tech, Inc.

TOC	Total Organic Carbon
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
URI	University of Rhode Island

EXECUTIVE SUMMARY

This Supplemental Sediment Investigation Report describes the investigations conducted and data collected to assess contamination in the marine sediment proximal to Site 19 at Naval Station (NAVSTA) Newport, Rhode Island. Site 19 is identified in a Federal Facilities Agreement (FFA) between the Navy, the United States Environmental Protection Agency (EPA), and the State of Rhode Island under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA) as the Former Robert E. Derecktor Shipyard (the Site).

This investigation was conducted to provide current representative data for use in aiding in the development of a revised Feasibility Study (FS) for impacted marine sediment proximate to the Site.

This supplemental investigation was performed under the U.S. Department of Defense (DoD) Installation Restoration Program (IRP) with the resulting Supplemental Sediment Investigation Report prepared by Tetra Tech, Inc. (Tetra Tech), under the direction of the Naval Facilities Engineering Command (NAVFAC) Mid Atlantic (MIDLANT), and the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001, Contract Task Order (CTO) WE61.

E.1 SITE CONDITIONS AND BACKGROUND

The Site was used by the Robert E. Derecktor Shipyards of Rhode Island, Inc., (Derecktor) from 1979 until 1992, to construct, repair, and maintain private and military ships. Construction included cutting and welding steel, sandblasting, priming and painting, and assembling vessels. Repair and maintenance operations consisted of sandblasting and painting, hull inspections, and other on-board ship repairs. Supporting the ship maintenance and construction operations were an engineering department, an electrical and pipe shop, and a vehicle maintenance shop. The operations were conducted in several buildings on-shore, as well as on two floating dry docks moored at Pier 1, and a large ferry (the Greenport Ferry) moored on the south side of the T-Wharf (Figure E-1). Shipyard operations reportedly generated large quantities of hazardous wastes, including waste oil, paints, solvents, thinners, concentrated bases, and other waste solids and liquids. Housekeeping and hazardous material handling practices at the facility were reportedly poor and waste materials including spent sandblast grit and oily liquids from the dry dock were known to be disposed of on the property.

Sampling and analysis of sediments conducted between 1997 and 1999 identified elevated levels of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and select metals in marine surface sediments located near the shoreline and Piers 1 and 2. Lower levels of contaminants were found in the outer portions of Coddington Cove. Risk assessments were conducted and Preliminary

Remediation Goals (PRGs) were established from those risk assessments. Additional sampling and analysis conducted in 2004 reported similar contaminants in the same general locations, but at substantially lower levels than previously identified, particularly in the vicinity of Pier 1 and near the former Building 234. An FS for the site was drafted, but it was determined that the available data sets were insufficient to support adequate costing and selection of potential remedial alternatives designed to mitigate affected marine sediments.

These earlier investigations concluded that contaminants in the marine sediment, particularly near Pier 1 and the bulkhead shoreline, are likely to be a result of discharges from ships and from shipyard operations on shore, and from vessels and floating dry docks at the site. Subsurface soil and groundwater contamination at the site is limited, and the primary sediment contaminants are not present in groundwater; therefore, it is believed that the primary routes of contaminant transport from the shipyard operations into the marine sediment media are via overland runoff of spilled, contaminated materials discharging directly into Coddington Cove through the storm drainage system, and the direct release of contaminated materials into the cove from the shoreline, Pier 1, and other work areas.

E.2 FIELD INVESTIGATIONS

The Supplemental Sediment Investigation was conducted between August and October 2011 and included sediment sampling and analysis, the investigation of physical characteristics of the study area, and wave and current analysis. Specifically, the following tasks were conducted:

Sediment Chemical Investigation – collection of 349 sediment samples (0 to 12 inches, 12 to 24 inches, and 24 to 48 inches below sediment surface) from 119 locations, and the laboratory analysis of these samples for the following target analytes or for a subset of the following analytes: high molecular weight (HMW) PAHs, benzo(a)pyrene, PCBs, lead, tributyltin (TBT), asbestos, copper, zinc, and total organic carbon (TOC).

Sediment Physical Characteristics Investigation – collection of 10 sediment samples from 10 locations, and analysis/testing of these samples for grain size, radioisotope (Pb-210) dating, and sediment cohesion (stability).

Wave and Current Measurements – deployment of 10 Acoustic Doppler Current Profilers (ADCPs) which collected data on wave heights, currents, tides, and temperature, over a 15-day period.

Bathymetric Survey – a multibeam hydrographic survey was conducted throughout the study area to obtain data on ocean bottom characteristics within the study area.

E.3 TARGET ANALYTES EXCEEDING PRGs

The measured concentrations of target analytes detected in sediment samples were compared to screening criteria established in previous documents, including PRGs and other values selected by the project team. Although there are screening criteria for all target analytes (listed in Section E.2), only four (PAHs, benzo(a)pyrene, PCBs, and lead) have recommended PRGs (RPRGs) that will eventually be used to direct the development of remedial alternatives in the revised FS. Others were collected for informational purposes and to provide a better understanding of the overall ecological conditions within the study area.

Overall, the data collected under this investigation showed exceedances of screening criteria in areas where previous samples indicated elevated levels of these same contaminants. Additionally, screening criteria were exceeded in some newly investigated areas that were suspected to have elevated levels of contaminants. Figure ES-2 presents locations within the study area where PAHs, benzo(a)pyrene, PCBs, or lead were found exceeding RPRGs.

Analytical results for sediment samples collected from the 0 to 12-inch depth interval indicate that there are four general locations within the study area where levels of PAHs, benzo(a)pyrene, PCBs, and lead exceed RPRGs in shallow sediments. These four general locations are: (1) in the vicinity of the east end of Pier 2; (2) at the east end of Pier 1; (3) beneath the former location of the ex-USS-Forrestal (south of Pier 1); and (4) south of the T-Wharf. Other locations with minor exceedances or with exceedances that occur only in the 0 to 12-inch interval include the west end of Pier 2, and sediment along the shoreline in the Stillwater Area.

Analytical results for sediment samples collected from the 12 to 24-inch depth interval indicate that there are three general locations within the study area where levels of PAHs, benzo(a)pyrene, PCBs, and lead exceed RPRGs in this depth interval. These areas are: the east end of Pier 2; the east end of Pier 1; and south of the T-Wharf.

Analytical results for samples collected from the 24 to 48-inch interval indicate that there are three locations within the study area where levels of PAHs, benzo(a)pyrene, PCBs, and lead exceed RPRGs in this depth interval. These areas are: the east end of Pier 2; the west/central end of Pier 1; and the east end of Pier 1.

E.4 PHYSICAL CHARACTERISTICS

The physical characteristics of the study area were evaluated by measuring current and wave energies, and by conducting grain size analysis, radioisotope analysis, and cohesion/sediment stability testing. The ultimate goals for collecting this data were to determine: (1) if deposition of sediment is occurring within the study area; and (2) if flow velocities (steady state, storm surge, or boat traffic) have the potential to disturb and re-suspend sediment within the water column, for transport beyond the study area.

The results from the radioisotope analysis and interpretation show that Coddington Cove is an area of sediment accumulation. Bioturbation and re-suspension do not appear to be influencing sediment accumulation. Sediment appears to be accumulating at a range of 0.08 to 2.23 cm/year at different locations within the Study Area.

Cohesion testing concluded that all cores collected in the study area are vertically stratified, indicating that bedding layers are present. Also, all cores exhibited cohesive erosional behavior, and the critical shear stress for erosion generally increased with depth, while erosion rates at a given shear stress decreased with depth. The maximum near-bottom velocity reported was 28 centimeters per second (cm/sec), which would not be sufficient to erode the surface (most erodible) sediment layer. These data indicate that in order to re-suspend or erode the bottom sediment in the study area, current velocities much higher than were observed are required, indicating that the sediment is not being eroded under the steady state conditions.

E.5 CONCLUSIONS

Based on the data provided in this Supplemental Sediment Investigation Report, the following conclusions are made:

1. The Coddington Cove area near Piers 1 and 2, where the former shipyard operated, is a depositional environment, and not a scouring environment under steady state conditions. Suspended sediments will settle out of the water column in areas near obstructions, such as those formed by the piers and by the long-term dockage of ships. A flow velocity of 28.7 cm/sec is estimated to be required to re-suspend surface sediment, based on cohesion testing that was conducted in the study area. Near-bottom maximum flow velocity measured within the study area ranged from 9.2 cm/sec (nearshore) to 28.0 cm/sec (outer cove).

2. The most frequent exceedances of RPRGs were found in the areas proximal to and beneath the east ends of Piers 1 and 2, and near the bulkhead and shoreline. Over time, the deposition of sediments

has covered sediments with RPRG exceedances that are now in the 24 to 48-inch depth interval, located south of the center of Pier 1, where one of the former dry docks was positioned during the operation of the former shipyard. The distribution of RPRG exceedances in sediments correlates well with the conceptual site model (CSM) previously published for Site 19. .

3. Measurements related to the evaluation of natural recovery processes at the site include the following:

    a. near-bottom flow measurements indicate a depositional environment, especially in near-shore areas and areas with impacted sediment;
    b. bathymetry shows that obstructions are further encouraging deposition of sediment;
    c. COCs are present in deeper sediment; and
    d. radioisotope analysis indicates sediment bedding and deposition over time.

1.0 INTRODUCTION

This report presents results of the Supplemental Sediment Investigation for marine sediments proximal to the Former Robert E. Derecktor Shipyard - Site 19 (the Site) at the Naval Station (NAVSTA) Newport, Rhode Island. This investigation and report were completed by Tetra Tech, Inc. (Tetra Tech) for the U.S. Naval Facilities Engineering Command Mid-Atlantic (NAVFAC MIDLANT) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001, contract task order (CTO) WE61. This Supplemental Sediment Investigation Report describes the methodologies utilized as part of the supplemental investigation that was designed to fill data gaps identified during the production of the Draft Final Feasibility Study (FS) for the Site (Tetra Tech, 2008).

Field investigation activities for the Supplemental Sediment Investigation at the site were conducted over the period from August to October 2011 to better define the horizontal and vertical extent of contamination in the marine sediments, as well as physical characteristics that might be critical to the evaluation of remedial alternatives for affected sediments at the site. Marine sediment samples at the Site were collected to confirm the presence, concentration and distribution of contaminants previously identified in this area, and to confirm if contamination exists in marine sediments in parts of the study area that have not been previously evaluated.

Supplemental sampling efforts at the Site were undertaken to fill gaps identified in the data set(s) from previous sediment samples collected from Coddington Cove, which were reported in the Marine Ecological Risk Assessment (ERA) (Science Applications International Corporation (SAIC)/University of Rhode Island (URI), 1997) and the Marine Sediment Sampling and Analysis Report (Tetra Tech, 2005), to reflect current conditions in the study area for use in evaluating remedial alternatives in the revised FS.

The major tasks implemented as part of this supplemental investigation include:

- Marine sediment sampling for chemical analysis
- Marine sediment sampling for physical characteristics (deposition, grain size and stability)
- Multi-beam sonar survey
- Current direction, wave height and tidal data investigation

This Supplemental Sediment Investigation report is organized into five sections as follows:

Section 1, Introduction - Provides an introduction to the objectives of the supplemental sediment investigation at the Site, presents a brief discussion on the study area location and description, and also

includes a summary of the site's operational history, previous environmental investigations/actions at the Site, development of cleanup goals and a narrative on the basis for this data gap investigation.

Section 2, Study Area Field Investigations - Presents an overview of field activities associated with this project including a discussion on the sampling rationale, approach, and methodologies.

Section 3, Study Area Physical Characteristics - This section provides a summary of the historical dredging and surveys at the Site, a brief overview of bathymetric surveys and sediment analysis results, hydrographic information collected as part of historical investigations, and a brief discussion on sediment stability and cohesion.

Section 4, Extent of Target Analytes Exceeding Preliminary Remediation Goals (PRGs) - Section 4 presents a summary of analytical results generated from this supplemental investigation and the distribution of contaminants based on laboratory data. A discussion on data validation efforts and associated data usability assessment is also provided in this section.

Section 5, Summary and Conclusions - This section presents a summary of activities completed as part of the supplemental marine sediment sampling investigation at the Site, a discussion on the distribution of elevated levels of contaminants of concern (COC) in marine sediments at the Site, and a discussion on the physical characteristics of the Site.

This supplemental sediment investigation report is supported by a series of tables, figures, and appendices including field data collection documentation in Appendix A, laboratory data, validation memoranda and usability reports in Appendix B, and data from physical evaluations and analyses in Appendix C.

1.1 STUDY AREA LOCATION AND DESCRIPTION

NAVSTA Newport is located approximately 60 miles southwest of Boston, Massachusetts, and 25 miles south of Providence, Rhode Island. It occupies approximately 1,063 acres, with portions of the facility located in the City of Newport and Towns of Jamestown, Middletown, and Portsmouth, Rhode Island. The facility layout is long and narrow, following the western shoreline of Aquidneck Island for nearly 6 miles, facing the east passage of Narragansett Bay. A site locus map is provided as Figure 1-1.

The Former Robert E. Derecktor Shipyard Site is located on the shoreline of Coddington Cove at the central portion of NAVSTA Newport. The site is comprised of approximately 41 acres of shoreline land

and improvements. The study area for this investigation is comprised of the marine sediments in the adjacent deep water industrial port in Coddington Cove, proximal to the site as illustrated in Figure 1-2.

1.2 SITE HISTORY

The NAVSTA facility has been in use by the Navy since the Civil War era. During World Wars I and II, military activities at the facility increased significantly and the base provided housing for many servicemen. In subsequent peacetime years, use of on-site facilities was slowly phased out until Newport became the headquarters of the Commander Cruiser-Destroyer Force Atlantic in 1962. In April 1973, the Shore Establishment Realignment (SER) Program resulted in the reorganization of naval forces, and activity again declined. This reorganization resulted in the Navy excessing 1,629 of its former 2,420 acres. Portions of the facility are currently leased by the Navy to the Rhode Island Port Authority Economic Development Corporation (RIPAEDC). Some of these areas are, in turn, subleased to private enterprises.

NAVSTA Newport was listed on the U.S. Environmental Protection Agency (USEPA) National Priorities List (NPL) of abandoned or uncontrolled hazardous waste sites in November 1989. The NPL identifies those sites that pose a significant threat to public health and the environment.

A Federal Facilities Agreement (FFA) for NAVSTA Newport was signed by the Navy, the State of Rhode Island, and the EPA on March 23, 1992. The FFA outlines response action requirements under the Installation Restoration Program (IRP) at NAVSTA Newport. The IRP is similar to the USEPA's Superfund Program authorized under the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) in 1980, as amended by the Superfund Amendment Reauthorization Act (SARA0 in 1986. The FFA was developed, in part, to ensure that environmental impacts associated with past and present activities at NAVSTA Newport are thoroughly investigated and remediated, as necessary. While the Derecktor Shipyard site was not originally on the list of IRP sites in the FFA, it was added in 1994 as a “Study Area”.

The shoreline of Coddington Cove was acquired in 1940 for use as a naval supply station. Prior to this time, the Coddington Cove area consisted of agricultural land with few buildings. During World War II, the Coddington Cove area experienced major development, including construction of barracks, warehouse space, and hundreds of Quonset huts. Although naval activity diminished following the end of World War II, some construction at Coddington Cove continued in support of naval missions.

An aerial photo from 1951, provided as figure 1-3 shows the location of the Coddington Cove shoreline to be approximately 25 to 50 feet east of the current location at Piers 1 and 2, a clear indication that fill was

placed during construction of the bulkhead that forms the base of the two piers. The photograph also shows Building A18 (on the T-Wharf). The shoreline where Building 234 was later constructed is also shown (before fill was placed), and is approximately 50 to 125 feet east of its' current location. The breakwater north of the T-Wharf is not present in this photo. Based on available records, Pier 1 was completed in 1955 and the adjacent Pier 2 was added in 1957.

All original buildings at the site were constructed by the Navy. Building 42 was constructed in 1952 and was used as a cold storage warehouse. Building 234 was constructed by the Navy in 1956, and was known as the transit shed. Supplies and materials were stockpiled and assembled in this building prior to being loaded on ships. Building 234 was also used by the Newport Shipyard, Inc., prior to the Derecktor lease.

In 1962, Newport became headquarters to the Commander Cruiser-Destroyer Force Atlantic. Dozens of naval warships and auxiliary support ships were home-ported at Newport. A 1965 aerial photograph of the Coddington Cove area depicts Buildings 42, A18 and 234 in their original locations. These and other buildings are present along the waterfront in the photograph, and 39 naval ships appear to be moored at Piers 1 and 2.

The Navy's use of the Coddington Cove area continued until April 17, 1973, when the Navy's SER Program was announced, resulting in a reorganization of naval forces at Newport and the transfer of ships and activities to other naval stations. The SER also directed the transfer or excessing of non-essential land and facilities. The 41-acre site, including a large portion of the Coddington Cove waterfront and Pier 1, was leased to the RIPAEDC, by the Navy. RIPAEDC, in turn, subleased this parcel to the Robert E. Derecktor Shipyards of Rhode Island, Inc. (Derecktor), which operated on this 41-acre parcel from 1979 until January 1992, when the corporation filed for Chapter 11 bankruptcy protection.

During the lease period, Derecktor dismantled Buildings 40 and 41 (not shown on figures), removed them from their original location south of Building 42, and re-assembled them in four separate sections near Pier 1. These were later referred to as Huts 1 through 4. Derecktor also constructed a large addition to Building 234, the inside of which was used as a setup area for the construction of ships. During bankruptcy auctions, this building was dismantled and sold as scrap material, leaving in place only the slab foundation and some remains of the original Building 234 structure.

The site was used by Derecktor to repair, maintain, and construct private and military ships. Repair and maintenance operations were concentrated around Pier 1. These operations largely consisted of sandblasting and painting, hull inspections, and other on-board ship repairs. Two floating dry docks were moored at Pier 1, and a large ferry, known as the Greenport Ferry, was moored between Building A18

(the T-Wharf) and Building 234, for use as workspace. Figure 1-2 presents the locations of former buildings and other historical site features.

Derecktor also constructed new ships under contract to the U.S. Coast Guard and the U.S. Army. These ships had steel structures, and were used as cutters and tugboats. The construction activities included cutting and welding steel, sandblasting, priming and painting the structure, and assembling the ship. Ship assembly was primarily conducted in Building 234. The engineering department (Buildings 6 and A18), an electrical and pipe shop (Building 6), a vehicle maintenance shop (Huts 1 and 2), as well as small storage buildings (Huts 3 and 4 [not shown in Figure 1-2]) supported the ship maintenance and construction operations.

A Preliminary Assessment (PA) of the site was completed by the Navy in 1993, initiated based on concerns regarding general housekeeping practices, including the heavy use and poor storage of sandblast grit on the site. The 41-acre parcel was included in the IRP at that time, and between 1993 and 2008, all buildings at the waterfront were either removed or demolished. Piers 1 and 2, and the T-Wharf remain. Additional details on past practices at Derecktor are presented in the Site Assessment Screening Evaluation (SASE) Report (B&R Environmental, 1997), and the SASE Report Addendum (Draft) (Tetra Tech, 2012).

1.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND ACTIONS

As noted above, the Navy performed a PA of the site based on the possible release of hazardous materials, and because the Derecktor Corporation had filed for bankruptcy. The Final PA (May, 1993) provided the following conclusions:

- Shipyard operations generated large quantities of hazardous wastes, including waste oil, paints, solvents, thinners, concentrated bases, and other waste solids and liquids.
- Housekeeping practices were poor, including the handling practices of hazardous materials at the facility.
- Waste materials, including spent sandblast grit and oily liquids from the dry docks, were known to be disposed of on the property.
- Sand blast grit and metals-contaminated marine sediments are present in the area of Pier 1.
- Releases of hazardous materials are suspected in the waterfront areas and in the area of Building 6.
- The interior of Buildings 42, 234, 6 and 40 required cleaning, prior to re-use/demolition.
- Numerous unlabeled 55-gallon drums were present, containing unknown liquids.
- Asbestos-containing materials (ACM) were suspected in some buildings.

- Releases to the ground surface at the site would most likely result in discharge to the marine environment through groundwater flow or via storm drain systems.

Based on these findings, the Navy added Derecktor to the FFA list in 1994, as Study Area (SA)-19. A SASE (B&R Environmental, 1997) was performed to characterize contaminants in the on-shore portions of the site. A Marine ERA was performed (SAIC and URI, 1997) to characterize risks posed by contaminants in the marine sediment to ecological receptors near the study area. Using data collected as part of the ERA, a Human Health Risk Assessment (HHRA) was conducted (B&R Environmental, 1998), to identify the increased risks to humans from the contaminants in the marine environment (Section 1.4 includes additional information).

The SASE concluded that the surface and subsurface drainage systems at the site likely directed contaminants released at the site to the cove and marine sediment. A follow-up onshore investigation was conducted in 2011, and data is provided in the SASE Addendum (Tetra Tech, 2012).

Finally, a FS was drafted to evaluate remedial alternatives for the marine portions of the site (B&R Environmental, 1999). The PRGs for the marine sediment were developed and finalized in a separate document (SAIC, 1998) as a part of the effort to develop the draft FS.

The Draft FS was also supported with information obtained as part of the Marine Sediment Sampling Program, conducted in 2004. This program included the collection of 27 marine sediment samples (24 surface sediment and three subsurface sediment samples), as well as continuous, automated turbidity monitoring at two pier locations. The sediment samples were analyzed for Target Analyte List (TAL) metals, polychlorinated biphenyl (PCB) congeners, total organic carbon (TOC), polyaromatic hydrocarbons (PAHs), and simultaneously extracted metals/ acid volatile sulfide (SEM/AVS) metals. The results from the 2004 Marine Sediment Sampling Program indicated that sediments exceeding the PRGs were located primarily along the shoreline and/or near the piers. Analytical results from sediment samples collected further from shore did not exceed Recommended PRGs (RPRGs).

Between the publication of the PA report and the FS, other construction and site restoration activities occurred onshore:

- Building 234 was removed between 1993 and 1997.
- The dry docks were removed from Pier 1.
- The Greenport Ferry was removed in 1993.
- Building A-18, on the T-Wharf south of Pier 1, was demolished in 1997.

- NAVSTA Public Works Department (PWD) performed a removal at the site in 1994 that consisted of removing remaining debris, surface cleaning of grossly contaminated concrete, and closing and removing storage tanks.
- In 1996, NAVSTA PWD contracted a removal of sand blast grit that was present on the ground in the area north and east of Building 42. OHM Corporation removed approximately 16,600 cubic yards of this material and covered the ground with a crushed stone/gravel mix.
- In 1997, the soil berm located to the south of the site was removed and sorted. This material was found to contain excavated soil and debris from construction and expansion of Building 234.
- In 1999, a removal action was conducted to address soils containing paint constituents, located under Building 42, and a removal action was conducted to address PCB-containing soils, located northeast of Building 6.

The inactive ships, USS Saratoga and USS Forrestal, were moved to Pier 1 between 1999 and 2000. The Forrestal was removed from the south side of Pier 1 in 2010. The Saratoga is expected to be removed from the north side of Pier 1 in 2012. An Iowa-class battleship was also moored adjacent to the south side of the Ex-Forrestal for a short period of time, beginning in 1999. This ship was removed prior to 2003.

1.4 DEVELOPMENT OF CLEANUP GOALS (PRGs)

Based on the human health and ecological risk assessments conducted, contaminants of potential concern (COPCs) were identified for marine sediment. Baseline PRGs (BPRGs) were developed for these COPCs, using a hazard quotient (HQ) of 1.0, and with consideration of reference concentrations measured at background sample locations. From the list of COPCs, the applicable "limiting" COCs (limiting COCs) were identified (those that are the primary drivers of the unacceptable risks posed to receptors). The limiting COCs are High Molecular Weight PAHs (HMW PAHs), benzo(a)pyrene, PCBs, and lead. For these limiting COCs, RPRGs were calculated (SAIC, 1998). The development of RPRGs addressed both anthropogenic contaminants and some uncertainties of the exposure assumptions (i.e. feeding areas for avian predators).

Table 1-1 presents the COCs and RPRGs developed from the HHRA and the ERA Reports. The RPRGs were finalized as cleanup criteria for marine sediment at Site 19. The limiting COCs, their RPRGs, and their associated risk endpoints are summarized below (see "SAIC, 1998" for details).

COC	RPRG (all for dry weight)	Risk Endpoint
lead	168 milligrams per kilogram (mg/kg)	toxicity to aquatic organisms from exposure to suspended sediment
benzo(a)pyrene	539 micrograms per kilogram (µg/kg)	adverse human health effects from ingestion of shellfish
Total HMW PAHs	13,903 µg/kg	toxicity to aquatic organisms from exposure to bedded sediment
Total PCBs	1,060 µg/kg	toxicity to aquatic organisms from exposure to suspended sediment

Following development of the PRGs, a FS was conducted and an FS report was drafted; however, during the review of the FS report, it became evident that the quantity of data available for marine sediments was not adequate to support the selection of a remedy for this medium. This Supplemental Sediment Investigation has been developed and implemented to provide current, adequate data for this purpose, and the FS will be revised using information presented in this Supplemental Sediment Investigation Report.

1.5 BASIS FOR THE DATA GAPS INVESTIGATION

Based on the combined findings of the investigations that had been conducted through 2004, it was concluded that contaminants from the onshore and offshore shipyard operations areas were discharged to the waterfront areas of Coddington Cove and the area of Pier 1. The conceptual site model indicates that the primary routes of contaminant transport from the areas of the shipyard operations into the marine sediment were likely: (1) the overland runoff of spilled materials, discharging to Coddington Cove through the storm drainage system, and (2) the direct release of contaminated materials into the cove, from the shoreline, the floating dry docks, and from other activities. The locations of the highest levels of COCs measured during the risk assessments (1992-1994) are centered on the waterfront and pier areas of the cove. Additional sampling conducted in 2004 identified a similar pattern of contaminants in the same areas. The levels of contaminants measured in 2004, however, were consistently lower at all locations that were sampled during both time frames, indicating a decreased risk, speculated to be a result of deposition of clean sediment.

Review of the Draft Final FS (Tetra Tech, 2008) revealed that the limited chemical data available from the risk assessment studies did not support the selection of a remedy for the marine sediment: the data did not provide adequate spatial resolution for the COCs that were present at levels greater than PRGs. In addition, several uncertainties were raised during the review of the Draft Final FS: regulatory parties and trustees stated concerns that dockage of inactive Navy ships between 1999 and 2012 may have contributed other chemicals to the sediment, and that the flow dynamics within the cove may have been altered by the presence of the large ship hulls. Some parties also stated concerns that ship traffic and inactive ship dockage also may have changed the conditions of exposed sediment from those that were

present at the time of data collection for the risk assessment. Also, asbestos from steam lines present under Pier 1 was identified as a new potential concern by the USEPA. Overall, the available data did not address all these uncertainties. For this reason, the Supplemental Sediment Investigation was conducted and the results of the investigation are presented in this report.

A Sampling and Analysis Plan (SAP) for the Supplemental Sediment Investigation was developed to direct this effort. The development of the SAP accounted for input from the project team, that included the Navy, regulatory agencies (USEPA and Rhode Island Department of Environmental Management [RIDEM]), and other interested parties (National Oceanic and Atmospheric Administration [NOAA] and United States Fish and Wildlife Service [USFWS]). The initial planning meeting for the investigation was held in the fall of 2010, when team members provided input and expressed concerns; the final product of that meeting was a generalized sampling strategy. Following the preparation and review of multiple rough drafts of proposed sampling schemes, and additional project team conference calls to discuss other concerns/ideas, the Navy produced a Draft SAP. The Draft SAP was reviewed and accepted by the regulatory agencies, and the Final SAP was published in August 2011 (Tetra Tech, 2011).

2.0 STUDY AREA FIELD INVESTIGATIONS

The field investigation activities implemented for the Supplemental Sediment Investigation for Site 19 were conducted between August and October 2011. These activities were conducted in accordance with the SAP, prepared by Tetra Tech between November 2010 and July 2011, with input from the USEPA, NOAA, USFWS, and RIDEM.

Worksheet 17 of the SAP documents the rationale for the collection of data conducted under this investigation. As described in the SAP, the resulting data will be used to quantify the area and volume of sediments in the study area that exceed the risk-based RPRGs, previously published in the Draft Final FS (Tetra Tech, 2008).

The sediment investigation activities conducted for the collection of chemical and physical data are provided below, in Sections 2.1 and 2.2, respectively. The hydrographic investigation activities are summarized in Section 2.3. In each section, an overview of the investigation activities for each major field task is presented, including a summary of sample locations, analyses, and a discussion of field measurements and observations, if applicable. Samples were collected and analyzed according to the quality assurance/quality control (QA/QC) criteria defined in the SAP.

Table 2-1 presents a summary of necessary field modifications that were made in accordance with provisions within the SAP, as well as the rationale/justification for the modifications. Completed field modification records (FMRs) are provided in Appendix A1.

2.1 FIELD ACTIVITIES – COLLECTION OF SAMPLES AT GRID LOCATIONS

The primary focus of the Supplemental Sediment Investigation was to resolve data gaps identified during the development of the Draft Final FS for the Former Robert E. Derecktor Shipyard. It was determined that additional data was required, in particular, marine sediment data for further definition of the horizontal and vertical extent of COCs exceeding RPRGs (Table 1-1).

During development of the SAP, additional target analytes were included for analysis in samples from selected locations. Samples collected for chemical analysis included both surface and subsurface sediment, and the sampling plan utilized sediment cores that were collected in a modified grid pattern.

Descriptions of the cored sediments and associated field observations made during sample collection are included in Sections 2.1.2 and 3.0 of this report. Analytical data for sediment samples are discussed in Section 4.0.

2.1.1 Analysis and Location Selection

To further evaluate areas where sediments contain COCs and other target analytes at elevated levels (exceeding RPRGs), 119 sediment cores were advanced in areas surrounding and beneath Piers 1 and 2, north and south of the T-wharf, and around former sample locations DSY-18, DSY-22 and DSY-30 as illustrated in Figure 2-1. Both surface and subsurface sediments were sampled at each location, as noted above. Analysis of all samples was conducted for PAHs (including benzo(a)pyrene), PCBs and lead, to determine presence of these constituents above RPRGs as identified in this report.

At the request of the regulatory agencies, four additional "secondary" compounds were added with associated screening criteria, to be evaluated within the study area. The analyses of tributyltin, copper, and zinc were added to investigate concerns that these compounds may be present at elevated levels as a result of the dockage of inactive Navy ships at Pier 1 between 1999 and 2011.

The analysis of asbestos was added for those sediment samples collected beneath Pier 1, to investigate concerns that deteriorating steam lines beneath the pier may have caused asbestos contamination in sediments at that location.

TOC analysis was performed on all surface sediment samples (the 0- to 12-inch depth interval). Although there is no comparison criterion associated with this analysis, TOC results were used to determine bioavailability of some constituents. Grain size analysis and radioisotope analysis was conducted at 10 cores selected as described in the SAP. These analytes are described in Section 2.2.1 of this report.

Sediment coring locations were established using a modified grid pattern using the following rationale: a 100-foot sampling grid was used in areas of previously collected sediment samples, where analytical results indicated the presence of contaminants at elevated levels; a 200-foot grid pattern was used in areas that had not been previously investigated, but where contaminants were suspected to be present at elevated levels. The sediment coring locations are shown on Figure 2-1. Table 2-2 presents a summary of the sample location rationale for each sediment core location, as determined in the SAP. A summary of sediment samples collected and submitted for laboratory analysis is presented in Table 2-3.

2.1.2 Sample Collection Methods - Sediments for Chemical Analysis

Sediment cores for chemical analysis were collected using one of two methods: one method (vibracore) was used in unobstructed, open-water areas, and the other method (drive-cores) was used in the obstructed areas beneath Piers 1 and 2. Although two different sediment collection techniques were used, there were some similarities between the two since both sampling methodologies employed a catch-basket at the bottom of the core-tube to ensure that sediments are not lost during recovery of the core-

barrel. Additionally, a plunger was placed inside of each core tube to create a suction force as a secondary measure, to ensure prevention of sediment loss during core recovery. This plunger was placed at the bottom of the core tube before placement into the water. Attached to the top of the plunger was a rope that was threaded upwards through the core tube; once the core tube had been lowered into the water and was positioned just above the sediment surface the string was tied off at the water surface to ensure that the plunger would remain at a constant depth during core tube advancement.

In unobstructed areas, cores were collected using a 3-inch-diameter core-barrel attached to a weighted vibratory hammer. A winch was used to lower the core-tube to the sediment surface and the tube was allowed to penetrate into the sediment as far as possible without turning on the vibrating head. Once the core reached a depth where it was no longer penetrating the sediments via gravity, the vibrating head was activated and the core was advanced to a depth of at least 4 feet below the top of sediment.

In the obstructed sample collection areas beneath Piers 1 and 2, sediment cores were collected using a 3-inch-diameter core-tube attached to a push-rod. The core-barrel was attached to a series of 5-foot extension rods as it was lowered to the sediment surface. The core-barrel was then driven into the sediment by manually hammering the extension rods until the targeted depth was reached as indicated by markings on the extension rods.

In this type of sampling, since a precise measurement of penetration depth during advancement of the coring equipment is not feasible, the core-barrel penetration was consistently greater than the targeted 4-foot depth. Upon retrieval of the equipment, the coring subcontractor was able to accurately determine penetration depth by measuring the distance that the plunger had moved within the core tube during advancement. These measurements are presented on Table 2-3.

Once the sediment sample core was delivered to the onshore sampling team, the core was placed in an upright position to allow for as much resettling as possible (typically, a maximum of 20 minutes). When the sediment had sufficiently settled, the water within the core tube was slowly poured off. Typically, it was unavoidable for a small amount of suspended sediment, or flocculent, to be poured off with the water (it is assumed that this material was recently deposited, uncontaminated sediment). After decanting the water from the core tube, a second measurement of the sediment sample recovery was made to evaluate whether or not recoveries remained consistent between collection and after settling. At this point, if penetration was greater than 4 feet, some sediment was removed from the bottom of the core before dividing the sample into the appropriate aliquots (0- to 12-inches, 12- to 24-inches and 24- to 48-inches). The amount of material removed from the bottom of the core was somewhat subjective, but based on compaction measured and the condition of the sediment extruded from the core. In general, the decision to remove sediment from the bottom of the cores was made conservatively, so as to ensure that sediment

from deeper than 4 feet was included in the 2- to 4-foot interval (versus the likelihood that a sample from this targeted interval did not reach the target depth of 4 feet).

The indication of successful recovery, as described in the SAP, was that a minimum of 75 percent (3 feet) of recovery (for 4 feet of penetration) would be considered full recovery. If recovery was less than 3 feet, coring was attempted again at the location until 3 feet of sediment recovery was achieved, up to a maximum of four attempts. If four attempts were made and any of the cores achieved 2.5 feet of recovery, the core with the best recovery was used for sampling. At two sample locations, 2.5 feet of recovery was not achieved, and the subcontractor was asked to return to the locations to collect two to three additional cores at different depth intervals (i.e., 0 to 1 foot or 0 to 2 feet) so that a better evaluation could be made regarding where compaction or blockage (rodding) was occurring (the core tube with the best recovery was selected for sampling).

As noted previously, sediment penetration and recovery lengths for each sample station are presented on Table 2-3. As shown, three samples representing the intervals of 0- to 12-inches, 12- to 24-inches, and 24- to 48-inches were collected from virtually every core. Shallow refusal occurred at some coring locations, requiring sample intervals to be selected in the field, sometimes varying from the sample intervals identified in the SAP. In situations where core recovery was less than 4 feet, but still above the minimum requirements provided in the SAP, the sample team assumed uniform compaction (in most cases) and divided the recovery into four equal intervals; at this point, the bottom two intervals were combined to create the 24- to 48-inch interval, and the top two intervals would represent the 0- to 12-inch and the 12- to 24-inch intervals.

At approximately 8 of the 119 sediment core locations designated for chemical analysis, field conditions indicated that uniform compaction did not occur, requiring an onsite assessment of which interval of the recovered core represented each sample interval. This information was also recorded on the applicable sample log sheet and is presented on Table 2-3.

Sediment was placed into pre-cleaned aluminum pans or, for metals analysis (copper or zinc) into decontaminated Pyrex glass trays, once sample intervals were selected. Sediment descriptions were recorded on field log sheets along with any visual or olfactory evidence of contamination (Table 2-3 presents a summary of field observations). Sediment for each sample interval was homogenized using a stainless steel spoon and placed into the appropriate sample containers to be shipped to the analytical laboratory. Sediment samples were analyzed for tributyltin (TBT), TOC, HMW PAHs, total PCBs, lead, copper, zinc, and asbestos, or for a subset of the listed analyses. Table 2-3 and Figure 2-1 indicate the specified analyses for each sample (analytical results are discussed in Section 4).

2.1.3 Field Measurements and Observations - Sediments for Chemical Analysis

Field observations of visual or olfactory evidence of potential contamination were recorded on the sample log sheets during the collection and processing of sediment cores. At a total of 18 sediment sample locations, either a sheen or a petroleum-like odor or both were observed in sediments. These attributes were particularly prevalent in the sediments that were sampled in areas surrounding and beneath Pier 1, as well as in two locations on the south side of Pier 2, and in one location near the T-wharf. Further information regarding specific sample locations and observations is presented on Table 2-3, and on the sediment sample log sheets, provided in Appendix A.

2.2 FIELD ACTIVITIES – COLLECTION OF SEDIMENT AT PHYSICAL LOCATIONS

A total of 10 locations were selected for the collection of sediments for physical analysis, which included grain size analysis, radioisotope analysis, and cohesion testing. The locations, identified as GP-01 through GP-10, were distributed throughout the study area, as determined in the SAP and illustrated in Figure 2-1. Additional information on the sample collection activities and the analyses performed on the sediment collected from the physical locations is provided below.

2.2.1 Grain Size and Radioisotope Analysis

Two sediment push-cores were collected at each location designated for physical analysis. Cores were collected using a push technique, rather than the vibracore technique, in order to keep the bedding and soft surface sediment as intact as possible. Cores were collected by attaching a 3-inch-diameter core-tube to extension rods and allowing the core to gently penetrate the sediment via gravity. In order to minimize compression of the softer surface sediment and to preserve any bedding features that may be present, a catch basket was not used for the collection of these samples, however, a plunger was used, as described above in Section 2.1.1, to reduce sediment loss during core retrieval.

In accordance with the SAP, a single sample aliquot was collected from the first core at each of these 10 sample locations, representing the 0- to 1-foot depth interval. The depth interval selected for grain size analysis samples was selected to match that to cores collected by others for cohesion testing. This sample was designated for grain size analysis. Upon retrieval of the core, the sediment was placed in a clean, disposable aluminum pan and homogenized. The sediment was then transferred into the appropriate sample container, labeled, and stored for later shipment to the analytical laboratory. Grain size analysis results are discussed in Section 3.

The second core at each sample location was collected for radioisotope analysis. A marine geologist was aboard ship to direct the collection of cores chosen for radioisotope analysis. Core recoveries ranged from 1.7 feet to 3.6 feet, as depicted on Figure 2-2. Upon retrieval, the core tubes were cut just above the standing sediment surface and were capped at both ends. The full core tubes were placed in a freezer for later processing on shore. Processing the radioisotope cores included inspection of the frozen core to identify any bedding layers that may be present. Once the presence of bedding was evaluated, sample intervals were selected by targeting the top and bottom (and sometimes middle, if layer was relatively thick) of bedding layers, if present. If the bedding layer was thin (2 to 3 inches), one sample (1 inch) was collected from the approximate center to represent the entire layer.

In cores that had no evidence of bedding, sample intervals were selected by targeting the top of the core, the bottom of the core, and two to three middle intervals, depending on core length. All selected intervals were 1-inch-thick sections of the frozen core, and marked on the core tube. While the sediment was still frozen within the tube, the core was cut at the marked interval locations, using either a hack-saw or a reciprocating saw. Once cut from the rest of the core, each selected sample interval was pushed out of the core tube and placed into the appropriate sample container. Samples were then placed on ice and shipped to the analytical laboratory for the isotope Po-210 analysis. The analytical results are discussed in Section 3, and the full data report is provided in Appendix B5.

A summary of the sediment core sample intervals and bedding information is provided on Figure 2-2. Sample log sheets that include descriptions of sample collection are presented in Appendix A-3.

2.2.2 Bathymetric Survey

A multibeam hydrographic survey was conducted to provide information on slight variations in the topography of the sediment surface within the study area. To perform the survey, the subcontractor used a Reson SeaBat 8125, an ultra-high-resolution multibeam echosounder. The complete survey report provided by the subcontractor is included in Appendix C-1. The survey results are described in Section 3.

2.2.3 Sediment Stability Testing

U.S Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory of Vicksburg, Mississippi was subcontracted to perform sediment stability testing within the study area. Using coordinates provided by Tetra Tech, sediment cores for this testing were collected from the same ten locations (GP-01 through GP-10) discussed above in Section 2.2, and presented on Figure 2-1. Target depths for these cores were 0 to 1 foot below sediment surface. The complete report describing testing procedures is provided in Appendix C-2. The stability testing results are discussed in Section 3.

2.3 FIELD ACTIVITIES - HYDROGRAPHIC INVESTIGATION

Additional activities were conducted to augment a 1996 hydrographic survey that was conducted within the study area by URI. These activities included deploying stationary Acoustic Doppler Current Profilers (ADCPs) and collecting surface water samples, in order to evaluate ocean currents within the study area over time. The field activities implemented as part of this hydrographic investigation are summarized below.

2.3.1 Acoustic Doppler Current Profiler Deployment

ADCPs were deployed at the same ten locations (GP-01 through GP-10) discussed above in Section 2.2, and presented on Figure 2-1. The profiler units were deployed on September 1, 2011 and remained in place until September 17, 2011, during which time the ADCPs measured surface wave height, tidal elevation, water temperature, and current profiles. One ADCP deployed at GP05 was maintained until September 30th, due to difficulties encountered during its recovery. The ADCP deployed at GP07 failed after seven days of operation. The complete report presenting methods and the resulting data is provided in Appendix C-3. A summary of the data is provided in Section 3 of this report.

2.3.2 Surface Water Sampling

Three rounds of surface water samples were collected for total suspended solids (TSS) analysis to assist in the interpretation of the ADCP data. One surface water sample was collected at the location of each profiler on three separate occasions, on September 1, 2011 (day of deployment), on September 6, 2011 (using a Kemmerer surface water sampler), and on September 17, 2011 (day of retrieval, using a "bomb sampler"). The bomb sampler was used on the final day because Kemmerer samplers were not available (both the bomb sampler and the Kemmerer sampler can collect surface water from an isolated interval, and the resulting data are comparable). Each surface water sample was collected approximately 2 to 3 feet above the top of the associated ADCP. Immediately upon collection, each surface water sample was transferred directly into the appropriate sample container. The sample container was labeled and placed on ice. Samples were shipped to the analytical laboratory for total suspended solids (TSS) analysis at the end of each day.

3.0 STUDY AREA PHYSICAL CHARACTERISTICS

Available information on the physical characteristics of the study area is summarized below. Data were obtained during this Supplemental Sediment Investigation as well as previous investigations, including data on bathymetry, sediment grain size, radioisotopes in sediments, current velocity, water column profiling, and sediment cohesion. The investigations summarized in this section include a bathymetry survey, analysis of sediment grain size and radioisotopes, two hydrographic surveys - one conducted in 1995 by the URI and one conducted in 2011 as part of the Supplemental Sediment Investigation, and sediment cohesion testing. Information on the historical dredging of sediments in portions of the study area is also included.

3.1 HISTORICAL DREDGING AND SURVEYS

A general history of the dredging operations at Coddington Cove, through the development of the piers and waterfront, is summarized below.

Based on a review of historical site plans, the first dredging event within the study area occurred in 1942, when the area to the west and south of the T-wharf was dredged to 24 feet (elevation). In 1952, the shoreline area north of the T-wharf was dredged to an elevation of 10 feet, to allow for construction of the breakwater and the Stillwater Area.

Pier 1 construction plans dated 1954 indicate that the area to be dredged to an elevation of 35 feet, extended from the pier approximately 400 to 500 feet to the south, 500 to 600 feet to the north, and 1000 to 2000 feet to the west. The plan indicates that Pier 1 had not yet been constructed, and specifies that no dredging should take place in the area where Pier 1 was to be located. Based on the depths to sediment which appear in a 1955 plan (from the results of a “sounding” survey), the dredging had apparently been completed by that time (the actual depths to sediment appear very similar to the planned depths).

Pier 2 construction plans dated 1956 indicate that the area to be dredged, extended from the pier approximately 300 to 400 feet to the south and 400 to 600 feet north of its east end. This plan also specifies that no dredging should occur in the area where Pier 2 was to be constructed. Plans from 1962 appear to indicate that additional dredging took place in areas north and south of Pier 2, but only to remove localized areas of sediments that were not at the proper elevation. A final dredging event apparently took place in 1968, when the extension to Pier 1 was planned. Areas that were to be dredged, as indicated in this plan, were north of the east end of Pier 1, along the slope.

A bathymetric survey of Coddington Cove was conducted by the National Ocean Survey (NOS) in 1957, and indicated that water depths ranged from less than 5 feet in the northeastern and southern areas of the cove, to between 33 and 40 feet in the areas adjacent to Piers 1 and 2, and gradually deepened to 50 feet at the cove entrance. Another bathymetric study performed in 1986 in a portion of the cove south of Pier 1 was found to be in good agreement with the NOS survey (SAIC and URI, 1997).

A hydrographic survey was completed in 2006 in the vicinity of Pier 1, for the Naval Inactive Ships Maintenance Office, to obtain a better understanding of the bottom elevations in the vicinity of two inactive aircraft carriers at Pier 1. The survey concluded that bottom elevations in the berth areas generally ranged from 34 to 40 feet below the NOAA Mean Lower Low Water (MLLW) Datum, findings that are consistent with the NOS survey. It was further concluded that the maximum draft of the carriers that were at that time berthed at Pier 1 ranged from 30 to 32 feet, and that the under-keel clearance ranged from 4 to 11 feet (Sea Vision, 2006).

3.2 BATHYMETRIC SURVEY AND SEDIMENT ANALYSES

This section presents the results of the geophysical investigations conducted as part of the Supplemental Sediment investigation. These investigations include the bathymetric survey, sediment grain size analysis, and the radioisotope analysis.

3.2.1 Bathymetric Survey - 2011

A multibeam bathymetric survey was conducted in June of 2011 by Ocean Surveys, Inc., as summarized in Section 2.2.2, where information on the survey techniques and equipment utilized is also presented. Results of the survey are presented on Figures 3-1 and 3-2, and the full report is provided in Appendix C-1.

The survey results indicated that sediment depths are generally similar to depths that have been reported in previous surveys. In the area located approximately 300 feet north of Pier 2 to 300 feet south of Pier 1, the depth to sediment ranges from approximately 36 to 40 feet below MLLW in open areas, and rapidly approaches 10 to 15 feet MLLW within 50 feet of the shoreline. A 5-foot-high ledge feature is located approximately 300 to 350 feet south of Pier 1, at a depth of 35 to 30 feet MLLW. The ledge is oriented approximately east-west, and was apparently created by dredging activities; the ledge is also present to the northeast of Pier 2 along the shore. To the south and southeast, the ledge increases in elevation to approximately 25 feet MLLW at the edge of the stillwater basin and the T-wharf. Within the stillwater area, and south and southwest of the T-wharf, the depths to sediment surface gradually increase, ranging from approximately 10 to 3 feet below MLLW as the shore is approached.

Two notable features observed from the bathymetric data are the presence of channels from former dredging activities, located between Piers 1 and 2 and south of Pier 1, as well as the presence of sediment deposition that formed an outline of the ex-Forrestal's hull immediately south of Pier 1, indicating its effect on sediment deposition during the period of time that it was berthed at Pier 1. This feature (outline of the hull) is evident on Figure 3-1, which shows the bottom relief as exaggerated, in transitional colors; however, the hull outline is not observed on Figure 3-2, which has a contour interval of 1 foot, indicating that this feature is less than one foot in thickness. A second hull outline is faintly visible south of the first outline, presumably created by the third warship, moored here for a short time (1999 to 2003).

3.2.2 Sediment Grain Size Analysis Results

Sediment samples were collected for grain size analysis at ten locations, as described in Section 2.2.1 and shown on Figure 2-1. At all locations, the major components were either sands (dominated by fine- or medium-grained sand) or silts. Three sample locations, GP01, GP02, and GP10, had more sand than silt, with percentages of sand ranging from 37.3 to 63.5 percent. The remaining seven locations were dominated by silt, and percentages ranged from 48 percent at GP09 to 78.9 percent at GP08. Clay was detected in all samples at percentages ranging from 8.7 to 23.5 percent. While either sands or silts were always the major components of the sediments, there were three locations, GP04, GP07, and GP08, where clay was the second most dominant constituent.

Complete laboratory results for grain size, including hydrometer and sieve analyses, are presented in Appendix B-3. Table 3-1 presents a summary of grain size data.

3.2.3 Radioisotope Analysis Results

Cores were collected at ten locations in the survey area as described in Section 2.2.1 of this report. The cores were subsampled, and a minimum of four samples were collected from each core. For each sample, the activity of polonium-210 (Po-210) was measured by alpha spectroscopy to approximate the activity of lead-210 (Pb-210). Po-210 is a granddaughter radionuclide of lead (Pb)-210 that, in a closed system, such as buried sediment, is assumed to reach secular equilibrium (the same activity) with Pb-210 after approximately two years. This means that Po-210 is produced and then decays at roughly the same rate at which the Pb-210 decays. Po-210 was measured because it provides a more accurate estimate of Pb-210 based on alpha-particle emission than direct measurement of Pb-210 (Flett, R., 2009). The downcore decay of excess Pb-210 was utilized to calculate sediment accumulation rates as presented below.

Sediment accumulation rates from Lead-210 geochronology

Site Core #	R2	Sediment Accumulation Rate (cm/yr)
1	0.99	0.08
2	0.95	0.75
3	0.89	0.18
4	0.56	2.05
5	0.74	0.35
6	0.58	2.23
7	0.98	0.45
8	0.85	1.43
9	0.95	0.14
10	0.66	0.27

(Source: Allison, 2012).

The results from the radioisotope analysis and interpretation show that Coddington Cove is an area of sediment accumulation. Pb-210 is present down-core in every core, levels vary with depth between cores, and influenced by grain size. Pb-210 is preferentially adsorbed on clay mineral grains (the finest mud fraction), and coarser grains are a dilutant in activity (add mass by no excess activity). Hence, core sites with variable grain size down-core (e.g., Core 01) often show variable excess Pb-210. Bioturbation and resuspension do not appear to be influencing sediment accumulation. Sediment appears to be accumulating at an estimated range of 0.08 to 2.23 cm/yr.

Sediment accumulation rates can be affected by a variety of factors, including proximity to shore, depth of water, current velocity, flow obstructions and suspended sediment load. Stations 4, 6, and 8, which are closest to shore, have the highest estimated accumulation rate. As such, it is evident at this site that accumulation tends to be higher where there are flow impedances.

Further analysis of each core is presented in the Allison, 2012 report, provided as Appendix C-4.

3.3 HYDROGRAPHIC INFORMATION

This section presents the results of two hydrographic surveys; the first survey was completed by the URI in 1995 as part of the ERA (SAIC & URI, 1997), the second survey was conducted as part of this Supplemental Sediment Investigation in order to supplement and reassess the data gathered during the 1995 study.

3.3.1 Hydrographic Survey – URI, 1995

A hydrographic survey was performed by the URI in 1995 to measure current velocity and to conduct water column profiling of conductivity, temperature, and depth to determine patterns of water circulation within the study area. This study evaluated the area during several different cycles of wind and tidal patterns, but did not account for seasonal variation of wind patterns or effects of winter storms. The complete results are reported in the Derecktor Shipyard Marine Ecological Risk Assessment (SAIC and URI, 1997).

The 1995 survey showed that within the interior of Coddington Cove, the characteristic flow pattern occurs as a net counter-clockwise circulation. On average, maximum bottom velocities were found to be highest at the mouth of the cove, and decreased in a counter-clockwise manner, following the counter-clockwise pattern around the cove. High bottom velocities extending into the southeastern section of the cove were expected to prevent deposition of silt-sized particles, while the generally more sluggish velocities of the interior portions of the study area, between the piers and to the northeast of the study area were expected to be depositional zones (except near the shoreline and/or shallow areas, which were identified as areas that may be affected by wave energy or propeller wash). The near-bottom velocities between piers 1 and 2 were measured as average rates ranging between 2 and 6 cm/sec. Near bottom velocities between the area between the piers and the outer cove was measured at between 4 and 10 cm/sec. Other portions of the cove measured higher velocities, as high as 25 cm/sec at the mouth of the cove near the end of the breakwater where currents would concentrate.

The survey results indicated that sediments in the Derecktor Shipyard/Coddington Cove study area vary by location, being predominantly fine-grained (less than 40 percent sand content) at some locations, and predominantly sandy (sand greater than 70 percent) at others. Surface sediments in Coddington Cove were typically found to be more fine-grained (contained more silt and clay) than the underlying, more sandy sediments, probably due to the significantly decreased bottom energy and increased likelihood of fine-grained sediment deposition resulting from construction of the Coddington Cove breakwater in 1957.

3.3.2 Hydrographic Investigation (ADCP) - 2011

During the Supplemental Sediment Investigation, information was gathered regarding the current velocities/patterns and water depths within the study area, in order to update previously collected data. This effort was conducted to determine if currents are present that could mobilize surface sediment under most conditions. As described in Section 2.2, ADCPs were deployed to measure water column characteristics. The results of this activity are summarized below. The complete report, “Coddington

Cove, Narragansett Bay RI, Current, Wave and Tidal Analysis, September 2011" (Rogue Wave, 2011), is provided in Appendix C-2.

The ADCPs recorded data on tidal elevation, currents and circulation, surface wave heights, and turbidity/backscatter. The data indicate that tides dominated the circulation process within Coddington Cove during the study period.

Tides ranged about 1.4 meters during spring tides, and about 0.8 meters during neap tides. The falling (ebb) tide was on average about 5.6 hours in duration, while the rising (flood) tide was approximately 6.8 hours in duration. The fact that the ebb tides are shorter suggests that Coddington Cove might be considered an "ebb-dominant system". Ebb-dominant systems typically flush sediment more readily, since faster ebb currents are more capable of initiating particle suspension and transport.

Due to cove geometry, and the presence of the breakwater in the northern portion of the cove, current speeds were generally weak. Maximum current speeds never exceeded 40 centimeters per second (cm/sec) throughout the duration of the deployment. Wind effects on current and circulation were minimal within the cove; however, few storms occurred during the deployment period. Current direction within the cove varied from location to location, and seemed to depend on tidal cycle as well as physical characteristics of each location. Generally, water appears to flow eastward into the cove after low tide, until it reaches the shoreline, where it splits. The majority of the water circulates south in the vicinity of the study area, while flow in the northern portion of the study area and points north, seem to circulate north. This pattern holds steady until about 3 to 4 hours after low tide, at which point the flow weakens. As high tide approaches, the circulation turns westward and appears to drain from the cove for about 2 hours before and after high tide. Currents then appear to rotate northward about 1 to 2 hours before low tide, then northeastward, then eastward to complete the cycle. Bottom currents tend to be weaker than surface currents.

Initially, this data might appear to contradict the previous statement that Coddington Cove might be considered an ebb-dominated system. Data collected at location GP02 indicates that incoming flood velocities were much greater than ebb flows. However, variability of the flow-field explains this seemingly contradictory evidence. The report states "If station 02 (GP02) is experiencing strong incoming flow around low water – even as the water level continues to drop – then flow at other locations must be exiting the system. Outbound flow must be occurring at the edges of the entrance – Coddington Point or the corner of the northern breakwater – to balance the tidal elevation curve with overall velocities" (Rogue Wave, 2011).

Wave heights were low amplitude within Coddington Cove during the duration of deployment. Cove geometry, and the fact that no significant wind events occurred during the duration of deployment, meant

that maximum peak wave heights did not exceed 0.4 meters. The shoreline and northern breakwater act to shelter the cove from wave action in all directions, except for the west entrance. Waves entering the cove from the west have little chance to develop because of Conanicut Island (Jamestown), which is located about 2.5 miles to the west. Maximum significant wave heights were less than 0.4 meters; rarely did the significant wave height exceed 20 cm during the test period.

Overall, the ADCP study shows that, during the steady state, currents are tidally driven and mean flow velocities range from 0.1 to 2.9 cm/sec, while maximum flow velocities range from 7.3 to 29.3 cm/sec throughout the entire water column. It should be recognized that information gathered during the 1995 study, which suggests the importance of wind-driven currents, is still valid and should be taken into consideration as well.

TSS estimates were calculated by the ADCPs, and laboratory analysis of TSS was conducted for water samples collected during the three sampling events, as described in Section 2. The TSS results ranged from near zero to approximately 20 milligrams per liter (mg/L). Regression fit results (provided in Appendix C-2) comparing the laboratory TSS data and the ADCP data ranged from 0.01 to 1.0 (Rogue Wave, 2011). As noted above, the only wind event that occurred during deployment was on September 16th, so minimal sediment transport would be expected during the deployment time period. Table 3-2 presents TSS results from the three sampling events, as well as backscatter results from the ADCPs and regression fit results for the two readings.

3.4 SEDIMENT STABLITY AND COHESION

Sediment cohesion testing was conducted to determine the likelihood that sediments would be moved from the bedded condition, under various water flow conditions. The testing was conducted by the ERDC Coastal Hydraulics Laboratory. The ERDC report with complete results of the sediment cohesion testing is presented in Appendix C-3. A brief summary of the findings of this testing is presented below.

Data on the cohesive sediment transport process were collected during the field study and were analyzed to determine sediment transport model developed by Ziegler, Lick and Jones (SEDZLJ) model parameterizations for cohesive sediment erosion.

Sediment cores collected by ERDC ranged in length from 15 to 29 cm. During the erosion experiments, all cores were found to be vertically stratified. The vertical variation in erosion characteristics was associated with shell content, vegetation, and/or sand content. These cores were installed individually into a “flume” device that measures flow across the surface of the core, so as to measure critical stress that will affect resuspension of that material (i.e. erosion). Cores from locations GP-07 and GP-08 included significant

amounts of shells and shell fragments. Erosion measurements had to be halted for portions of these cores, due to the presence of shells. Erosion-rate data were evaluated for relationships between erosion rate, bed density, and applied shear stress. Each of the cores analyzed indicated bed layering, as inferred from visual observations, particle size distribution analysis (as determined by a Beckman-Coulter LS-100 laser diffraction particle sizer), and erosion rates. In some cases, the boundaries between layers were very distinct, and in other cases, the layer boundaries transitioned more gradually.

Each core was found to have an unconsolidated surface layer of recently deposited material. This layer was the most easily eroded, with a critical shear stress of 0.2 Pa, which equates to a flow velocity of 28.7 cm/sec. Table 4 in the ADCP data report presents values for the bottom half of the water column, whereas the ADCP data collected in August 2011 for the near deepest water (the deepest bin captured by the ADCP meters) are presented below.

Near Bottom Flow Statistics			
Core	Max Depth	Max Current Speed	Max Speed Direction
	(m)	(cm/sec)	(degrees)
1	9.44	12.71	97
2	9.76	28.02	99
3	10.07	16.51	70
4	10.31	12.59	263
5	11.24	19.73	87
6	9.63	9.73	4
7	8.45	11.23	279
8	9.89	14.36	77
9	7.05	15.3	207
10	3.91	9.22	13

Source: Rogue Wave and Ocean Data Technologies, March 5, 2012

As shown in the table above, the maximum near-bottom velocity reported was 28.02 cm/sec, less than the 28.7 cm/sec flow rate indicated above, and would therefore be insufficient to erode the surface layer.

Using this approach of comparing flow to critical shear stress, further evaluation was conducted to look at deeper layers within the cores. Table 3-3 presents the shear stress and associated water flow rates required to erode the deeper layers in each core (Smith et al. 2012, Table 2 and Figure 1). This comparison of deeper layer shear stresses and flow rates is presented to show that the flow rate required erode sediment is higher that the flow rates observed in the field through ADCP measurements. This indicates that the flow present at the site under the steady state condition is below the shear stress

required to erode sediment at the site, in either the surface or deeper layers. It is also noted that shear stress required to erode sediment at this rate increases dramatically with depth of the core even to a depth of less than six inches below surface.

Based on the analysis of the cohesion testing conducted, it was concluded that all cores collected in the study area were vertically stratified. Also, all cores exhibited cohesive erosional behavior, the critical shear stress for erosion generally increased with depth, and erosion rates at a given shear stress decreased with depth. As stated in Appendix C3, “this is a common observation associated with stronger bonding with increased sediment consolidation and density” (Smith et.al., 2012).

4.0 EXTENT OF TARGET ANALYTES EXCEEDING PRGs

This section summarizes the analytical results obtained for the samples collected to characterize the extent of contamination in sediments within the study area. Details regarding investigation methods are described in Section 2.0 of this report. The analytical results are presented in this section by sample interval (0 to 12 inches [surface sediment], 12 to 24 inches, and 24 to 48 inches) and then by target analyte. The results for sediment samples are compared to screening criteria (RPRGs, BPRGs, NOEC, or National Emission Standards for Hazardous Air Pollutants [NESHAP]) identified in Worksheet 11 of the SAP, and presented in Table 1-1 of this report. Also in accordance with the SAP, samples were analyzed using the following methods:

Analytical Group / Matrix	Analytical Method
HMW PAHs Select Ion Monitoring (SIM)/ Sediment	SW846 8270D SIM
HMW PAHs Gas Chromatograph/Mass Spectrometry (GC/MS) / Sediment	SW846 8270D
HMW PAHs (SIM) / Aqueous	SW846 8270D
HMW PAHs (GC/MS) / Aqueous	SW846 8270D
Metals / Sediment	EPA Method 6010
Metals / Aqueous	EPA Method 6010
PCBs / Sediment	SW-846 8082
PCBs / Aqueous	SW-846 8082
TOC	Lloyd Kahn / CA-714
Asbestos / Sediment	ASTM Draft Sieve Method, Determination of Asbestos in Soil

The complete analytical data sets resulting from this investigation are provided in Appendix B of this report: Appendix B-1 provides complete data tables for all samples collected for chemical analyses, Appendix B-2 presents documentation of data QA processes, including data validation memoranda for each sample data group (SDG), and a data usability assessment, as recommended by USEPA Region I and as described in the Uniform Federal Policy (UFP) SAP. Appendices B-3 through B-5 present full laboratory data reports for specialized analyses, including grain size distribution, asbestos, and radioisotope analysis.

4.1 DATA VALIDATION AND USABILITY ASSESSMENT

The analytical data for all samples were validated according to established USEPA Region I Data Validation Guidelines (USEPA Region I, February 1989, December 1996, and February 2004). A Tier II data validation effort was performed for PAHs, metals, PCBs, asbestos and TOC data. Tier II validation included evaluation of the following parameters:

- Data Completeness
- Preservation and Technical Holding Times
- GC/MS Instrument Performance Check (Tuning) (PAH)
- Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) Tuning (Select Metals)
- ICP/MS Internal Standard Performance (Select Metals)
- Initial and Continuing Calibrations/Calibration Verification
- Blanks
- Surrogate Standards (Organics)
- Internal Standards (volatile organic compounds [VOCs], PAH)
- Matrix Spike/Matrix Spike Duplicates
- ICP Interference (Metals)
- ICP Serial Dilution (Metals)
- Laboratory Control Sample/Laboratory Control Sample Duplicate
- Field Duplicates
- Reporting Limits
- Tentatively Identified Compounds (PAH)

Based on this validation process, several analytical results were qualified due to limitations inherent to sample matrix interferences or to field and/or laboratory issues. Sample results qualified with a "J" are considered approximate because of limitations identified during data validation. Results for some analytes were rejected due to: (1) results not meeting QC limits in the matrix spike and matrix spike duplicate analysis, or in the laboratory control sample and laboratory control sample duplicate analysis; (2) extremely low relative response factors in the calibration; or (3) poor surrogate performance. Analytical results that were rejected are reported as the value that was reported by the laboratory, but with an "R" qualifier. For this investigation, the only rejected analytical results were some "non-detected" (U) results. Complete data validation reports are included in Appendix B-2.

Using the data validation results, an overall "data usability assessment" was performed to determine if the analytical data reported by the laboratory for these SDGs met the project data quality objectives (DQOs) for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. The evaluation, based on laboratory QC and limited field information available at the time of the assessment, is provided in a separate memorandum for each analyte group, also included in Appendix B-2. Overall, the data were determined to be acceptable for the intended purpose.

4.2 ANALYTICAL RESULTS

The analytical results for all sediment samples are discussed below, according to sediment depth interval: 0 to 12 inches (surface sediment), 12 to 24 inches, and 24 to 48 inches (depths below the sediment surface). The discussion is further organized by sample analysis (PAHs, benzo(a)pyrene, PCBs, lead, TBT, asbestos, copper, and zinc). The results are compared to criteria that were selected as described in Worksheet 11 of the SAP (Tetra Tech, 2011). The criteria selected for PAHs, benzo(a)pyrene, PCBs, and lead are RPRGs, developed in the document, Final PRGs for Derecktor Shipyard/Coddington Cove (SAIC, 1998). The criteria used for TBT, zinc, copper, and asbestos were developed for this investigation at the request of the regulatory agencies, as presented in the SAP:

- The criterion for TBT is the established "No Observed Effects Concentration (NOEC)" from the ERA (Tetra Tech, 2008b).
- The comparison criteria for zinc and copper are baseline PRGs (BPRGs), developed in the Final PRGs for Derecktor Shipyard/Coddington Cove (SAIC, 1998).
- The criterion for asbestos content is one percent, the definition for ACM from the NESHAP regulations.

Figures 4-1A through 4-3G, referred to throughout the discussion of analytical results, present interpolations of chemical levels in sediments across the Study Area. The interpolation method used is a "Spline with Barriers" method provided in Esri ArcGIS 10 software, and explained below:

> "The Spline with Barriers tool applies a minimum curvature method, as implemented through a one-directional multigrid technique that moves from an initial coarse grid, initialized in this case to the average of the input data, through a series of finer grids until an approximation of a minimum curvature surface is produced at the desired row and column spacing.
>
> At each grid refinement level, the current grid-based surface model is treated as an elastic membrane, and a convergent linear iterative deformation operator is applied repeatedly at each node to achieve an approximation to a minimum curvature surface that honors both the input point data and discontinuities encoded in the barriers. The deformation that is applied to each cell is calculated on the basis of a molecular summation (Terzopoulos, 1988) that compares the weighted summation of 12 neighboring cells with the current value of a central target cell to calculate a new value for the target cell" (ESRI, 2011).

This interpolation method was selected because of its ability to include barriers, and because the calculation "honors the input point data", characteristics not offered in other methods provided in ArcGIS 10 software.

When utilizing the Spline with Barriers tool in ArcGIS, there are several options that the user must define. The first is the "input barrier field"; for this field, a polygon was created that provided a barrier to define the shoreline, the breakwater south of Pier 1 that creates the north border of the Stillwater Area, and the T-Wharf. The breakwater and T-Wharf are physical obstructions that prevent the movement of water, and therefore, the sediment, so they were accounted for as "barriers". The second variable the user must define is the "output cell size", meaning the size of the grid cell for which a value will be calculated. For this interpolation, a cell size of 5 feet by 5 feet was chosen. Lastly, a smoothing factor is applied: for this analysis, a smoothing factor of 0 was chosen, indicating that no smoothing would occur, reducing interpolation.

Additionally, a 150-foot-radius "buffer" was established around each sample point. The 150-foot buffer was chosen as an interpretation so that all space between the 200-foot sample grid points would be represented using the spline data, while eliminating areas that lay beyond this 150-foot buffer. The purpose of eliminating areas beyond 150 feet is to reduce "overestimating" and to accommodate acceptable uncertainty that exists when the interpolation is performed at greater distances from actual sample points. In an effort to conservatively delineate the extent of contamination at the study area, the Navy determined that a distance of 150 feet beyond the outermost portions of the grid is appropriate.

4.2.1 Analytical Results: 0- to 12-Inch Depth Interval – Surface Sediment

This section presents the results of sediment samples collected from the 0- to 12-inch depth interval, identified as "surface sediment" (The last portion of the sample identifier for samples from this group is "0012", indicating the sample collection depth of 0 to 12 inches). Two additional samples that included sediment from depths of 0 to 16 inches and 0 to 18 inches were included in this sample group: samples DSY-SD-AA28-0016 and DSY-SD-G29-0018 included sediment from these slightly greater depths in order to achieve the required volume for laboratory analyses. Table 4-1 presents a summary of analytical results (positive detections) for surface sediment samples.

4.2.1.1 High Molecular Weight PAHs in Surface Sediment

A total of 119 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of PAHs. While PAHs were detected in all but two surface sediment samples (in 117 samples), the associated RPRG of 13,903 micrograms per kilogram (µg/kg) was exceeded in only nine samples,

and just two of these samples had results greater than twice the RPRG. In sample DSY-SD-J30-0012 the PAHs result was 186,000 µg/kg, more than 10 times the RPRG. In sample DSY-SD-BE30-0012 the result was 117,000 µg/kg, more than 7 times the RPRG.

Figure 4-1A presents the spline interpolation results for total PAHs in the 0- to 12-inch interval. Two areas are presented with PAH levels greater than 5 times the RPRG; one located beneath and south of the east end of Pier 2, and the second located south of the east end of the T-Wharf. Four other locations where PAHs exceeded the RPRG (by less than two times the value) are also indicated on the figure: immediately south of the western portion of the T-Wharf (two samples); beneath the center of the former location of the USS Forrestall (one sample), north of the east end of Pier 1 (one sample), and east of the center of Pier 2 (one sample).

4.2.1.2 Benzo(a)pyrene in Surface Sediment

A total of 119 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of benzo(a)pyrene. This HMW PAH compound was detected in all but three samples (in 116 samples), at levels ranging from 20 J to 9,000 µg/kg, and the RPRG for benzo(a)pyrene, 539 µg/kg, was exceeded in 20 samples. Eight of these samples had results greater than twice the RPRG, including two samples with benzo(a)pyrene detected at levels greater than 10 times the RPRG.

Figure 4-1B presents the spline interpolation results for benzo(a)pyrene in the 0- to 12-inch interval. The same nine samples that exceeded the RPRG for PAHs also exceeded the RPRG for benzo(a)pyrene, itself a PAH, therefore, the distribution patterns for these two analyses are similar. However, the benzo(a)pyrene RPRG was exceeded more frequently (in eleven additional samples) and had higher exceedances (the benzo(a)pyrene RPRG is more than an order of magnitude lower than the RPRG for PAHs). The figure indicates that sediments with exceedances of the benzo(a)pyrene RPRG cover a larger area than those exceeding the RPRG for PAHs. Also, one sample from the Stillwater Area exceeded the benzo(a)pyrene RPRG (by less than twice the value).

4.2.1.3 PCBs in Surface Sediment

A total of 119 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of PCBs (total aroclors), which were detected in 56 samples at levels ranging from 40.1 J µg/kg to 17,000 µg/kg. The RPRG for PCBs, 1,060 µg/kg, was exceeded in eight samples, only two of which exceeded by more than twice the RPRG: DSY-SD-K13-0012 and DSY-SD-L26-0012.

Figure 4-1C presents the spline interpolation results for total PCBs in the 0- to 12-inch interval. As shown, PCBs were detected above the RPRG in four areas. One area located south of the center of Pier 2 represents the maximum concentration reported by the analytical laboratory, greater than ten times the RPRG; PCB concentrations in surrounding samples were below the RPRG. Levels of PCBs are moderately elevated in three other areas: the area located south of the east end of Pier 2, where PCB results were less than five times the RPRG (four samples), an area to the north of the east end of the USS Saratoga (two samples with PCBs less than twice the RPRG), and an area located beneath the east end of Pier 1 (one sample with PCBs less than twice the RPRG).

4.2.1.4 Lead in Surface Sediment

A total of 119 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of lead, which was detected in every sample at levels ranging from 2.3 to 1,410 milligrams per kilogram (mg/kg). The RPRG for lead, 168 mg/kg, was exceeded in 15 samples. Eight of these samples had lead at levels greater than twice the RPRG, including six samples with lead at greater than five times the RPRG. The highest lead levels (greater than 800 mg/kg) were reported in samples DSY-SD-AE24, -J24, -K05, -L24, L28 and -W24.

Figure 4-1D presents the spline interpolation results for lead in surface sediment. The figure indicates that the majority of the elevated lead levels are present around Pier 1 and Pier 2. Areas with lead at greater than five times the RPRG are: south of the west end of Pier 2 (two samples), south of the east end of Pier 2 (four samples), and at the east ends of the two former locations of the aircraft carriers USS Saratoga (one sample) and USS Forrestal (two samples). One area had levels of lead reported between two and five times the RPRG, south of the center of Pier 2 (one sample). Lastly, three areas had levels of lead less than twice the RPRG: north of the east end of Pier 2 (three samples), north of the east end of Pier 1 (one sample), and south of the east end of the T-Wharf (one sample).

4.2.1.5 Tributyltin in Surface Sediment

A total of 119 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of TBT, which was detected in 77 samples at levels ranging from 0.77 to 410 µg/kg. The NOEC for TBT, 228 µg/kg, was exceeded in just one sample, DSY-SD-AD13-0012. Figure 4-1E presents the results of the spline interpolation for tributyltin results in surface sediment.

4.2.1.6 Asbestos in Surface Sediment

A total of 10 surface sediment samples (plus duplicates) were collected from locations beneath Pier 1, only, and submitted for laboratory analysis of asbestos. Asbestos was detected at trace levels (<1 percent) in 8 samples and was not detected in two samples. Because the results are all less than the comparison criterion, asbestos is not mapped on figures presented in this section.

4.2.1.7 Copper in Surface Sediment

A total of 44 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of copper, which was detected in all samples at concentrations ranging from 9.3 to 208 J mg/kg. The BPRG for copper, 74 mg/kg, was exceeded in 17 samples, only four of which exceeded by more than twice the BPRG: DSY-SD-W17, -AD13, -AD21 and -BC30-0012.

The spline interpolation results for copper in surface sediment are presented in Figure 4-1F. Copper was detected at levels between one and five times the BPRG in five areas: south of the T-Wharf (six samples between one and five times the BPRG); at the former location of the USS Forrestal (five samples between one and five times the BPRG); beneath the USS Saratoga (four samples at levels between one and five times the BPRG); at the east end of Pier 2 (one sample less than twice the RPRG); and beneath the center of Pier 1 (one sample less than twice the BRPG).

4.2.1.8 Zinc in Surface Sediment

A total of 44 surface sediment samples (plus duplicates) were collected and submitted for laboratory analysis of zinc, which was detected in all samples at levels ranging from 48.4 to 823 mg/kg. The PRG for zinc, 118 mg/kg, was exceeded in 36 samples.

Figure 4-1G presents the spline interpolation results for zinc in surface sediment, which appears to occur throughout the entire study area at levels between one and ten times the BPRG, and could possibly be attributed to the natural mineral content of sediments within the bay.

4.2.1.9 Total Organic Carbon in Surface Sediment

A total of 119 surface sediment samples were submitted for laboratory analysis of TOC. Sample results ranged from 1,200 to 64,000 J mg/kg. The average TOC was 30,910 mg/kg, and there is no criterion for comparison.

4.2.2 Analytical Results: 12- to 24-Inch Depth Interval

This section presents the results of samples collected from the 12- to 24-inch interval. (The last portion of the sample identification for samples from this group is "1224", indicating the sample collection depth of 12- to 24-inches). There were two sample locations where sediment was not collected below the surface interval; these locations were G29 and AA28. Table 4-2 presents a summary of analytical results (positive detections) for sediment samples collected from the 12- to 24-inch depth interval.

4.2.2.1 HMW PAHs in the 12- to 24-inch Sediment Interval

A total of 117 sediment samples (plus duplicates) were collected from the 12- to 24-inch interval and submitted for laboratory analysis of HMW PAHs, which were detected in all but 18 samples (in 99 samples) at levels ranging from 4.6 J µg/kg to 39,000 J µg/kg. The RPRG for PAHs, 19,903 µg/kg, was exceeded in 7 samples, of which only two had results greater than twice the RPRG: DSY-SD-Y25 and -Y28-1224.

Figure 4-2A presents the spline interpolation results for PAHs in the 12- to 24-inch interval. There are three areas where PAHs were detected at levels above the RPRG: one area located north of the east end of Pier 1 had PAH levels greater than twice the RPRG (four samples), and two areas exceeded the RPRG by less than twice - one beneath the east end of Pier 2 (one sample) and one south of the east end of the T-Wharf (two samples).

4.2.2.2 Benzo(a)pyrene in the 12- to 24-inch Sediment Interval

A total of 117 sediment samples (plus duplicates) were collected from the 12- to 24-inch interval and submitted for laboratory analysis of benzo(a)pyrene. This HMW PAH was detected in 98 of those samples at concentrations ranging from 4.6 J to 2,300 µg/kg. The RPRG for benzo(a)pyrene, 539 µg/kg, was exceeded in 17 samples, of which seven had results greater than twice the RPRG.

Figure 4-2B presents the spline interpolation results for benzo(a)pyrene in the 12- to 24-inch interval, and indicates four areas with levels of benzo(a)pyrene exceeding the RPRG. Three areas exceeded by greater than twice the RPRG: one area in the vicinity of Pier 2, north, beneath, and south of the east end of the pier (three samples); a second area north of the east end of Pier 1 (five samples); and one area south of the T-Wharf (five samples). In a fourth area located approximately 250 feet south of the east end of Pier 2, benzo(a)pyrene levels were less than twice the RPRG (three samples).

4.2.2.3 PCBs in the 12- to 24-inch Sediment Interval

A total of 117 sediment samples (plus duplicates) were collected from the 12- to 24-inch interval and submitted for laboratory analysis of PCBs, detected in 47 samples at concentrations ranging from 49 J to 2,760 µg/kg. The RPRG for PCBs, 1,060 µg/kg, was exceeded in five samples.

Figure 4-2C presents the spline interpolation results for total PCBs in the 12- to 24-inch interval. The maximum PCB level was detected in sample DSY-SD-L24-1224, located south of the center of Pier 2, and was the only value greater than twice the RPRG (between two and five times the RPRG). The other four samples that exceeded the criterion were less than twice the RPRG, and are located in the vicinity of Pier 1 (beneath and just north of the pier's east end).

4.2.2.4 Lead in the 12- to 24-inch Sediment Interval

A total of 117 sediment samples (plus duplicates) collected from the 12- to 24-inch interval were submitted for laboratory analysis of lead, detected in every sample at levels ranging from 2 to 918 mg/kg. The RPRG for lead, 168 mg/kg, was exceeded in 17 samples, six of which were more than twice the RPRG: DSY-SD-C29, -J24, -L24, -W24, -Y25 and -AC24-1224.

Figure 4-2D presents the spline interpolation results for lead in the 12- to 24-inch sediment interval. The figure shows two major areas where lead levels are between two and ten times the RPRG: one area is in the vicinity of the east end of Pier 2 - north, south/southwest, and beneath Pier 2's east end (five samples); one area is partially located at the east/central end of Pier 1, extending to the north approximately 400 feet, and to the south, approximately 200 feet (six samples). Several other samples had lead at lower levels, between one and two times the RPRG, including: two samples in the vicinity of Pier 2, approximately 250 feet south of the east end of the pier; several samples in the vicinity of Pier 1 - one north of the east end of the pier, and two near the center of the pier - one to the north and one south of the center of the Pier 1; and one sample approximately 250 feet south of Pier 1's east end.

4.2.2.5 Tributyltin in the 12- to 24-inch Sediment Interval

A total of 117 sediment samples (plus duplicates) were collected from the 12- to 24-inch interval and submitted for laboratory analysis of tributyltin. Of the 44 samples in which it was detected, tributyltin did not exceed its NOEC of 228 µg/kg in any sample. Figure 4-2E presents the results of the spline interpolation for tributyltin in the 12- to 24-inch interval.

4.2.2.6 Asbestos in the 12- to 24-inch Sediment Interval

A total of 9 sediment samples (plus duplicates) were collected from the 12- to 24-inch interval at locations beneath Pier 1, and were submitted for laboratory analysis of asbestos. Asbestos was detected at a level of 2 percent in one sample, DSY-SD-AA26-1224, and at trace levels (< 1 percent) in 7 samples.

4.2.2.7 Copper in the 12- to 24-inch Sediment Interval

A total of 43 sediment samples (plus duplicates) collected from the 12- to 24-inch interval were submitted for laboratory analysis of copper, which was detected in all 43 samples at levels ranging from 3.2 to 282 J mg/kg. The BPRG for copper, 74 mg/kg, was exceeded in 14 samples, four of which had results between two and five times the BPRG: DSY-SD-G25, W17, AD17 and AA26-1224.

Figure 4-2F presents the spline interpolation results for copper in the 12- to 24-inch interval. Copper levels exceeding the BPRG (between one and five times the BPRG) are present around and beneath all but the west end of Pier 1 (11 samples), and at the east end of Pier 2 (one sample).

4.2.2.8 Zinc in the 12- to 24-inch Sediment Interval

A total of 43 sediment samples (plus duplicates) collected from the 12 to 24-inch interval were submitted for laboratory analysis of zinc, which was detected in all 43 samples at levels ranging from 20.8 to 675 mg/kg. The BPRG for zinc, 118 mg/kg, was exceeded in a total of 28 samples, of which 10 exceeded by more than twice the BPRG, with two of those at levels greater than 5 times the BPRG.

Figure 4-2G presents the spline interpolation results for zinc in the 12- to 24- inch interval. As was the case for surface sediments, in the 12- to 24-inch interval, zinc also appears to occur throughout the entire Study Area at levels between one and ten times the BRG, and could possibly be attributed to the natural mineral content of sediments within the bay.

4.2.3 Analytical Results: 24- to 48-Inch Depth Interval

This section presents the analytical results of samples collected from the 24- to 48-inch interval (the last portion of the sample identifier for samples from this group is “2448”, indicating the sample collection depth of 24 to 48 inches). There were six sample locations where sediment was not collected from the 24- to 48-inch interval, due to poor penetration, recovery, or both; these locations were G29, J24, Y30, AA28, AA30 and AE30. Table 4-3 presents a summary of analytical results for sediment samples collected from the 24- to 48-inch interval.

4.2.3.1 HMW PAHs in the 24- to 48-inch Sediment Interval

A total of 113 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of PAHs, which were detected in 73 samples at levels ranging from 5.2 to 41,000 J µg/kg. The RPRG for PAHs, 13,903 µg/kg, was exceeded in four samples, two samples (DSY-SD-AA05 and AB11-2448) exceeded by between two and five times the RPRG, and two samples exceeded by less than twice the RPRG. Sample location -AB11 is where potential sand blast grit was observed during sampling.

Figure 4-3A presents the spline interpolation results for PAHs in the 24- to 48- inch interval. Three areas where PAH levels exceed the RPRG are indicated. In the vicinity of Pier 1, beneath and just south of the west/center portion of the pier, PAHs are present at levels between two and five times the RPRG (two samples). PAH levels are present at less than twice the RPRG in one sample collected south of the east end of Pier 1, and in one sample from beneath the east end of Pier 2.

It is worth noting that at former location DSY28, sediments previously were found to contain elevated concentrations of PAHs at a depth of 26-34 inches. This location is approximately at grid location AE28. Data from sample AE28 collected in 2011 did not substantiate these previously elevated concentrations measured in 1995. This could be a result of a thicker layer of new sediment above the former deep sample or because the older 8-inch interval was bridged by a larger interval of 24 inches resulting in some dilution of what may be a narrow band of contamination.

4.2.3.2 Benzo(a)pyrene in the 24- to 48-inch Sediment Interval

A total of 113 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of benzo(a)pyrene, which was detected in 73 samples at levels ranging from 5.2 to 2,100 µg/kg. The RPRG for benzo(a)pyrene, 539 µg/kg, was exceeded in eight samples, of which three exceeded by between two and five times the RPRG, and the remaining five exceeded by less than twice the RPRG. Benzo(a)pyrene exceeded the RPRG at location AB11, where potential sand blast grit was observed during sampling.

Figure 4-3B presents the spline interpolation results for benzo(a)pyrene in the 24- to 48-inch interval. The five areas indicated where benzo(a)pyrene exceeds the RPRG are similar to areas where HMW PAH levels exceed the RPRG. Benzo(a)pyrene is present at levels between two and five times the RPRG in three areas: one area in the vicinity of the west and central portions of Pier 1 - beneath and south of the pier (three samples); one area beneath and south of the east end of Pier 1 (two samples); and one area beneath the east end of Pier 2 (one sample). Additionally, there are two locations where levels are less

than two times the RPRG: one sample from beneath the center of Pier 1, and one sample south of the T-Wharf's east end.

4.2.3.3 PCBs in the 24- to 48-inch Sediment Interval

A total of 113 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of PCBs (total aroclors), which were detected in 40 samples at levels ranging from 32 to 2,600 µg/kg. The RPRG for PCBs, 1060 µg/kg, was exceeded in four samples, of which one sample exceeded by greater than twice the RPRG (DSY-SD-AC30-2448), while the remaining three samples had PCBs at levels less than twice the RPRG.

Figure 4-3C presents the spline interpolation results for PCBs in the 24- to 48-inch interval. In one area, beneath and south of the east end of Pier 1, PCBs are present at levels between two and five times the RPRG (two samples). Two other samples had PCBs at levels less than twice the RPRG - one located south of the east end of Pier 1, and one beneath the west/central end of Pier 1.

4.2.3.4 Lead in the 2 to 4 foot Sediment Interval

A total of 113 sediment samples (plus duplicates) collected from the 24 to 48-inch interval were submitted for laboratory analysis of lead, which was detected in every sample at levels ranging from 1.8 to 842 mg/kg. The RPRG for lead, 186 mg/kg, was exceeded in nine samples.

Figure 4-3D presents the spline results for 2 to 4 foot interval sediment lead results. There are 5 general areas where lead levels are elevated in the 2 to 4 foot interval. The three most elevated areas are about 250 feet south of the east end of Pier 2, beneath the west end of the former location of the Forestall and at the east end of Pier 1. At each of these locations, concentrations of lead are greater than twice the RPRG. There are also two other locations where concentrations were between one and two times the RPRG, one beneath the east end of Pier 2 and the other beneath the center of Pier 1.

4.2.3.5 Tributyltin in the 24- to 48-inch Sediment Interval

A total of 113 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of TBT, which was detected in 25 samples at levels ranging from 0.75 J to 240 µg/kg. The NOEC for TBT, 228 µg/kg, was exceeded in one sample, with a result of 240 µg/kg. The sample was collected beneath the center of Pier 1, as shown in Figure 4-3E, which presents the spline interpolation results for TBT in the 24- to 48-inch interval.

4.2.3.6 Asbestos in the 24- to 48-inch Sediment Interval

A total of eight sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted to the analytical laboratory for asbestos analysis. Asbestos was detected in seven samples, six of which had asbestos at levels less than 1 percent. In sample DSY-SD-AA26-2448, collected from the east end of Pier 1, asbestos was reported at 2 percent.

4.2.3.7 Copper in the 24- to 48-inch Sediment Interval

A total of 42 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of copper, detected in all 42 samples at levels ranging from 2.5 J to 295 J mg/kg. The BPRG for copper, 74 mg/kg, was exceeded in 17 samples, of which only six exceeded the BPRG by more than two times.

Figure 4-3F presents the spline interpolation results for copper in the 24- to 48-inch interval, indicating the presence of copper at levels greater than the BPRG beneath both Piers 1 and 2. Copper levels are between one and five times the BPRG at the west end of Pier 2 (three samples), at the central and east end of Pier 2 (three samples), beneath and south of the west/central end of Pier 1 (four samples), and beneath the central and east portions of Pier 1 (six samples).

4.2.3.8 Zinc in the 24- to 48-inch Sediment Interval

A total of 42 sediment samples (plus duplicates) collected from the 24- to 48-inch interval were submitted for laboratory analysis of zinc, detected in all 42 samples at levels ranging from 17.7 to 931 J mg/kg. The BPRG for zinc, 118 mg/kg, was exceeded in 25 samples, of which only three samples exceeded the zinc BPRG by more than five times: DSY-SD-G25, -AD09 and -AE28-2448.

Figure 4-3G presents the spline interpolation results for zinc in the 24- to 48-inch interval. Throughout the Study Area, zinc appears to be present at levels between one and ten times the BPRG in sediments from the 24- to 48-inch interval. As noted for zinc in the more shallow sediments, these levels could be representative of background conditions.

5.0 SUMMARY AND CONCLUSIONS

The summary of the Supplemental Sediment Investigation provides a review of investigative actions and findings with respect to the goals listed in Worksheet 11 of the SAP. The conclusions will provide the project team's determination of the next steps required toward developing the Revised FS.

5.1 EXTENT OF ELEVATED LEVELS OF LIMITING COCs

Sediment samples collected as part of this field effort were analyzed for all of the following limiting COCs, as defined in the PRG Document (SAIC, 1998): total HMW PAHs, benzo(a)pyrene, total PCBs, and lead. The following sections summarize the distribution of limiting COCs, at each depth interval.

5.1.1 PAHs

PAHs were detected in sediments from all three sample intervals (0- to 12-inches, 12- to 24-inches and 24- to 48-inches) at levels elevated above the RPRG of 13,903 µg/kg. The highest levels were reported in surface sediments (0- to 12-inch interval), where two samples had PAHs at levels of 117,000 µg/kg and 186,000 µg/kg. Highest concentrations of total PAHs are indicated in near-shore sediment adjacent to Pier 1, and levels decrease to between one and two times the RPRG in the 24 to 48-inch depth interval in this area.

A second area of elevated PAHs is located near shore, near the T-Wharf, where levels are greater than five times the RPRG in surface sediment, but appear to decrease to levels below the RPRG in the bottom sample interval. In the 12 to 24-inch depth interval, sediments have PAH levels between one and two times the RPRG.

Lastly, a few areas located beneath and around Pier 1 have sediments with PAH concentrations at moderately elevated levels in all three depth intervals, however, there are no clear distribution patterns of PAHs throughout all three sample depth intervals in this area; elevated levels appear to be located in different areas depending on the depth interval. The distribution of PAHs is fairly consistent with that previously observed in site sediments.

5.1.2 Benzo(a)pyrene

Distribution of benzo(a)pyrene is similar to those identified for PAHs in the 0- to 12-inch interval of sediment. Near shore (near Pier 2), elevated levels of benzo(a)pyrene are as high as 8,800 µg/kg. As the depth increases, the levels of benzo(a)pyrene and the size of the affected area decrease. In the 24 to

48-inch interval, benzo(a)pyrene occurs at lower levels than in the surface sediment, and the area with elevated concentrations too is much less.

In the near-shore area near the T-Wharf, the same pattern of decreasing levels with increasing depth is evident. In the surface sediment interval in this area, levels of benzo(a)pyrene are as high as 9,000 µg/kg, and in the 24 to 48-inch interval, there is only a small area with elevated levels.

Lastly, no benzo(a)pyrene distribution patterns associated with depth are apparent in the sediment beneath and around Pier 1. While sediments with benzo(a)pyrene at elevated levels are present in all three depth intervals, the locations of these areas are inconsistent between the depth intervals.

5.1.3 Total PCBs

The highest levels of PCBs were detected in sediment from the 0 to 12-inch interval on the south side of Pier 2's midpoint. PCBs were not detected at levels above the RPRG of 1,060 µg/kg in the intervals beneath 12 inches at this location. PCBs were also found at elevated levels between the east ends of the piers, along the waterfront. Levels in these areas decrease with depth, and in the 24 to 48-inch interval, PCB levels are below the RPRG. Lower levels of PCBs (between one and two times the RPRG) were detected below the east end and center of Pier 1, and immediately south of this area. Again, there was no discernible distribution pattern of elevated PCBs throughout the depth intervals in this area. In the area immediately south of the east end of Pier 1, one sample collected from the 24 to 48-inch interval did have PCBs present at an elevated level.

5.1.4 Lead

The highest levels of lead were detected in the 0 to 12-inch (up to 1,410 mg/kg) and 12 to 24-inch intervals (up to 1,100 mg/kg). Elevated lead levels above the RPRG of 168 mg/kg were also detected in the 24 to 48-inch interval, but at lower concentrations over all (up to 788 mg/kg). The two areas with lead at levels consistently greater than RPRGs at all depth intervals are the east ends of both Piers 1 and 2. Lead is present at elevated levels in surface sediment at the west end of Pier 2, and south of its center, but not in deeper sediments, and elevated levels of lead are present in the 24 to 48-inch interval sediments located at the west/central end of Pier 1, but not in the shallower sediments.

5.1.5 Site-Wide Distribution of Elevated COCs

In summary, the sediment data collected for RPRGs in 2011 indicate that sediment with elevated COC levels is present mostly on the south (midsection) and east end of Pier 2, on the south (midsection) and northeast area of Pier 1, and south of the T-Wharf.

The PRG document (SAIC, 1998) identified four general areas where COC levels in surface sediment were elevated in relation to RPRGs (south of the east end and center of Pier 2, south of the east end of Pier 1, at SD-18, and west and south of the T-Wharf). Areas identified in the PRG document with elevated COC levels in surface sediment were resampled during this Supplemental Sediment Investigation. The additional coverage provided by the more detailed grid used during this study established some areas of concern that were previously unidentified, but not others. New areas identified with elevated COCs in surface sediment are beneath and north of the east ends of Piers 1 and 2, beneath and south of the west end of Pier 2, and south of the center of Pier 1 (former location of the USS Forrestal). Areas that were previously identified with elevated COC levels in surface sediment, but were not elevated in the more detailed 2011 investigation include SD-18 (approximately 700 feet north of Pier 2), and areas northwest of the T-Wharf.

Sediments in the 12 to 24-inch interval are elevated above RPRGs mostly near shore: on the east end of Pier 2, on the east and northeast end of Pier 1, and south of the T-Wharf.

Sediments in the 24 to 48 inch interval that are elevated in relation to RPRGs are mostly near shore (on the east ends of Piers 1 and 2) and on the west-central portion of Pier 1. This vertical distribution of data indicates that contaminant burial is occurring at the site.

5.2 TRIBUTYLTIN

As described in the “Summary of TBT at Site 19 Derecktor Shipyard” letter (Tetra Tech, 2008b), a PRG was not established for TBT when other PRGs were developed because at the time there was no water quality screening level. Additionally, TBT was not detected in any elutriate samples, indicating that TBT was not available to some critical receptors. However, in compliance with a request of the regulatory review parties, a PRG for TBT in bedded sediment was calculated in 2008 using the same approach done in 1998 by SAIC for other COCs using a newly published ambient water quality criterion for TBT. The PRG calculated was 65.8 µg/kg. Using data available in 2008, only two locations were elevated in relation to this value, and these locations did not correlate with mortality in Ampelisca toxicity samples collected during the ERA. Therefore, no dose-response relationship for TBT using sediment toxicity was

determined. Using this information from the ERA, a NOEC of 228 µg/kg was established for TBT at the site (Tetra Tech, 2008b).

Data from the 2011 investigation shows that there are two samples where TBT levels in sediment are elevated in relation to the NOEC calculated in 2008. One sample was collected from the 0 to 12-inch interval at location AD13, located at the former location of both the ex-Forrestal and one of the dry docks on the south side of Pier 1 (460 µg/kg). The second sample was collected from the 24 to 48-inch interval at location AA13, located beneath the center of Pier 1 (240 µ/kg). The higher concentration found at location AD13 is co-located with locations where RPRGs are exceeded. The lower concentration is covered by two feet of sediment and is located beneath Pier 1, providing further protection from exposure.

Based on this information, the former findings of the ERA and the PRG document are valid and it is not necessary to calculate a PRG for TBT.

5.3 LEVELS OF COPPER AND ZINC IN SEDIMENT

Sediment samples collected from around and beneath the piers, and south of the T-Wharf were also analyzed for zinc and copper in accordance with the SAP, as recommended by the regulatory agencies. Concentrations of copper and zinc measured in sediment are summarized in Section 4 of this report, and a full set of analytical results, including copper and zinc is provided in Appendix B1.

The screening levels used for copper and zinc in this investigation were set at the baseline PRG values calculated in the PRG document (SAIC, 1998). RPRGs were not developed for these analytes and the end use of the copper and zinc data was not specified in the SAP. In general, copper and zinc were found at levels greater than baseline PRGs, but at levels similar to previously collected samples. Samples collected for this study were able to fill data gaps and confirm that copper and zinc levels are also greater than BPRGs beneath and surrounding Piers 1 and 2.

The PRG document developed by SAIC in 1998 determined that copper and zinc were not limiting COCs, and therefore RPRGs were not developed for these constituents. Copper was not considered a limiting COC because it was found to be at levels low enough to be considered to have low or no-bioavailability during development of the ERA. Additionally, levels of copper detected in samples collected by URI in 1993 and 1994 were higher than samples evaluated in the ERA but it was determined that these levels still had no significant effect on risk. Of the samples collected by URI, the maximum result was 262 mg/kg. The maximum level of copper detected in surface sediment samples during the Supplemental Sediment Investigation was 208J mg/kg. The maximum copper level detected in all sediment samples

collected during the Supplemental Sediment Investigation was 295 mg/kg, indicating similar conditions that were measured during the ERA.

Zinc was identified as a COC in the PRG document because of the Avian Predator Exposure Pathway but definition of a RPRG was determined to be unwarranted due to the conservative exposure assumptions made in the ERA. Although the zinc PRG was exceeded in the ERA, the avian predator would have to spend its entire life feeding in the affected area for true risks to occur. This fact led to the conclusion that a RPRG should not be adopted for Zinc. Zinc levels in sediment samples collected as part of the ERA ranged from 47.25 mg/kg to 393 mg/kg; while zinc levels in sediment samples collected by URI in 1993/1994 ranged from 48.32 mg/kg to 1231 mg/kg. Zinc levels in surface sediment samples collected during the Supplemental Sediment Investigation ranged from 48.4 mg/kg to 823 mg/kg; while zinc levels in all samples ranged from 17.7 mg/kg to 931 J mg/kg; indicating similar conditions to those previously described in the ERA.

Based on this information, there is no new information that should lead to revision of the 1998 PRG document with regard to the role of copper and zinc.

5.4 DETERMINATION OF PRESENCE OF ASBESTOS

Through the analysis of sediment samples collected from beneath Pier 1 it was determined that asbestos is present at very low levels. Worksheet 11 of the SAP defined the action limit for asbestos as 1 percent (a common definition of ACM). There were no surface sediment samples with asbestos levels greater than 1 percent. Two surface sediment samples provided results of non-detect while the remaining eight samples were found to contain less than 1 percent, the screening level. Analysis of two subsurface samples (one from each interval) indicated the presence of asbestos at 2 percent. Both of these results were from samples collected at location AA26.

5.5 PHYSICAL CHARACTERISTICS OF THE SITE

This section summarizes the findings of the bathymetric survey, the ADCP measurements, radioisotope analysis, and the sediment cohesion information. The data from these studies were obtained to assess the probability that current flow and/or ship traffic are able to disturb and resuspend sediment within the Study Area. Table 5-1 presents an overall summary of this information.

5.5.1 Bathymetry

Throughout the northern two-thirds of the study area, water depths are generally between 36 and 40 feet below MLLW, excluding areas beneath Piers 1 and 2, and areas within 50 feet of the shoreline. Beneath Piers 1 and 2, water depths during sediment sampling were measured at between 15 and 20 feet below MLLW at the east ends of the piers, and between 30 and 35 feet below MLLW at the west ends of the piers, depending on tides. In the southern portion of the study area, water depths range from approximately 3 to 30 feet below MLLW, with distance from the shoreline. This area receives a minimal amount of boat traffic, if any.

The study area has been dredged during various periods of the port and shoreline development. The first dredging project occurred in 1942 on the west side (outboard) of the T-Wharf. The northern portion of the study area was dredged during construction of Piers 1 and 2 (1954 to 1956), and after construction, targeted areas were also dredged. The last recorded dredging project was in 1968 in the area north of the east end of Pier 1. Water depths measured during 2011 appear to be similar to the post-dredging sounding measurements collected after each dredging project, although the precision and the vertical control on the older surveys is unknown. There are two areas south of Pier 1 where ships were formerly berthed, and where evidence of some sedimentation is present: imagery of the sediment contours in this area show the outlines of two ship hulls, an indication that the presence of these ships decreased flow velocities enough to allow sediment to fall out of suspension in the areas around the former hulls. However, because these outlines do not appear on the one-foot topographic map generated by the same sonar scan (Figure 3-2), it is concluded that these depositional features are less than 1 foot in height.

Overall, sediment deposition appears to occur throughout the cove and is particularly higher in near shore areas and in areas where obstructions exist. The sediment outline of the third ship formerly south of the former location of the Ex-Forrestal, still present over 5 years after the ship's departure, and the clear outline of the Ex-Forrestal, present one full year after the ship's departure indicates that, once deposited, sediment tends to remain in place and is not scoured during normal cove conditions.

5.5.2 ADCP Measurements

Overall, the ADCP data shows that currents within the study area are dominated by tides, and mean flow velocities range from 0.1 to 2.9 cm/sec. Maximum velocities measured near the bottom ranged from 9.2 to 28 cm/sec, which corroborates the work conducted by URI in 1995 that reported velocities between 2 and 25 cm/sec near the sediment surface. Velocities in the near shore areas were lower than those measured in outer cove areas. Data on suspended solids in the water column gathered during this effort

indicate that levels range from near zero to about 20 mg/L. Based on this information, it can be concluded that during steady state conditions, flow velocities are low, indicating a stable environment.

5.5.3 Radioisotope Analysis

Sediment cores collected at ten locations were sub-sampled and analyzed for polonium (po) 210 analysis as po210 is a daughter product of lead-210 isotopes. This data was used to generate estimates of sediment accumulation rates. Overall, the radioisotope assessment shows that sediment is accumulating in the Study Area at a rate of up to 2.23 cm/year. The cores did not show evidence of significant bioturbation or resuspension. At all ten locations studied, the measurements indicate a depositional environment with higher rates evident in near shore areas.

5.5.4 Sediment Transport

Cohesion testing was conducted at 10 locations where ADCP measurements also evaluated current flow. The testing results for the cohesion test cores collected in the study area indicate that sediments are vertically stratified, with bedding layers present. Also, all cores exhibited cohesive erosional behavior, and the critical shear stress for erosion generally increased with depth, and erosion rates at a given shear stress decreased with depth. The range of near-bottom velocities reported (0.1 cm/sec to 28.0 cm/sec) would not be sufficient to erode even the un-compacted surface layer. The upper end of the velocity range occurs at the station furthest from shore and furthest from the impacted sediment. Deeper layers of sediment, even in the areas where higher sedimentation rates were estimated would require even higher rates of flow for erosion to occur. The sediment stability report defines the critical shear stress for this surface layer to be 0.2 Pa, which equates to a flow velocity of 28.7 cm/sec. These data indicate that in order to resuspend or erode sediment in the study area, current velocities higher than those that were observed in the areas where contaminated sediments exist would be required, indicating that the sediment is not being eroded under steady-state conditions.

5.6 CONCLUSIONS

Based on the data provided in this Supplemental Sediment Investigation, the following conclusions are made:

1. The Coddington Cove area near the piers where the former shipyard operated is a depositional environment, and not a scouring environment, under steady state conditions. Suspended sediments will settle out of the water column, particularly in near-shore areas and areas near obstructions, such as the piers and the ships formerly docked long-term. A flow velocity of 28.7 cm/sec is estimated to

be required to resuspend un-compacted surface sediment, based on cohesion tests conducted. Near-bottom maximum flow velocities measured in the study area during calm conditions ranged from 9.2 cm/sec near the shoreline where impacted sediment is present to 28.0 cm/sec in the outer portions of the cove. Such conditions suggest that over time, further deposition would further isolate contaminants present in the sediment.

2. Elevated COCs were most frequently found in sediment samples in areas near the piers and near the shore (near the east ends of the piers, near the bulkhead, and shoreline). This indicates that both on-shore and off-shore sources could have contributed to the elevated levels in the sediment. Over time, sediment deposition in the cove appears to have covered other sediments with elevated COCs, now located in the 24- to 48-inch depth interval in the area south of the center of Pier 1, where one of the former dry docks was positioned during the former shipyard operations. The distribution of elevated COCs matches the general conceptual site model for Site 19, although this model did not include the Pier 2 area, which was outside the site boundaries.

3. Measurements related to the evaluation of natural recovery processes at the site include the following:

    a. near-bottom flow measurements indicate a depositional environment, especially in near-shore areas and areas with impacted sediment;
    b. bathymetry shows that obstructions are further encouraging deposition of sediment;
    c. COCs are present in deeper sediment; and
    d. radioisotope analysis indicates sediment bedding and deposition over time.

TABLES

TABLE 1-1
SUMMARY OF RECOMMENDED PRGs
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT, RI

COC	POTENTIAL PRGS								RECOMMENDED PRGs	
	Ecological Risk Endpoint						Human Health Risk Endpoint			
	Aquatic Bedded[2]		Aquatic Resuspended[3]		Avian Predator[4]		Subsistence Fisherman[5]		All Endpoints	
	BPRG (HQ=1)	RPRG	BPRG (HQ=1)	RPRG	BPRG (HQ=1)	RPRG	BPRG (HQ=1)	RPRG	BPRG	RPRG
copper	NA	NA	73.74 mg/kg	none	184 mg/kg	none	none	none	73.74 mg/kg	none
lead[1]	NA	NA	83.94 mg/kg	168 mg/kg	622,000 mg/kg	none	NA	NA	83.94 mg/kg	168 mg/kg
TBT	The TBT concentration of 228 µg/kg is a No-Observed Effects Concentration (NOEC) for ecological receptors								NA	NA
zinc	NA	NA	NA	NA	118 mg/kg	none	NA	NA	118 mg/kg	none
benzo(a)pyrene[1]	NA	NA	NA	NA	NA	NA	53.92 µg/kg	539 µg/kg	53.92 µg/kg	539 µg/kg
HMW PAHs[1]	6,951 µg/kg	13,903 µg/kg	NA	NA	NA	NA	NA	NA	6,951 µg/kg	13,903 µg/kg
Total PCBs[1]	1,638 µg/kg	1,638 µg/kg	530 µg/kg	1,060 µg/kg	92.82 µg/kg	none	NA	NA	92.82 µg/kg	1,060 µg/kg
asbestos	The asbestos concentration of 1% is considered a common definition of asbestos-containing material								NA	NA

Notes:

1. COCs noted are "Limiting COCs" - those with the maximum contribution to risk for each station and pathway.
2. Toxicity to aquatic organisms (amphipods) exposed to bedded sediment.
3. Toxicity to aquatic organisms (sea urchin larvae) exposed to resuspended sediment.
4. Modeled effects to avian predator species ingesting shellfish (bivalves or lobster) exclusively from the study area.
5. Predicted health effects to subsistence fisherman ingesting shellfish (bivalves or lobster) exclusively from the study area.

COC - contaminant of concern
PRG - preliminary remediation goal
BPRG - baseline preliminary remediation goal
RPRG - reccommended preliminary remediation goal
HQ - hazard quotient
TBT - tributyltin
HMW PAHs - high molecular weight polyaromatic hydrocarbons
PCBs - polychlorinated biphenys
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
NA - not applicable : contaminant is not a limiting COC for the endpoint noted
none - recommended PRG not developed for this receptor (SAIC, 1998)

TABLE 2-1
FIELD MODIFICATIONS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

FIELD MODIFICATION	JUSTIFICATION
FMR G02747-01: Worksheet #20 of the SAP requires that one rinsate blank be collected for every 20 samples. One rinsate blank was collected each day or one for every 20 samples, whichever was fewer.	The sample team was collecting between 30 and 40 samples per day. So as to not have to stop sampling to collect a rinsate blank, the FOL discussed with the QC staff and determined that one rinsate blank per day would be sufficient.
FMR G02747-02: Worksheet #20 required that one duplicate sample be collected for every 20 radioisotope samples. No duplicates were collected for radioisotope analysis.	In order to capture the 1 inch of sediment needed from the 3-inch-diameter core, the core tube was frozen with the sediment still inside. Once the sediment was frozen, the selected interval was cut from the core. This technique did not involve homogenization (appropriate for splitting off a duplicate sample) and also did not provide enough sediment volume for duplicate analysis.
In the SAP, sample location C09 was identified for analysis of zinc, copper, lead, HMW PAHs, PCBs and TBT. Analysis of zinc and copper was not performed on the sample from the 0- to 12-inch interval at this location.	A field error was made when the chain-of-custody form was filled out. The box for lead analysis (not lead, copper and zinc analysis) was checked, so the laboratory did not perform zinc or copper analysis on the sample.
At sample location G29, the only interval sampled was 0 to 18 inches.	The core barrel could not penetrate beyond 1.5 feet. The volume of sediment did not allow for an interval from 12 to 18 inches and all sediment volume in the core tube was needed for the 0- to 12-inch analysis, so it was called a 0- to 18-inch sample interval.
At sample location J24, the 24- to 48-inch sample interval was not collected.	Recovery was only 1.7 feet. In the field, observations were made indicating that the 1.7 feet represented only the top two feet (see sample log sheet).
At sample location Y30, the 24- to 48-inch sample interval was not collected.	Recovery was only 1.7 feet. In the field, observations were made indicating that the 1.7 feet represented only the top two feet (see sample log sheet).
At sample location AA26, the bottom sample interval was from 24 to 36 inches, rather than 24 to 48 inches.	Core barrel refusal at 3 feet.
At sample location AA28 the only interval sampled was 0 to 16 inches	Core barrel refusal at 1.4 feet, and only enough sediment volume for one sample, so the interval was 0 to 16 inches, rather than 0 to 12 inches.
At sample location AA30, the 24- to 48-inch interval was not sampled.	Core barrel refusal at 2.2 feet, compact sandy layer encountered at 1.8 feet.
At sample location AE30, the 24- to 48-inch interval was not sampled.	A sandy gravel layer with some clay was encountered at 1.5 feet, and obstructed material below 1.7 feet from entering the core barrel, although penetration of 4 feet was achieved.

TABLE 2-2
SAMPLE LOCATION JUSTIFICATION
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE LOCATION(S)	JUSTIFICATION
SD-18	Sample location at former sample location DSY-18
C09, C13, C17, C21, C25, C29, G01, G05, G09, G13, G17, G21, G25, G29, J24, J26, J28, J30, K09, K13, K17, K21	Sample locations surrounding and beneath Pier 2 to investigate potential contamination caused by former industrial actions that occurred at Pier 2.
K05	Location of USACE sample S4, elevated Cu concentration in 1987.
L24, L26, L28, N24, N26, N28	Sample locations surrounding former sediment location DSY-27.
L30, M30	Investigate potential contamination along sheetpile wall from onshore runoff and stormdrain outlets.
O09, O13, O17, O21, Q25, Q29, S09, S13, S17, S21, T25, T29	Locations chosen to investigate areas that were previously not sampled, or areas where previously collected sample results indicated little or no contamination (in order to confirm sediment has not mobilized and contaminated previously uncontaminated areas).
W24, W26, W28, W30, Y24, Y26, Y28, Y30	Area surrounding former sample location DSY-SD-103.
W09, W13, W17, W21, Y03	Area at the hull of Sarratoga to investigate potential contamination from the inactive ship. This area also harbored a floating drydock reportedly used for sandblasting and ship maintenance.
AA01, AA05, AA09, AA13, AA17, AA21, AA24, AA26, AA28, AA30	Area beneath Pier 1, not previously sampled and suspected asbestos contamination from former steam lines.
AD01	Area not previously investigated
AD05, AD09, AD13, AD17, AD21, AB11, AB15	Area beneath former location of the Forrestal to investigate potential contamination from the inactive ship. Area was also the location of a floating drydock reportedly used for sandbalsting and ship maintenance.
AC24, AC26, AC28, AC30, AE24, AE26, AE28, AE30, AG24, AG26, AG28, AG30, AI24, AI26, AI28, AI30, AK24, AK26, AK28, AK30	Area surrounding former sample locations DSY-02, DSY-28 and DSY-SD-104. Also along sheetpile wall to investigate potential contamination from onshore runoff and stormwater drain outfalls.
AO30, AT30, AY30	Confirm that no contamination is present within the stillwater area.
AP20, AT16, AT20, AT24, AX20	Investigate area surrounding former sample location DSY-30.
AX06, BB02, BB06, BB10, BF06	Investigate area surrounding former sample location DSY-22
BB26, BC28, BC30, BD26, BE28, BE30, BF23, BG26, BG28, BI26, BJ23	Investigate area south of former Building A18, and the former location of the Greenport Ferry, also resample area surrounding DSY-29 and DSY-03.

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-18-0012	3.2/4.3	3.2/4	X		X					
DSY-SD-18-1224			X							
DSY-SD-18-2448			X							
DSY-SD-C09-0012	5.2/5.9	3.6/4	X	X	X					
DSY-SD-C09-1224			X	X						
DSY-SD-C09-2448			X	X						
DSY-SD-DUP30-100711			X	X						
DSY-SD-C13-0012	4.5/5.6	3.5/4	X		X					
DSY-SD-C13-1224			X							
DSY-SD-C13-2448			X							
DSY-SD-C17-0012	3.1/4.2	3.0/4	X		X					
DSY-SD-C17-1224			X							
DSY-SD-C17-2448			X							
DSY-SD-C21-0012	3.7/5.0	3.0/4	X		X					
DSY-SD-C21-1224			X							
DSY-SD-C21-2448			X							
DSY-SD-C25-0012	4.2/5.4	3.5/4	X		X					
DSY-SD-C25-1224			X							
DSY-SD-C25-2448			X							
DSY-SD-DUP29-100711			X							
DSY-SD-C29-0012	2.5/4.0	2.5/4	X		X					
DSY-SD-C29-1224			X							
DSY-SD-C29-2448			X							
DSY-SD-G01-0012	4.1/4.5	4.0/4	X	X	X					
DSY-SD-G01-1224			X	X						
DSY-SD-G01-2448			X	X						
DSY-SD-G05-0012	4.0/4.3	3.9/4	X	X	X					
DSY-SD-G05-1224			X	X						
DSY-SD-G05-2448			X	X						
DSY-SD-DUP31-101211			X	X						
DSY-SD-G09-0012	3.1/4.0	3.1/4	X	X	X					
DSY-SD-G09-1224			X	X						
DSY-SD-G09-2448			X	X						
DSY-SD-G13-0012	3.0/4.0	3.0/4	X	X	X					
DSY-SD-G13-1224			X	X						
DSY-SD-G13-2448			X	X						
DSY-SD-G17-0012	3.2/4.1	3.1/4	X	X	X					
DSY-SD-G17-1224			X	X						
DSY-SD-G17-2448			X	X						
DSY-SD-DUP32-101211			X	X						
DSY-SD-G21-0012	3.5/4.2	3.0/4	X	X	X					
DSY-SD-G21-1224			X	X						
DSY-SD-G21-2448			X	X						
DSY-SD-G25-0012	2.8/4.0	2.6/4	X	X	X					
DSY-SD-G25-1224			X	X						
DSY-SD-G25-2448			X	X						
DSY-SD-G29-0018	0.9/1.5	0.9/1.5	X	X	X					Refusal at 1.5 feet
DSY-SD-J24-0012	2.0/4.0	1.7/4	X		X					Sheen and petroleum like odor, product smeared on interior or core tube
DSY-SD-J24-1224			X							Dense material at 10 inches prevented sediment below that interval from entering core tube
DSY-SD-J26-0012	3.1/4.2	2.8/4	X		X					
DSY-SD-J26-1224			X							
DSY-SD-J26-2448			X							
DSY-SD-DUP24-100411			X							
DSY-SD-J28-0012	3.8/5.0	3.6/4	X		X					
DSY-SD-J28-1224			X							
DSY-SD-J28-2448			X							
DSY-SD-J30-0012	3.3/4.0	3.3/4	X		X					
DSY-SD-J30-1224			X							
DSY-SD-J30-2448			X							

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-K05-0012	5.0/5.9	3.8/4	X	X	X					
DSY-SD-K05-1224			X	X						
DSY-SD-K05-2448			X	X						
DSY-SD-K09-0012	5.0/5.9	3.8/4	X		X					
DSY-SD-K09-1224			X							
DSY-SD-K09-2448			X							
DSY-SD-DUP21-100311			X		X					
DSY-SD-K13-0012	4.4/5.6	3.2/4	X		X					Slight petroleum like odor, sheen
DSY-SD-K13-1224			X							
DSY-SD-K13-2448			X							
DSY-SD-K17-0012	4.1/5.3	3.0/4	X		X					
DSY-SD-K17-1224			X							
DSY-SD-K17-2448			X							
DSY-SD-K21-0012	3.8/5.0	3.0/4	X		X					
DSY-SD-K21-1224			X							
DSY-SD-K21-2448			X							
DSY-SD-L24-0012	4.7/5.7	3.8/4	X		X					
DSY-SD-L24-1224			X							
DSY-SD-L24-2448			X							
DSY-SD-L26-0012	4.5/5.6	3.8/4	X		X					
DSY-SD-L26-1224			X							
DSY-SD-L26-2448			X							
DSY-SD-L28-0012	3.4/4.6	3.4/4	X		X					
DSY-SD-L28-1224			X							
DSY-SD-L28-2448			X							
DSY-SD-DUP25-100411			X							
DSY-SD-L30-0012	3.6/4.2	3.6/4	X		X					
DSY-SD-L30-1224			X							
DSY-SD-L30-2448			X							
DSY-SD-N24-0012	4.9/5.9	3.7/4	X		X					
DSY-SD-N24-1224			X							
DSY-SD-N24-2448			X							
DSY-SD-DUP26-100511			X							
DSY-SD-N26-0012	3.6/5.0	3.0/4	X		X					
DSY-SD-N26-1224			X							
DSY-SD-N26-2448			X							
DSY-SD-N28-0012	3.5/4.9	3.0/4	X		X					
DSY-SD-N28-1224			X							
DSY-SD-N28-2448			X							
DSY-SD-N30-0012	3.0/4.0	2.7/4	X		X					
DSY-SD-N30-1224			X							
DSY-SD-N30-2448			X							
DSY-SD-O09-0012	4.1/4.8	3.5/4	X		X					
DSY-SD-O09-1224			X							
DSY-SD-O09-2448			X							
DSY-SD-O13-0012	3.0/4.0	3.0/4	X		X					
DSY-SD-O13-1224			X							
DSY-SD-O13-2448			X							
DSY-SD-DUP17-093011			X		X					
DSY-SD-O17-0012	3.1/4.1	3.0/4	X		X					
DSY-SD-O17-1224			X							
DSY-SD-O17-2448			X							
DSY-SD-O21-0012	3.0/4.0	2.8/4	X		X					
DSY-SD-O21-1224			X							
DSY-SD-O21-2448			X							
DSY-SD-Q25-0012	4.6/5.8	3.5/4	X		X					
DSY-SD-Q25-1224			X							
DSY-SD-Q25-2448			X							

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-Q29-0012	4.2/5.8	3.2/4	X		X					
DSY-SD-Q29-1224			X							
DSY-SD-Q29-2448			X							
DSY-SD-S09-0012	4.1/5.2	3.5/4	X		X					
DSY-SD-S09-1224			X							
DSY-SD-S09-2448			X							
DSY-SD-DUP16-093011			X							
DSY-SD-S13-0012	5.3/5.9	3.9/4	X		X					
DSY-SD-S13-1224			X							
DSY-SD-S13-2448			X							
DSY-SD-S17-0012	3.1/4.0	2.7/4	X		X					
DSY-SD-S17-1224			X							
DSY-SD-S17-2448			X							
DSY-SD-S21-0012	3.0/4.0	2.7/4	X		X					
DSY-SD-S21-1224			X							
DSY-SD-S21-2448			X							
DSY-SD-DUP20-093011			X							
DSY-SD-T25-0012	3.2/4.2	3.2/4	X		X					
DSY-SD-T25-1224			X							
DSY-SD-T25-2448			X							
DSY-SD-T29-0012	3.0/4.0	2.8/4	X		X					
DSY-SD-T29-1224			X							
DSY-SD-T29-2448			X							
DSY-SD-W09-0012	4.3/4.5	3.8/4	X	X	X					
DSY-SD-W09-1224			X	X						
DSY-SD-W09-2448			X	X						
DSY-SD-W13-0012	3.9/4.2	3.9/4	X	X	X					
DSY-SD-W13-1224			X	X						
DSY-SD-W13-2448			X	X						
DSY-SD-DUP18-093011			X	X						
DSY-SD-W17-0012	4.7/5.4	3.7/4	X	X	X					
DSY-SD-W17-1224			X	X						
DSY-SD-W17-2448			X	X						
DSY-SD-W21-0012	3.5/4.6	3.3/4	X	X	X					
DSY-SD-W21-1224			X	X						
DSY-SD-W21-2448			X	X						
DSY-SD-DUP19-093011			X	X	X					
DSY-SD-W24-0012	3.9/5.0	3.8/4	X		X					
DSY-SD-W24-1224			X							Petroleum like odor
DSY-SD-W24-2448			X							
DSY-SD-DUP28-100611			X		X					
DSY-SD-W26-0012	3.2/4.4	2.9/4	X		X					
DSY-SD-W26-1224			X							
DSY-SD-W26-2448			X							
DSY-SD-DUP27-100511			X							
DSY-SD-W28-0012	3.3/4.5	3.4/4	X		X					
DSY-SD-W28-1224			X							
DSY-SD-W28-2448			X							

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-W30-0012	2.5/4.0	2.5/4	X		X					
DSY-SD-W30-1224			X							
DSY-SD-W30-2448			X							
DSY-SD-Y03-0012	4.7/5.7	3.7/4	X	X	X					
DSY-SD-Y03-1224			X	X						
DSY-SD-Y03-2448			X	X						
DSY-SD-DUP22-100311			X	X						
DSY-SD-Y25-0012	5.2/6.0	3.9/4	X		X					
DSY-SD-Y25-1224			X							
DSY-SD-Y25-2448			X							
DSY-SD-DUP23-100311			X							
DSY-SD-Y26-0012	4.7/5.8	3.7/4	X		X					
DSY-SD-Y26-1224			X							
DSY-SD-Y26-2448			X							
DSY-SD-Y28-0012	3.6/4.7	3.0/4	X		X					
DSY-SD-Y28-1224			X							
DSY-SD-Y28-2448			X							
DSY-SD-Y30-0012	2.0/4.8	1.7/4	X		X					Strong petroleum like odor and sheen
DSY-SD-Y30-1224			X							Dense material obstructed sediment below 2 feet from entering core
DSY-SD-AA01-0012	4.7/5.0	3.9/4	X	X	X			X		
DSY-SD-AA01-1224			X	X				X		
DSY-SD-AA01-2448			X	X				X		
DSY-SD-DUP33-101211			X	X				X		
DSY-SD-AA05-0012	4.5/5.5	3.8/4	X	X	X			X		
DSY-SD-AA05-1224			X	X				X		Petroleum like odor
DSY-SD-AA05-2448			X	X				X		
DSY-SD-AA09-0012	Not Recorded	3.9/4	X	X	X			X		
DSY-SD-AA09-1224			X	X				X		Petroleum like odor
DSY-SD-AA09-2448			X	X				X		
DSY-SD-AA13-0012	Not Recorded	3.5/4	X	X	X			X		
DSY-SD-AA13-1224			X	X				X		
DSY-SD-AA13-2448			X	X				X		
DSY-SD-AA17-0012	Not Recorded	3.7/4	X	X	X			X		
DSY-SD-AA17-1224			X	X				X		Slight petroleum like odor
DSY-SD-AA17-2448			X	X				X		
DSY-SD-AA21-0012	Not Recorded	3.8/4	X	X	X			X		
DSY-SD-AA21-1224			X	X				X		
DSY-SD-AA21-2448			X	X				X		
DSY-SD-DUP34-101311			X	X				X		
DSY-SD-AA24-0012	Not Recorded	3.4/4	X	X	X			X		
DSY-SD-AA24-1224			X	X				X		
DSY-SD-AA24-2448			X	X				X		
DSY-SD-AA26-0012	2.4/3	2.4/3	X	X	X			X		Petroleum like odor
DSY-SD-AA26-1224			X	X				X		Refusal at 3 feet, hard bottom
DSY-SD-AA26-2448			X	X				X		
DSY-SD-AA28-0018	1.1/1.4	1.1/1.4	X	X	X			X		Refusal at 1.4 feet
DSY-SD-DUP35-101311			X	X	X			X		
DSY-SD-AA30-0012	1.8/2.2	1.8/2.2	X	X	X			X		Petroleum like odor
DSY-SD-AA30-1224			X	X				X		Refusal at 2.2 feet, hard bottom
DSY-SD-AB11-0012	3.1/5.0	2.5/4	X	X	X					Sheen, very coarse sandy material present in bottom interval (possibly sand blast grit)
DSY-SD-AB11-1224			X	X						
DSY-SD-AB11-2448			X	X						
DSY-SD-AB15-0012	4.4/5.8	3.7/4	X	X	X					
DSY-SD-AB15-1224			X	X						Sheen and petroleum like odor
DSY-SD-AB15-2448			X	X						

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-AC24-0012	4.2/5.2	3.8/4	X	X	X					Slight sheen and slight petroleum like odor
DSY-SD-AC24-1224			X	X						
DSY-SD-AC24-2448			X	X						
DSY-SD-AC26-0012	3.9/4.5	4.0/4	X		X					Slight sheen
DSY-SD-AC26-1224			X							
DSY-SD-AC26-2448			X							
DSY-SD-DUP13-092811			X							
DSY-SD-AC28-0012	5.2/5.6	4.0/4	X		X					Petroleum like odor
DSY-SD-AC28-1224			X							
DSY-SD-AC28-2448			X							
DSY-SD-DUP14-092811			X		X					
DSY-SD-AC30-0012	3.2/4.2	3.0/4	X		X					Petroleum like odor
DSY-SD-AC30-1224			X							
DSY-SD-AC30-2448			X							
DSY-SD-AD01-0012	4.8/5.4	3.8/4	X		X					
DSY-SD-AD01-1224			X							
DSY-SD-AD01-2448			X							
DSY-SD-AD05-0012	4.5/5.6	3.8/4	X	X	X					
DSY-SD-AD05-1224			X	X						
DSY-SD-AD05-2448			X	X						
DSY-SD-AD09-0012	4.5/5.5	4.0/4	X	X	X					
DSY-SD-AD09-1224			X	X						
DSY-SD-AD09-2448			X	X						
DSY-SD-AD13-0012	5.5/5.8	4.0/4	X	X	X					
DSY-SD-AD13-1224			X	X						
DSY-SD-AD13-2448			X	X						
DSY-SD-DUP15-092911			X	X						
DSY-SD-AD17-0012	4.2/4.7	3.9/4	X	X	X					
DSY-SD-AD17-1224			X	X						
DSY-SD-AD17-2448			X	X						
DSY-SD-AD21-0012	4.8/5.2	3.9/4	X	X	X					
DSY-SD-AD21-1224			X	X						
DSY-SD-AD21-2448			X	X						
DSY-SD-AE24-0012	4.0/4.5	4.0/4	X		X					
DSY-SD-AE24-1224			X							
DSY-SD-AE24-2448			X							
DSY-SD-AE26-0012	3.2/4.0	3.0/4	X		X					
DSY-SD-AE26-1224			X							
DSY-SD-AE26-2448			X							
DSY-SD-AE28-0012	3.2/4.2	3.0/4	X	X	X					
DSY-SD-AE28-1224			X	X						
DSY-SD-AE28-2448			X	X						
DSY-SD-AE30-0012	1.6/2.0	1.7/4	X		X					Dense material at 1.5 feet obstructed material below 1.7 feet from entering core barrel
DSY-SD-AE30-1224			X							
DSY-SD-AG24-0012	3.1/4.3	3.0/4	X		X					
DSY-SD-AG24-1224			X							
DSY-SD-AG24-2436			X							
DSY-SD-AG26-0012	4.0/4.6	3.8/4	X		X					
DSY-SD-AG26-1224			X							
DSY-SD-AG26-2448			X							
DSY-SD-DUP11-092611			X		X					
DSY-SD-AG28-0012	3.2/4.3	2.8/4	X		X					Petroleum like odor
DSY-SD-AG28-1224			X							
DSY-SD-AG28-2448			X							
DSY-SD-DUP10-092611			X							
DSY-SD-AG30-0012	3.0/4.0	2.7/4	X		X					
DSY-SD-AG30-1224			X							
DSY-SD-AG30-2436			X							
DSY-SD-AI24-0012	4.3/5.6	3.5/4	X		X					
DSY-SD-AI24-1224			X							
DSY-SD-AI24-2448			X							

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-AI26-0012	3.5/4.5	3.4/4	X		X					
DSY-SD-AI26-1224			X							
DSY-SD-AI26-2448			X							
DSY-SD-AI28-0012	4.9/5.0	4.0/4	X		X					
DSY-SD-AI28-1224			X							Petroleum like odor
DSY-SD-AI28-2448			X							
DSY-SD-AI30-0012	3.1/4.1	2.8/4	X		X					
DSY-SD-AI30-1224			X							
DSY-SD-AI30-2448			X							
DSY-SD-AK24-0012	4.6/5.6	3.8/4	X		X					
DSY-SD-AK24-1224			X							
DSY-SD-AK24-2448			X							
DSY-SD-DUP09-092311			X							
DSY-SD-AK26-0012	4.0/5.0	3.6/4	X		X					
DSY-SD-AK26-1224			X							
DSY-SD-AK26-2448			X							
DSY-SD-AK28-0012	3.2/4.2	3.0/4	X		X					
DSY-SD-AK28-1224			X							
DSY-SD-AK28-2448			X							
DSY-SD-AK30-0012	3.9/5.0	3.5/4	X		X					
DSY-SD-AK30-1224			X							
DSY-SD-AK30-2448			X							
DSY-SD-AO30-0012	4.3/5.3	3.9/4	X		X					
DSY-SD-AO30-1224			X							
DSY-SD-AO30-2448			X							
DSY-SD-AP20-0012	4.7/4.9	4.0/4	X		X					
DSY-SD-AP20-1224			X							
DSY-SD-AP20-2448			X							
DSY-SD-AT16-0012	4.0/4.4	4.0/4	X		X					
DSY-SD-AT16-1224			X							
DSY-SD-AT16-2448			X							
DSY-SD-DUP06-092211			X							
DSY-SD-AT20-0012	4.3/4.5	4.0/4	X		X					
DSY-SD-AT20-1224			X							
DSY-SD-AT20-2448			X							
DSY-SD-AT24-0012	4.0/4.3	3.9/4	X		X					
DSY-SD-AT24-1224			X							
DSY-SD-AT24-2448			X							
DSY-SD-DUP07-092211			X		X					
DSY-SD-AT30-0012	3.0/4.0	3.0/4	X		X					
DSY-SD-AT30-1224			X							
DSY-SD-AT30-2448			X							
DSY-SD-DUP08-092311			X							
DSY-SD-AX06-0012	3.9/4.3	3.9/4	X		X					
DSY-SD-AX06-1224			X							
DSY-SD-AX06-2448			X							
DSY-SD-AX20-0012	4.3/5.0	3.8/4	X		X					
DSY-SD-AX20-1224			X							
DSY-SD-AX20-2448			X							
DSY-SD-AY30-0012	4.0/5.0	3.5/4	X		X					
DSY-SD-AY30-1224			X							
DSY-SD-AY30-2448			X							
DSY-SD-BB02-0012	4.0/5.0	4.0/4	X		X					
DSY-SD-BB02-1224			X							
DSY-SD-BB02-2448			X							
DSY-SD-DUP04-092211			X							
DSY-SD-BB06-0012	4.6/4.8	4.0/4	X		X					
DSY-SD-BB06-1224			X							
DSY-SD-BB06-2448			X							
DSY-SD-BB10-0012	4.9/5.2	4.0/4	X		X					
DSY-SD-BB10-1224			X							
DSY-SD-BB10-2448			X							
DSY-SD-DUP05-092211			X							

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-BB26-0012	Not	3.85/4	X	X	X					
DSY-SD-BB26-1224	Recorded		X	X						
DSY-SD-BB26-2448			X	X						
DSY-SD-BC28-0012	4.0/4.3	4.0/4	X	X	X					
DSY-SD-BC28-1224			X	X						
DSY-SD-BC28-2448			X	X						
DSY-SD-BC30-0012	2.5/3.5	2.4/4	X	X	X					
DSY-SD-BC30-1224			X	X						Sheen
DSY-SD-BC30-2448			X	X						
DSY-SD-BD26-0012	4.2/4.2	4.0/4	X	X	X					
DSY-SD-BD26-1224			X	X						
DSY-SD-BD26-2448			X	X						
DSY-SD-DUP01-09211			X	X						
DSY-SD-BE28-0012	3.2/4.0	3.1/4	X	X	X					
DSY-SD-BE28-1224			X	X						
DSY-SD-BE28-2448			X	X						
DSY-SD-BE30-0012	2.9/3.5	2.8/3.5	X	X	X					
DSY-SD-BE30-1224			X	X						
DSY-SD-BE30-2448			X	X						
DSY-SD-BF06-0012	4.8/5.0	4.0/4	X		X					
DSY-SD-BF06-1224			X							
DSY-SD-BF06-2448			X							
DSY-SD-BF23-0012	3.2/4.0	3.0/4	X	X	X					
DSY-SD-BF23-1224			X	X						
DSY-SD-BF23-2448			X	X						
DSY-SD-BG26-0012	3.4/4.0	3.0/4	X	X	X					
DSY-SD-BG26-1224			X	X						
DSY-SD-BG26-2448			X	X						
DSY-SD-BG28-0012	4.5/4.8	4.0/4	X	X	X					
DSY-SD-BG28-1224			X	X						
DSY-SD-BG28-2448			X	X						
DSY-SD-BI26-0012	3.0/4.0	3.0/4	X	X	X					
DSY-SD-BI26-1224			X	X						
DSY-SD-BI26-2448			X	X						
DSY-SD-DUP03-092111			X	X						
DSY-SD-BJ23-0012	4.0/4.2	3.6/4	X	X	X					
DSY-SD-BJ23-1224			X	X						
DSY-SD-BJ23-2448			X	X						
DSY-SD-DUP02-092111			X	X						
DSY-SD-GP01-0102		NA							X	
DSY-SD-GP01-0304									X	
DSY-SD-GP01-0809									X	
DSY-SD-GP01-1112									X	
DSY-SD-GP01-1314									X	
DSY-SD-GP01-1516									X	
DSY-SD-GP01-2223									X	
DSY-SD-GP01-2728									X	
DSY-SD-GP02-0102		NA							X	
DSY-SD-GP02-0708									X	
DSY-SD-GP02-1112									X	
DSY-SD-GP02-1718									X	
DSY-SD-GP03-0102		NA							X	
DSY-SD-GP03-0910									X	
DSY-SD-GP03-1718									X	
DSY-SD-GP03-2122									X	
DSY-SD-GP04-0102		NA							X	
DSY-SD-GP04-0708									X	
DSY-SD-GP04-1415									X	
DSY-SD-GP04-2122									X	
DSY-SD-GP05-0102		NA							X	
DSY-SD-GP05-0809									X	
DSY-SD-GP05-1516									X	
DSY-SD-GP05-2324									X	

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SD-GP06-0102		NA							X	
DSY-SD-GP06-0809									X	
DSY-SD-GP06-1516									X	
DSY-SD-GP06-2324									X	
DSY-SD-GP07-0102		NA							X	
DSY-SD-GP07-0809									X	
DSY-SD-GP07-1516									X	
DSY-SD-GP07-2324									X	
DSY-SD-GP08-0102		NA							X	
DSY-SD-GP08-0607									X	
DSY-SD-GP08-1112									X	
DSY-SD-GP08-1617									X	
DSY-SD-GP08-2021									X	
DSY-SD-GP08-2324									X	
DSY-SD-GP09-0102		NA							X	
DSY-SD-GP09-0506									X	
DSY-SD-GP09-1516									X	
DSY-SD-GP09-2021									X	
DSY-SD-GP09-2627									X	
DSY-SD-GP10-0102		NA							X	
DSY-SD-GP10-0304									X	
DSY-SD-GP10-0809									X	
DSY-SD-GP10-1112									X	
DSY-SD-GP10-1617									X	
DSY-SD-GP10-2122									X	
DSY-SD-GP10-2627									X	
DSY-SD-GP01-0012		NA					X			
DSY-SD-GP02-0012		NA					X			
DSY-SD-GP03-0012		NA					X			
DSY-SD-GP04-0012		NA					X			
DSY-SD-GP05-0012		NA					X			
DSY-SD-GP06-0012		NA					X			
DSY-SD-GP07-0012		NA					X			
DSY-SD-GP08-0012		NA					X			
DSY-SD-GP09-0012		NA					X			
DSY-SD-GP10-0012		NA					X			
DSY-SW-GP01-090111		NA				X				
DSY-SW-GP02-090111						X				
DSY-SW-GP03-090111						X				
DSY-SW-GP04-090111						X				
DSY-SW-GP05-090111						X				
DSY-SW-GP06-090111						X				
DSY-SW-GP07-090111						X				
DSY-SW-GP08-090111						X				
DSY-SW-GP09-090111						X				
DSY-SW-GP10-090111						X				
DSY-SW-DUP01-090111						X				

TABLE 2-3
SAMPLE ANALYSIS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Actual Recovery/ Penetration	Sampled Recovery/ Penetration	PAHs, PCBs, TBT, Lead	Copper, Zinc	TOC	TSS	Grain Size	Asbestos	Po-210	Field Notes:
DSY-SW-GP01-090611		NA				X				
DSY-SW-GP02-090611						X				
DSY-SW-GP03-090611						X				
DSY-SW-GP04-090611						X				
DSY-SW-GP05-090611						X				
DSY-SW-GP06-090611						X				
DSY-SW-GP07=090611						X				
DSY-SW-GP08-090611						X				
DSY-SW-GP09-090611						X				
DSY-SW-GP10-090611						X				
DSY-SW-DUP02-090611						X				
DSY-SW-GP01-091711		NA				X				
DSY-SW-GP02-091711						X				
DSY-SW-GP03-091711						X				
DSY-SW-GP04-091711						X				
DSY-SW-GP05-091711						X				
DSY-SW-GP06-091711						X				
DSY-SW-GP07-091711						X				
DSY-SW-GP08-091711						X				
DSY-SW-GP09-091711						X				
DSY-SW-GP10-091711						X				
DSY-SW-DUP03-091711						X				

TABLE 3-1
SUMMARY OF GRAIN SIZE RESULTS
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	DSY-SD-GP01-0012	DSY-SD-GP02-0012	DSY-SD-GP03-0012-AVG	DSY-SD-GP04-0012	DSY-SD-GP05-0012	DSY-SD-GP06-0012	DSY-SD-GP07-0012	DSY-SD-GP08-0012	DSY-SD-GP09-0012	DSY-SD-GP10-0012
LOCATION ID	DSY-SD-GP01	DSY-SD-GP02	DSY-SD-GP03	DSY-SD-GP04	DSY-SD-GP05	DSY-SD-GP06	DSY-SD-GP07	DSY-SD-GP08	DSY-SD-GP09	DSY-SD-GP10
SAMPLE DATE	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11	09/27/11
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
MISCELLANEOUS PARAMETERS (%)										
HYDROMETER-0.0019MM	9.7	19.3	10.4	13	15.3	7.6	12.1	13	11	7.5
HYDROMETER-0.001MM	8.3	16.6	9.05	11.4	12.6	6.1	10.4	11.4	9.8	6.4
HYDROMETER-0.002MM	11.2	23.5	12	14.9	21	9.3	12.4	14.9	16	8.7
HYDROMETER-0.0043MM	12.5	30.3	14	14.9	25.1	11.1	14.4	14.9	18.4	10.8
HYDROMETER-0.0052MM	15.1	37	18.9	21.5	30.6	12.5	24.6	19.9	23.2	15
HYDROMETER-0.006MM	34.9	42.4	46.8	59.7	40.4	36.1	70.3	66.1	30.6	21.4
HYDROMETER-0.0074MM	42.8	47.8	58.4	78.9	47.3	52.3	83.9	82.1	36.6	25.6
PERCENT CLAY	11.2	23.5	12	14.9	21	9.3	12.4	14.9	16	8.7
PERCENT COARSE SAND	2.9	3.3	1.45	0	0	2.1	1.4	0	0.6	2.6
PERCENT FINE SAND	37.6	16.5	19.4	8.4	25.2	30.2	3.3	4.5	34.2	54.1
PERCENT GRAVEL	0.9	4.2	1.35	0	0	2.4	3.3	0	0.3	0.4
PERCENT MEDIUM SAND	12.3	17.5	6.5	3.1	2.5	4.2	3.3	1.7	0.9	6.8
PERCENT SAND	52.8	37.3	27.4	11.5	27.7	36.5	8	6.2	35.7	63.5
PERCENT SILT	35.1	35	59.3	73.6	51.3	51.8	76.3	78.9	48	27.4
PERCENT PASSING										
SIEVE 3"	100	100	100	100	100	100	100	100	100	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	100
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	100
SIEVE 1"	100	100	100	100	100	100	100	100	100	100
SIEVE 3/4"	100	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	100	100	100	100	100	98.6	98	100	100	100
SIEVE NO. 004	99.1	95.8	98.6	100	100	97.6	96.7	100	99.7	99.6
SIEVE NO. 010	96.2	92.5	97.2	100	100	95.5	95.3	100	99.1	97
SIEVE NO. 020	93.8	86.2	95.8	99.3	99.2	93.8	93.1	99.3	98.8	94.2
SIEVE NO. 040	83.9	75	90.7	96.9	97.5	91.3	92	98.3	98.2	90.2
SIEVE NO. 060	61.2	67.4	82	94.4	90.5	82.1	91.2	97.3	97.3	72.6
SIEVE NO. 080	52.8	65.5	79.1	93	85.7	73.7	90.7	96.6	95.4	61.5
SIEVE NO. 100	50.3	64.5	77.7	92	83	69.4	90.3	96.1	91.7	53
SIEVE NO. 200	46.3	58.5	71.3	88.5	72.3	61.1	88.7	93.8	64	36.1

TABLE 3-2
TOTAL SUSPENDED SOLIDS RESULTS
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD OFFSHORE, SITE 19
NAVSTA NEWPORT, NEWPORT RI

SAMPLE LOCATION	DEPTH	TSS RESULTS (mg/L)			ADCP BACKSCATTER (dB)			REGRESSION FIT (R^2)
		9/1/2011	9/6/2011	9/17/2011	9/1/2011	9/6/2011	9/17/2011	
GP01	35	8	2	9	70.42	72.3	71.21	0.77
GP02	40	6.4	6.8	7.6	71.93	69.32	67.79	0.90
GP03	36	9.6	7.6	7.6	65.69	63.52	60.12	0.63
GP04	36	26	6.4	6.4	81.63	73.13	78.89	0.56
GP05	39	19	5.6	36	77.27	73.8	75.85	0.52
GP06	35	7.6	4.4	8	76.59	74.36	76.77	1.00
GP07	37	13	8.4	18	NA	NA	NA	NA
GP08	35	12	9.2	7.6	80.92	78.24	81.69	0.01
GP09	26	12	35	8	77.82	72.07	72.83	0.14
GP10	16	4.4	8	6	77.05	75.27	90.86	0.01

Note: Instrument malfunction prevented backscatter comparisons at Station 07

TABLE 3-3
PHYSICAL CHARACTERISTICS SUMMARY
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

Location	Layer[1]	Sediment Erosion Shear Stress (Pa)[2]	Associated Water Flow Required (cm/sec)[2]	Maximum Near-Bottom Flow (cm/sec)
1	0-2	0.2	28.7	13.7
2	0-2	0.2	28.7	28
	7-14	0.8	63.4	
3	0-1.5	0.2	28.7	16.5
	1.5-5.5	0.4	42.6	
	7-9.5	0.8	63.4	
	10-15	0.8	63.4	
	15-21	0.8	63.4	
4	0-2	0.2	28.7	12.59
	2-6.5	0.4	42.6	
5	0-2	0.2	28.7	11.24
	2.3-7.5	0.4	42.6	
	6-11	0.8	63.4	
6	0-2	0.2	28.7	9.73
7	0-2	0.2	28.7	11.23
	3-6.5	0.4	42.6	
	7-9	0.8	63.4	
8	0-2	0.2	28.7	14.36
	2-11.5	0.4	42.6	
	12-20	1.6	94	
9	0-1.5	0.2	28.7	15.3
	1.5-7.5	0.4	42.6	
	8-10.5	0.8	63.4	
	11.5-18	0.8	63.4	
10	0-1.8	0.2	28.7	9.22
	1.8-4	0.8	63.4	
	5-12	0.8	63.4	

(1) Layers selected for erosion/cohesion experiments by ERDC

(2) Shear stress is the predicted force required to erode identified layer at a rate of 0.0001 cm/sec at the associated water flow rate required

TABLE 4-1
SUMMARY OF ANALYTICAL STATISTICS FOR SEDIMENT
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

INTERVAL	PARAMETER		FREQUENCY OF DETECTION	MINIMUM DETECTED CONCENTRATION	MAXIMUM DETECTED CONCENTRATION	AVERAGE OF DETECTED CONCENTRATIONS	LOCATION OF MAXIMUM (DSY-SD-)	FREQUENCY EXCEEDING COMPARISON CRITIERIA
0 TO 1 FOOT	Benzo(a)pyrene	µg/kg	116/119	20 J	9000	443	BE30	20/119
	HMW PAHs	µg/kg	117/119	20 J	186000 J	5880	J30	9/119
	Copper	mg/kg	44/44	9.3	208 J	75.4	AD13	17/44
	Lead	mg/kg	119/119	2.3	1410	123	K05	15/119
	Zinc	mg/kg	44/44	48.4	823	223	W17	36/44
	Asbestos	%	0/10	<1	<1	NA	NA	0/10
	Tributyltin	µg/kg	77/119	0.77	410	13.3	AD13	1/119
	Total PCBs	µg/kg	56/119	40.1 J	17000	718	K13	8/119
1 TO 2 FOOT	Benzo(a)pyrene	µg/kg	98/117	4.6 J	2300 J	331	Y28	17/117
	HMW PAHs	µg/kg	99/117	4.6 J	39000 J	4420	Y28	7/117
	Copper	mg/kg	43/43	3.2	282 J	64.8	AD17	14/43
	Lead	mg/kg	117/117	2	918	94	Y25	17/117
	Zinc	mg/kg	43/43	20.8	675	193	G25	28/43
	Asbestos	%	1/9	<1	2	NA	AA26	1/9
	Tributyltin	µg/kg	44/117	0.67 J	160	17.8	AE26	0/117
	Total PCBs	µg/kg	47/117	49 J	2760	459	L24	5/117
2 TO 4 FOOT	Benzo(a)pyrene	µg/kg	73/113	5.2	2100	250	G25	8/113
	HMW PAHs	µg/kg	73/113	5.2	41000 J	4100	AB11	4/113
	Copper	mg/kg	42/42	2.5 J	295 J	69.7	AD09	17/42
	Lead	mg/kg	113/113	1.8	842 J	63.6	N24	9/113
	Zinc	mg/kg	42/42	17.7	931 J	202	AE28	25/42
	Asbestos	%	1/8	<1	2	NA	AA26	1/8
	Tributyltin	µg/kg	25/113	0.75 J	240	29.2	AA13	1/113
	Total PCBs	µg/kg	40/113	32	2600	371	AC30	4/113

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Screening Value - See Text	DSY-SD-18-0012	DSY-SD-AA01-0012	DSY-SD-AA05-0012	DSY-SD-AA09-0012	DSY-SD-AA13-0012	DSY-SD-AA17-0012	DSY-SD-AA21-0012	DSY-SD-AA24-0012	DSY-SD-AA26-0012
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	45	140	170	120 J	71	120	73	54	170
HIGH MOLECULAR WEIGHT PAHS	13903	45 J	1640 J	1340 J	540 J	71 J	560 J	73 J	54 J	2820 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	10.3 U	25.7 UJ	25.7 UJ	27.7 UJ	28.7 U	570 J	26.7 U	19.4 UJ	97 J
METALS (MG/KG)										
COPPER	74	NA	36.9	49.4	63 J	62	77.8	61.3	24.5	48.8
LEAD	168	14.1 J	45	55.7	66.3 J	58.5	76.8	57.4	25.2	44.9
ZINC	118	NA	114	152	156 J	162 J	397 J	167 J	66.8 J	158 J
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		19000 J	53000	52000	52000 J	49000	48000	48000	52000	49000
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	ND	<1	<1	<1	<1	ND	<1	<1
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.67 U	0.69 U	1.7	1.8	1.5 J	7.9	3.5	0.8 J	7.9

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-AA28-0016-AVG	DSY-SD-AA30-0012	DSY-SD-AB11-0012	DSY-SD-AB15-0012	DSY-SD-AC24-0012	DSY-SD-AC26-0012	DSY-SD-AC28-0012-AVG	DSY-SD-AC30-0012	DSY-SD-AD01-0012
LOCATION ID		DSY-SD-AA28	DSY-SD-AA30	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30	DSY-SD-AD01
SAMPLE DATE		10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/29/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1.33 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	300	290	160	220	180 J	180	230 J	80 J	150
HIGH MOLECULAR WEIGHT PAHS	13903	3540 J	5220 J	2960 J	3960 J	1280 J	1740 J	2790 J	80 J	1770 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	635 J	1880 J	18.4 U	19.6 UJ	24.6 UJ	170	65.4 J	24.6 U	15.4 UJ
METALS (MG/KG)										
COPPER	74	72.6	37.5	35.7 J	109 J	119	NA	NA	NA	NA
LEAD	168	82	59.8	58.3 J	166 J	90.8	114	75.3	63.4 J	107 J
ZINC	118	230 J	206 J	82.5 J	137 J	320	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		30500	17000	42000	50000	42000	35000	41000	42000	21000
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	<1	<1	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	1.9 J	5.7	1.3 J	0.7 U	14	8.3	38.9 J	5.9	1.5

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Screening Value - See Text	DSY-SD-AD05-0012	DSY-SD-AD09-0012	DSY-SD-AD13-0012	DSY-SD-AD17-0012	DSY-SD-AD21-0012	DSY-SD-AE24-0012	DSY-SD-AE26-0012	DSY-SD-AE28-0012	DSY-SD-AE30-0012
LOCATION ID		DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AE30
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	88	56	1300	98	250	270 J	100	130	240
HIGH MOLECULAR WEIGHT PAHS	13903	418 J	296 J	17300	408 J	2310 J	1360 J	430 J	130	2670 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	23.6 U	20.6 U	120	83 J	110 J	290 J	25.6 U	26.6 U	60
METALS (MG/KG)										
COPPER	74	70.5 J	81.1 J	208 J	65.6 J	185 J	NA	NA	45.3 J	NA
LEAD	168	43.7 J	35.7 J	109 J	59.7 J	200 J	1020	48.4	48.8	51.3
ZINC	118	138 J	119 J	413 J	159 J	294 J	NA	NA	138 J	NA
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		38000	31000	36000	44000	37000	53000	36000	36000	12000
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	3.4	0.73 U	410	0.72 U	9.3	9.3	1.8	0.95 J	0.64 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-AG24-0012	DSY-SD-AG26-0012-AVG	DSY-SD-AG28-0012	DSY-SD-AG30-0012	DSY-SD-AI24-0012	DSY-SD-AI26-0012	DSY-SD-AI28-0012	DSY-SD-AI30-0012	DSY-SD-AK24-0012
LOCATION ID		DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24
SAMPLE DATE		09/26/11	09/26/11	09/26/11	09/28/11	09/26/11	09/26/11	09/23/11	09/26/11	09/23/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	250	225 J	150	35	400	240 J	140	75	22 J
HIGH MOLECULAR WEIGHT PAHS	13903	3010 J	1920 J	650 J	315 J	5090 J	1860 J	510 J	675 J	22 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	180	23.1 UJ	22.6 U	10.3 U	360 J	22.4 UJ	20.4 UJ	10.3 U	11.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	69.9	68.9	66.1	8.7	91.5	54.6	56.1	20.9	9.5
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		28000	39000	38000	1600	44000	35000	36000	2200	8200
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	3.9	14	7.4	1.9	9.8	4.6	12	16	0.68 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI
PAGE 5 OF 13

SAMPLE ID	Screening Value - See Text	DSY-SD-AK26-0012	DSY-SD-AK28-0012	DSY-SD-AK30-0012	DSY-SD-AO30-0012	DSY-SD-AP20-0012	DSY-SD-AT16-0012	DSY-SD-AT20-0012	DSY-SD-AT24-0012-AVG	DSY-SD-AT30-0012
LOCATION ID		DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30
SAMPLE DATE		09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	66	12 U	110 J	59	91	160	100	144 J	890
HIGH MOLECULAR WEIGHT PAHS	13903	66	262 U	840 J	269 J	461 J	1140 J	550 J	1260 J	12300
PCBS (UG/KG)										
TOTAL AROCLOR	1060	10.3 U	10.3 UJ	65 J	11.3 UJ	58 J	130	11.3 U	12.8 UJ	10.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	8.2	2.3	80.1	13	20 J	65.7	32.2	20.7 J	35
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		7000	1200	8200	3800	16000	30000	19000	16000	3000
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.66 U	0.64 U	13	0.65 U	0.68 U	3.2	0.65 U	0.69 U	0.65 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI
PAGE 6 OF 13

SAMPLE ID	Screening Value - See Text	DSY-SD-AX06-0012	DSY-SD-AX20-0012	DSY-SD-AY30-0012	DSY-SD-BB02-0012	DSY-SD-BB06-0012	DSY-SD-BB10-0012	DSY-SD-BB26-0012	DSY-SD-BC28-0012	DSY-SD-BC30-0012
LOCATION ID		DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30
SAMPLE DATE		09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	160	140	12 U	140	64	100	930 J	790 J	1200 J
HIGH MOLECULAR WEIGHT PAHS	13903	780 J	1040 J	271 U	1180 J	234 J	530 J	16400 J	9660 J	14100 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	100 J	12.3 UJ	10.3 UJ	15.4 UJ	12.4 U	12.3 U	16.4 UJ	13.3 UJ	19.4 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	110 J	69.3 J	159 J
LEAD	168	51.7	41.6 J	5.1	45 J	26.1	30.2	143	67.5	94.6
ZINC	118	NA	NA	NA	NA	NA	NA	799	168	422
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		27000	20000	1700 J	30000	22000	18000	51000	40000	45000
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.72 U	0.66 U	0.62 U	0.69 U	0.69 U	0.65 U	3.2	14	20

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Screening Value - See Text	DSY-SD-BD26-0012-AVG	DSY-SD-BE28-0012	DSY-SD-BE30-0012	DSY-SD-BF06-0012	DSY-SD-BF23-0012	DSY-SD-BG26-0012	DSY-SD-BG28-0012	DSY-SD-BI26-0012	DSY-SD-BJ23-0012
LOCATION ID		DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23
SAMPLE DATE		09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	1260 J	610	9000	87	79	490	810 J	580	12 U
HIGH MOLECULAR WEIGHT PAHS	13903	16600 J	7640 J	117000 J	487 J	539 J	6700 J	9760 J	6450 J	1190 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	18.4 UJ	22.4 UJ	14.4 UJ	12.3 UJ	11.3 UJ	19.4 UJ	12.3 U	13.4 UJ	10.3 UJ
METALS (MG/KG)										
COPPER	74	136 J	91.8 J	113 J	NA	13.4 J	111 J	29.6 J	41.1 J	12.4 J
LEAD	168	134	80.4 J	173 J	14.9 J	14.5 J	91.4	28.8 J	39.7 J	13.3
ZINC	118	312	246 J	354 J	NA	55.9 J	250	108 J	139 J	48.7
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		55000	50000	36000	18000	9400 J	45000	16000 J	21000	8000 J
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	8.75	13	15	0.66 U	1.9	12	2.5	4.6	13

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-C09-0012	DSY-SD-C13-0012	DSY-SD-C17-0012	DSY-SD-C21-0012	DSY-SD-C25-0012	DSY-SD-C29-0012	DSY-SD-G01-0012	DSY-SD-G05-0012	DSY-SD-G09-0012	DSY-SD-G13-0012
LOCATION ID		DSY-SD-C09	DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11	10/12/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	37	110 J	44	160	840	620 J	210	160	190	160
HIGH MOLECULAR WEIGHT PAHS	13903	37 J	680 J	44 J	1670 J	9250 J	6430 J	4280 J	2560 J	2820 J	1920 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	11.3 U	120 J	12.3 UJ	190 J	140 J	470 J	22.6 U	19.6 U	23.7 UJ	21.4 U
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	NA	36.4	40.1	51.3	56.1
LEAD	168	15.9 J	19.2 J	22.5 J	320 J	198 J	209 J	368 J	43.8 J	61.7 J	54.4 J
ZINC	118	NA	NA	NA	NA	NA	NA	111	124	166	152
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON		13000 J	14000	10000	24000 J	38000 J	36000	43000 J	38000 J	44000 J	34000 J
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.69 U	0.67 U	0.66 U	10	0.85 J	0.71 U	0.71 U	0.73 U	0.73 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-G17-0012	DSY-SD-G21-0012	DSY-SD-G25-0012	DSY-SD-G29-0018	DSY-SD-J24-0012	DSY-SD-J26-0012	DSY-SD-J28-0012	DSY-SD-J30-0012	DSY-SD-K05-0012	DSY-SD-K09-0012-AVG
LOCATION ID		DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-G29	DSY-SD-J24	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09
SAMPLE DATE		10/12/11	10/12/11	10/12/11	10/13/11	10/04/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	130	250	1200	1600 J	100	230	350 J	8800 J	97 J	28.5 J
HIGH MOLECULAR WEIGHT PAHS	13903	1260 J	4450 J	15000 J	17300 J	1680 J	3320 J	6270 J	186000 J	507 J	28.5 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	23.6 U	27.7 U	22.6 UJ	480 J	1200	180 J	180 J	24.6 UJ	240	46.5
METALS (MG/KG)											
COPPER	74	45.6	56.5	69.2	107	NA	NA	NA	NA	42.2	NA
LEAD	168	48.6 J	53.1 J	49.7 J	98.2	1100 J	57.9 J	52.2 J	58.6 J	1410	13.9
ZINC	118	137	159	162	243 J	NA	NA	NA	NA	678	NA
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON		54000 J	53000 J	46000 J	44000	28000 J	38000 J	28000 J	36000 J	22000 J	10100 J
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.73 U	0.72 U	2.7	6.6	0.7 U	0.71 U	5.2	0.77 J	0.69 U	0.68 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI
PAGE 10 OF 13

SAMPLE ID	Screening Value - See Text	DSY-SD-K13-0012	DSY-SD-K17-0012	DSY-SD-K21-0012	DSY-SD-L24-0012	DSY-SD-L26-0012	DSY-SD-L28-0012	DSY-SD-L30-0012	DSY-SD-N24-0012	DSY-SD-N26-0012	DSY-SD-N28-0012
LOCATION ID		DSY-SD-K13	DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28
SAMPLE DATE		10/03/11	10/03/11	10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11	10/05/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	160 J	160 J	140 J	580 J	670 J	420	930 J	290 J	450 J	68 J
HIGH MOLECULAR WEIGHT PAHS	13903	2940 J	720 J	1310 J	580 J	8580 J	5640 J	11500 J	2310 J	4360 J	748 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	17000	110 J	140	1710 J	1800 J	3600	270	192 J	110 J	100
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	598	55.1	57.4	884 J	324 J	878 J	65.2 J	53.2 J	110 J	70.6 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON		34000 J	33000 J	37000 J	64000	36000 J	39000 J	27000 J	33000	37000	38000
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	3.4 U	0.69 U	0.7 U	2.6	7.5	0.77 J	3.5	3.3	7.7	2.9

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-N30-0012	DSY-SD-O09-0012	DSY-SD-O13-0012-AVG	DSY-SD-O17-0012	DSY-SD-O21-0012	DSY-SD-Q25-0012	DSY-SD-Q29-0012	DSY-SD-S09-0012	DSY-SD-S13-0012	DSY-SD-S17-0012
LOCATION ID		DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13	DSY-SD-S17
SAMPLE DATE		10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	310 J	160	20 J	79	130 J	300 J	190	170	180	61
HIGH MOLECULAR WEIGHT PAHS	13903	3070 J	1970 J	20 J	79	1160 J	2980 J	1090 J	1650 J	1890 J	61
PCBS (UG/KG)											
TOTAL AROCLOR	1060	74 J	160 J	40.1 J	96 J	19.4 UJ	410 J	21.6 U	120	19.4 U	14.3 UJ
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	51.1 J	63.5 J	27.6 J	45.4 J	51.5 J	60.6 J	56.5	51.1 J	48.6 J	18 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON		38000	23000	9150	28000	36000 J	34000	34000 J	28000	31000	21000 J
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	1.5	1.8	0.715 U	1.8	1.1 J	3.8	1.1 J	1.6	3	0.71 U

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-S21-0012	DSY-SD-T25-0012	DSY-SD-T29-0012	DSY-SD-W09-0012	DSY-SD-W13-0012	DSY-SD-W17-0012	DSY-SD-W21-0012-AVG	DSY-SD-W24-0012-AVG	DSY-SD-W26-0012
LOCATION ID		DSY-SD-S21	DSY-SD-T25	DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26
SAMPLE DATE		09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	240	250	190	230	150	240 J	200 J	355	320
HIGH MOLECULAR WEIGHT PAHS	13903	3370 J	2070 J	1870 J	2200 J	1500 J	2690 J	855 J	4900 J	3830 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	430 J	1500	110	17.4 UJ	260	21.6 UJ	65.2 J	2050	150 J
METALS (MG/KG)										
COPPER	74	NA	NA	NA	75.4	90.8	167	133	NA	NA
LEAD	168	64.6 J	64.2	20.1	64.7 J	58.2 J	118 J	67.4 J	904 J	68
ZINC	118	NA	NA	NA	148	172	823	196	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		36000 J	37000 J	13000 J	31000 J	24000	35000 J	39500 J	47500 J	32000 J
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	3.3	8.2	0.69 U	9.3	5.1	43	25.5 J	15	16

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-2
ANALYTICAL RESULTS SUMMARY FOR 0 TO 12 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Screening Value - See Text**	DSY-SD-W28-0012	DSY-SD-W30-0012	DSY-SD-Y03-0012	DSY-SD-Y25-0012	DSY-SD-Y26-0012	DSY-SD-Y28-0012	DSY-SD-Y30-0012
LOCATION ID		DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28	DSY-SD-Y30
SAMPLE DATE		10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)								
BENZO(A)PYRENE	539	230	500	38 J	520	900 J	220	1100 J
HIGH MOLECULAR WEIGHT PAHS	13903	1150 J	6560 J	38 J	10200 J	10800 J	1840 J	18900 J
PCBS (UG/KG)								
TOTAL AROCLOR	1060	280	89	13.3 U	190 J	200 J	190 J	530
METALS (MG/KG)								
COPPER	74	NA	NA	9.3	NA	NA	NA	NA
LEAD	168	66.2 J	36.8 J	11.1	165	69.5	69.4	256
ZINC	118	NA	NA	48.4	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)								
TOTAL ORGANIC CARBON		38000 J	20000 J	17000 J	45000	48000	40000	26000
MISCELLANEOUS PARAMETERS (%)								
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)								
TRIBUTYLTIN (AS TIN)	228	15	27	0.73 U	14	6.5	2.9	32

YELLOW SHADING 1-2 X RPRG;ORANGE SHADING 2-5 X RPRG;
RED SHADING 5-10 X RPRG; PURPLE SHADING >10 X RPRG;GREY SHADING <1 X RPRG;
U-NOT DETECTED;J-QUANT. APPROX;R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-18-1224	DSY-SD-AA01-1224	DSY-SD-AA05-1224	DSY-SD-AA09-1224	DSY-SD-AA13-1224	DSY-SD-AA17-1224	DSY-SD-AA21-1224	DSY-SD-AA24-1224	DSY-SD-AA26-1224
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	9.4 J	140	310	180	150	160	100	80	420
HIGH MOLECULAR WEIGHT PAHS	13903	9.4 J	1260 J	4210 J	1860 J	990 J	2120 J	420 J	80 J	9740 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	10.3 U	25.6 UJ	22.4 UJ	23.6 U	24.6 U	22.6 U	25.7 U	25.6 U	1280
METALS (MG/KG)										
COPPER	74	NA	41.3	60.9	116	89.7	90.5	75.1	93.5	154
LEAD	168	10 J	49.9	55.2	96	80.7	74.8	67.4	70.6	180
ZINC	118	NA	122	153	210 J	242 J	237 J	155 J	229 J	583 J
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	ND	<1	<1	<1	<1	<1	<1	2
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.62 U	0.71 U	4.4	75	8.4	7.6	11	1 J	43

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AA30-1224	DSY-SD-AB11-1224	DSY-SD-AB15-1224	DSY-SD-AC24-1224	DSY-SD-AC26-1224	DSY-SD-AC28-1224	DSY-SD-AC30-1224	DSY-SD-AD01-1224	DSY-SD-AD05-1224
LOCATION ID		DSY-SD-AA30	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30	DSY-SD-AD01	DSY-SD-AD05
SAMPLE DATE		10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/29/11	09/29/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	200	260	200 J	100	370	310	520	19 J	160
HIGH MOLECULAR WEIGHT PAHS	13903	3390 J	5120 J	2810 J	880 J	4730 J	8600 J	7910 J	19 J	2020 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	160 J	21.6 U	20.6 UJ	170 J	1100 J	460 J	170	13.3 UJ	20.4 U
METALS (MG/KG)										
COPPER	74	32.4	74.6 J	54.7 J	6	NA	NA	NA	NA	84.2 J
LEAD	168	48.9	88.4 J	89.8 J	4.6	473	103	104 J	11.6 J	60.5 J
ZINC	118	129 J	111 J	124 J	424	NA	NA	NA	NA	179 J
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	<1	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.67 U	1.6	4.3	0.67 J	0.68 U	16	23	0.69 U	18

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-AD09-1224	DSY-SD-AD13-1224	DSY-SD-AD17-1224	DSY-SD-AD21-1224	DSY-SD-AE24-1224	DSY-SD-AE26-1224	DSY-SD-AE28-1224	DSY-SD-AE30-1224	DSY-SD-AG24-1224
LOCATION ID		DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AE30	DSY-SD-AG24
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/26/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	110	6.4 J	220	100	190	240	200	5.6 J	35
HIGH MOLECULAR WEIGHT PAHS	13903	690 J	6.4 J	3570 J	680 J	1660 J	2130 J	1550 J	5.6 J	245 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	20.6 U	13.4 UJ	430 J	49 J	160 J	21.6 U	22.6 U	9.71 U	13.3 U
METALS (MG/KG)										
COPPER	74	95.3 J	8.4 J	282 J	38.1 J	NA	NA	86.8 J	NA	NA
LEAD	168	60 J	8.2 J	190 J	36.6 J	198	68.2	88.4	8.3	7.2
ZINC	118	186 J	48.9 J	577 J	619 J	NA	NA	209 J	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	2.5	0.73 U	15	0.79 J	0.65 U	160	49	0.64 U	0.63 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-AG26-1224	DSY-SD-AG28-1224	DSY-SD-AG30-1224	DSY-SD-AI24-1224	DSY-SD-AI26-1224	DSY-SD-AI28-1224	DSY-SD-AI30-1224	DSY-SD-AK24-1224	DSY-SD-AK26-1224
LOCATION ID		DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24	DSY-SD-AK26
SAMPLE DATE		09/26/11	09/26/11	09/28/11	09/26/11	09/26/11	09/23/11	09/26/11	09/23/11	09/23/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	200	210	27	89	170 J	310	180	57	11 U
HIGH MOLECULAR WEIGHT PAHS	13903	1300 J	2290 J	27 J	489 J	1030 J	3370 J	2280 J	197 J	253 U
PCBS (UG/KG)										
TOTAL AROCLOR	1060	130 J	140	9.06 U	250 J	63 J	21.4 UJ	10.3 U	11.3 UJ	10.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	113	106	191	78.3	98.2	95	24.9	22.6	6.1
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	1.4 J	3.8	17	0.72 U	9.3	24	0.96 J	0.69 U	0.66 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AK28-1224	DSY-SD-AK30-1224	DSY-SD-AO30-1224	DSY-SD-AP20-1224	DSY-SD-AT16-1224	DSY-SD-AT20-1224	DSY-SD-AT24-1224	DSY-SD-AT30-1224-AVG	DSY-SD-AX06-1224
LOCATION ID		DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06
SAMPLE DATE		09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	12 U	59	12 U	16 U	6.1 J	13 UJ	4.6 J	11.5 U	15 J
HIGH MOLECULAR WEIGHT PAHS	13903	262 U	279 J	271 U	344 UJ	6.1 J	298 UJ	4.6 J	262 U	15 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	10.3 UJ	10.3 U	10.3 U	13.3 UJ	11.1 UJ	12.3 U	11.1 UJ	10.3 UJ	12.4 U
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	2	12.1	2.6	6.9 J	8.8	5.8	6.1 J	2.9	13
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.66 U	0.64 U	0.67 U	0.72 U	0.68 U	0.66 U	0.7 U	0.7 U	0.71 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AX20-1224	DSY-SD-AY30-1224	DSY-SD-BB02-1224	DSY-SD-BB06-1224	DSY-SD-BB10-1224	DSY-SD-BB26-1224	DSY-SD-BC28-1224	DSY-SD-BC30-1224	DSY-SD-BD26-1224
LOCATION ID		DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26
SAMPLE DATE		09/22/11	09/23/11	09/22/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	13 U	12 U	4.7 J	15 U	16 U	940 J	340	2100 J	1100 J
HIGH MOLECULAR WEIGHT PAHS	13903	298 UJ	271 U	4.7 J	326 U	362 U	10900 J	4240 J	19700 J	13300 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	12.3 UJ	10.3 UJ	12.3 UJ	12.3 U	15.3 U	13.3 UJ	12.4 UJ	14.4 UJ	14.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	108 J	35.8 J	67 J	43.8 J
LEAD	168	5.2 J	2.2	28.5 J	6.5	7.9	149	44.3	62.6	50.9
ZINC	118	NA	NA	NA	NA	NA	432	98.2	147	122
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.7 U	0.62 U	0.64 U	0.71 U	0.7 U	0.7 U	0.65 U	3.8 J	0.69 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-BE28-1224	DSY-SD-BE30-1224	DSY-SD-BF06-1224	DSY-SD-BF23-1224	DSY-SD-BG26-1224	DSY-SD-BG28-1224	DSY-SD-BI26-1224-AVG	DSY-SD-BJ23-1224	DSY-SD-C09-1224
LOCATION ID		DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09
SAMPLE DATE		09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	940 J	1600	14 U	7.6 J	240	42	465	11 J	12 U
HIGH MOLECULAR WEIGHT PAHS	13903	11600 J	20600 J	307 U	7.6 J	4100 J	352 J	5210 J	11 J	280 UJ
PCBS (UG/KG)										
TOTAL AROCLOR	1060	12.3 UJ	11.3 UJ	12.3 U	11.3 UJ	12.3 UJ	11.3 UJ	10.8 UJ	11.3 UJ	11.1 U
METALS (MG/KG)										
COPPER	74	63.9 J	25.2 J	NA	4.2 J	28 J	6.5 J	22.6 J	6.8 J	3.2
LEAD	168	50.6 J	61.7 J	5.1	4 J	32	7.3 J	30.6 J	6.7	4 J
ZINC	118	136 J	82.9 J	NA	29.4 J	78.7	42.2 J	74.5 J	38.4	20.8
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	7.6	0.72 U	0.66 U	0.68 U	0.66 U	0.66 U	0.715 U	0.67 U	0.66 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-C13-1224	DSY-SD-C17-1224	DSY-SD-C21-1224	DSY-SD-C25-1224-AVG	DSY-SD-C29-1224	DSY-SD-G01-1224	DSY-SD-G05-1224	DSY-SD-G09-1224	DSY-SD-G13-1224	DSY-SD-G17-1224
LOCATION ID		DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	8.2 J	5.6 J	170	97.5 J	550	200	210	320	210	240
HIGH MOLECULAR WEIGHT PAHS	13903	8.2 J	5.6 J	1810 J	909 J	5330 J	5570 J	4020 J	5200 J	2880 J	3880 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	10.3 UJ	10.3 U	360	192 J	550 J	23.6 U	25.7 U	26.6 U	24.7 U	28.7 U
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	37.1	46.6	53	55	54.7
LEAD	168	4.5 J	3.6 J	88.4 J	68.4 J	759 J	47.7 J	62.8 J	63.4 J	56.5 J	60.6 J
ZINC	118	NA	NA	NA	NA	NA	110	145	161	144	154
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.64 U	0.62 U	0.72 U	1.3 J	0.7 U	0.69 U	0.7 U	0.73 U	0.73 U	0.7 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-G21-1224	DSY-SD-G25-1224	DSY-SD-J24-0012	DSY-SD-J26-1224	DSY-SD-J28-1224	DSY-SD-J30-1224	DSY-SD-K05-1224	DSY-SD-K09-1224	DSY-SD-K13-1224	DSY-SD-K17-1224
LOCATION ID		DSY-SD-G21	DSY-SD-G25	DSY-SD-J24	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09	DSY-SD-K13	DSY-SD-K17
SAMPLE DATE		10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	0 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	1 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	270	2200	100	1000 J	400 J	580 J	12 UJ	14 UJ	37 J	24 J
HIGH MOLECULAR WEIGHT PAHS	13903	2140 J	26800 J	1680 J	13000 J	8700 J	12400 J	280 UJ	307 UJ	337 J	24 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	24.7 U	170 J	1200	160 J	380 J	130 J	11.3 U	11.3 U	66 J	54
METALS (MG/KG)											
COPPER	74	49	260	NA	NA	NA	NA	4.2	NA	NA	NA
LEAD	168	49.3 J	199 J	1100 J	54.9 J	315 J	81 J	5.3	4.9	168	13
ZINC	118	135	675	NA	NA	NA	NA	24.9	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.72 U	44	0.7 U	6.9	1.2 J	2.3	0.65 U	0.69 U	0.71 U	0.7 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-K21-1224	DSY-SD-L24-1224	DSY-SD-L26-1224	DSY-SD-L28-1224-AVG	DSY-SD-L30-1224	DSY-SD-N24-1224	DSY-SD-N26-1224	DSY-SD-N28-1224	DSY-SD-N30-1224	DSY-SD-O09-1224
LOCATION ID		DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09
SAMPLE DATE		10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	110 J	20 UJ	13 J	73.5	140 J	500	300 J	710 J	580 J	14 U
HIGH MOLECULAR WEIGHT PAHS	13903	1370 J	5300 J	13 J	458 J	1120 J	6880 J	3900 J	7790 J	5910 J	316 U
PCBS (UG/KG)											
TOTAL AROCLOR	1060	550	2760	10.3 U	115	220	990	830	960	86 J	12.3 U
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	135	543 J	4.3 J	85.5 J	9.5 J	66.6 J	68.8 J	246 J	213 J	6.2 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.67 U	0.68 U	0.64 U	0.675 U	0.71 U	3	0.66 U	10	8.6	0.67 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-O13-1224	DSY-SD-O17-1224	DSY-SD-O21-1224	DSY-SD-Q25-1224	DSY-SD-Q29-1224	DSY-SD-S09-1224	DSY-SD-S13-1224	DSY-SD-S17-1224	DSY-SD-S21-1224	DSY-SD-T25-1224
LOCATION ID		DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13	DSY-SD-S17	DSY-SD-S21	DSY-SD-T25
SAMPLE DATE		09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)											
BENZO(A)PYRENE	539	13 U	390	200	36	560	21 J	220	14 U	70	490
HIGH MOLECULAR WEIGHT PAHS	13903	289 U	4030 J	3030 J	36 J	7860 J	21 J	2730 J	307 UJ	510 J	3830 J
PCBS (UG/KG)											
TOTAL AROCLOR	1060	11.3 U	250	18.4 UJ	89	260	13.4 U	140 J	12.3 UJ	311 J	92
METALS (MG/KG)											
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	3.7 J	79.8 J	56.4 J	23.3	63.3	12.6 J	97 J	11.5 J	80.4 J	236
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)											
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)											
TRIBUTYLTIN (AS TIN)	228	0.65 U	20	5.3	0.62 U	1.7	0.71 U	1.7	0.65 U	0.71 U	0.67 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-T29-1224	DSY-SD-W09-1224	DSY-SD-W13-1224-AVG	DSY-SD-W17-1224	DSY-SD-W21-1224	DSY-SD-W24-1224	DSY-SD-W26-1224	DSY-SD-W28-1224	DSY-SD-W30-1224
LOCATION ID		DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30
SAMPLE DATE		10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	56	31 J	40.5	150	97	150	300	930 J	34
HIGH MOLECULAR WEIGHT PAHS	13903	246 J	31 J	40.5	1690 J	817 J	1870 J	3460 J	10300 J	274 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	57	15.4 UJ	13.3 UJ	900	80 J	1130	240	1400	420
METALS (MG/KG)										
COPPER	74	NA	17	17.3	239	47	NA	NA	NA	NA
LEAD	168	16	46.4 J	25.6 J	210 J	133 J	577	109	94.8 J	21.7 J
ZINC	118	NA	84	68.3	590	122	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.71 U	0.71 U	0.695 U	0.66 U	78	0.69 U	8.8	9.7	0.72 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-3
ANALYTICAL RESULTS SUMMARY FOR 12 TO 24 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-Y03-1224	DSY-SD-Y25-1224	DSY-SD-Y26-1224	DSY-SD-Y28-1224	DSY-SD-Y30-1224
LOCATION ID		DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28	DSY-SD-Y30
SAMPLE DATE		10/03/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT
SEMIVOLATILES (UG/KG)						
BENZO(A)PYRENE	539	15 UJ	1600 J	1200 J	2300 J	650 J
HIGH MOLECULAR WEIGHT PAHS	13903	344 UJ	31100 J	17200 J	39000 J	15000 J
PCBS (UG/KG)						
TOTAL AROCLOR	1060	13.3 U	1000 J	1000 J	680 J	12.3 UJ
METALS (MG/KG)						
COPPER	74	6.2	NA	NA	NA	NA
LEAD	168	7.3	918	160	199	41
ZINC	118	41.2	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)						
ASBESTOS	1	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)						
TRIBUTYLTIN (AS TIN)	228	0.66 U	10	24	39	3.4 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-18-2448	DSY-SD-AA01-2448-AVG	DSY-SD-AA05-2448	DSY-SD-AA09-2448	DSY-SD-AA13-2448	DSY-SD-AA17-2448	DSY-SD-AA21-2448-AVG	DSY-SD-AA24-2448	DSY-SD-AA26-2448
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	10 U	195	1600	580	320	820	183 J	280	200
HIGH MOLECULAR WEIGHT PAHS	13903	235 UJ	2300 J	31600 J	9690 J	4340 J	12100 J	4980 J	5420 J	3390 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	9.54 U	23.6 UJ	170 J	1300	24.6 U	24.6 U	220 J	190 J	1270
METALS (MG/KG)										
COPPER	74	NA	39.5	155	123	126	226	151	87.8	183
LEAD	168	8.1 J	57.2	111	111	115	138	139	81	148
ZINC	118	NA	126	373	275 J	289 J	309 J	330 J	197 J	570 J
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	ND	<1	<1	<1	<1	<1	<1	2
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.67 U	0.705 U	16	42	240	100	21.5 J	23	1.2 J

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AB11-2448	DSY-SD-AB15-2448	DSY-SD-AC24-2448	DSY-SD-AC26-2448-AVG	DSY-SD-AC28-2448	DSY-SD-AC30-2448	DSY-SD-AD01-2448	DSY-SD-AD05-2448
LOCATION ID		DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30	DSY-SD-AD01	DSY-SD-AD05
SAMPLE DATE		09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/29/11	09/29/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)									
BENZO(A)PYRENE	539	1300 J	450	11 J	52 J	1600 J	470	14 U	400
HIGH MOLECULAR WEIGHT PAHS	13903	41000 J	8970 J	11 J	317 J	23200 J	7480 J	307 U	7750 J
PCBS (UG/KG)									
TOTAL AROCLOR	1060	13.3 U	97	11.3 UJ	122 J	810 J	2600	13.3 UJ	340
METALS (MG/KG)									
COPPER	74	66.9 J	154 J	59.1	NA	NA	NA	NA	131 J
LEAD	168	139 J	281 J	42.9	90.9	276	788 J	7 J	252 J
ZINC	118	163 J	466 J	126	NA	NA	NA	NA	320 J
MISCELLANEOUS PARAMETERS (%)									
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)									
TRIBUTYLTIN (AS TIN)	228	34	160	0.65 U	0.64 U	6.8 U	0.72 U	0.7 U	32

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AD09-2448	DSY-SD-AD13-2448-AVG	DSY-SD-AD17-2448	DSY-SD-AD21-2448	DSY-SD-AE24-2448	DSY-SD-AE26-2448	DSY-SD-AE28-2448	DSY-SD-AG24-2448
LOCATION ID		DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AG24
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/26/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)									
BENZO(A)PYRENE	539	140	14.5 U	14 J	22 J	16 J	730 J	77	22 J
HIGH MOLECULAR WEIGHT PAHS	13903	2050 J	320 UJ	14 J	22 J	16 J	8020 J	437 J	22 J
PCBS (UG/KG)									
TOTAL AROCLOR	1060	310	13.3 U	120	12.3 UJ	11.3 UJ	1390 J	130	12.3 U
METALS (MG/KG)									
COPPER	74	295 J	6.6 J	16.1 J	8 J	NA	NA	72.1 J	NA
LEAD	168	437 J	8.75 J	66 J	10.3 J	4.8	296	98.6	10.2
ZINC	118	782 J	43.2 J	196 J	142 J	NA	NA	931 J	NA
MISCELLANEOUS PARAMETERS (%)									
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)									
TRIBUTYLTIN (AS TIN)	228	1.3 J	0.705 U	0.71 U	0.69 U	0.68 U	7.8	22	0.67 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-AG26-2448	DSY-SD-AG28-2448-AVG	DSY-SD-AG30-2436	DSY-SD-AI24-2448	DSY-SD-AI26-2448	DSY-SD-AI28-2448	DSY-SD-AI30-2448	DSY-SD-AK24-2448-AVG	DSY-SD-AK26-2448
LOCATION ID		DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24	DSY-SD-AK26
SAMPLE DATE		09/26/11	09/26/11	09/28/11	09/26/11	09/26/11	09/23/11	09/26/11	09/23/11	09/23/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	3 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	67	145	12 U	5.5 J	120	260	19 J	6.85 J	12 U
HIGH MOLECULAR WEIGHT PAHS	13903	337 J	1440 J	262 UJ	5.5 J	740 J	3340 J	139 J	75.8 J	262 U
PCBS (UG/KG)										
TOTAL AROCLOR	1060	55 J	240	8.97 U	10.3 U	86 J	230 J	9.8 U	11.4 UJ	10.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	25.7	64.2	22.1	5.7	62.1	114	8.7	7.8	2.3
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.71 U	0.8 J	1.2 J	0.64 U	0.69 U	0.97 J	0.7 U	0.68 U	0.65 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-AK28-2448	DSY-SD-AK30-2448	DSY-SD-AO30-2448	DSY-SD-AP20-2448	DSY-SD-AT16-2448-AVG	DSY-SD-AT20-2448	DSY-SD-AT24-2448	DSY-SD-AT30-2448	DSY-SD-AX06-2448
LOCATION ID		DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06
SAMPLE DATE		09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	11 U	12 U	12 U	15 U	15 U	15 U	12 U	12 U	14 U
HIGH MOLECULAR WEIGHT PAHS	13903	253 U	253 UJ	262 U	334 UJ	344 UJ	334 U	271 UJ	271 U	325 U
PCBS (UG/KG)										
TOTAL AROCLOR	1060	9.8 UJ	10.3 U	9.8 U	13.4 UJ	13.3 U	12.3 U	11.1 UJ	10.2 UJ	12.4 U
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	1.8	3.2	2.1	6.5 J	6.1	5.2	4.4 J	4.6	6
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1	NA	NA	NA	NA					
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.64 U	0.61 U	0.64 U	0.65 U	0.655 U	0.68 U	0.69 U	0.61 U	0.66 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria - See Text	DSY-SD-AX20-2448	DSY-SD-AY30-2448-AVG	DSY-SD-BB02-2448-AVG	DSY-SD-BB06-2448	DSY-SD-BB10-2448-AVG	DSY-SD-BB26-2448	DSY-SD-BC28-2448	DSY-SD-BC30-2448
LOCATION ID		DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30
SAMPLE DATE		09/22/11	09/23/11	09/22/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)									
BENZO(A)PYRENE	539	14 U	10 U	15.5 U	15 U	63.5 J	300	13 U	690 J
HIGH MOLECULAR WEIGHT PAHS	13903	316 UJ	235 U	348 UJ	334 U	424 J	4030 J	289 UJ	8760 J
PCBS (UG/KG)									
TOTAL AROCLOR	1060	12.3 U	10.3 UJ	13.4 UJ	12.3 UJ	13.8 U	13.3 UJ	10.3 UJ	11.4 UJ
METALS (MG/KG)									
COPPER	74	NA	NA	NA	NA	NA	92.4 J	2.5 J	24.4 J
LEAD	168	5 J	3.6	6.05 J	5.7	5.65	75.3	1.8	25.4
ZINC	118	NA	NA	NA	NA	NA	168	18.7	69.6
MISCELLANEOUS PARAMETERS (%)									
ASBESTOS	1								
MISCELLANEOUS PARAMETERS (UG/KG)									
TRIBUTYLTIN (AS TIN)	228	0.72 U	0.71 U	0.65 U	0.65 U	0.68 U	0.68 U	0.61 U	0.66 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-BD26-2448	DSY-SD-BE28-2448	DSY-SD-BE30-2448	DSY-SD-BF06-2448	DSY-SD-BF23-2448	DSY-SD-BG26-2448	DSY-SD-BG28-2448	DSY-SD-BI26-2448	DSY-SD-BJ23-2448-AVG
LOCATION ID		DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23
SAMPLE DATE		09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	120	5.2 J	250	14 U	12 U	12 U	58	10 U	12 U
HIGH MOLECULAR WEIGHT PAHS	13903	1530 J	5.2 J	3620 J	316 U	262 UJ	262 UJ	765 J	235 UJ	266 UJ
PCBS (UG/KG)										
TOTAL AROCLOR	1060	11.3 UJ	10.3 UJ	11.3 UJ	12.3 U	10.3 UJ	9.89 UJ	9.97 U	9.46 UJ	10.2 UJ
METALS (MG/KG)										
COPPER	74	8 J	3 J	8.3 J	NA	3 J	2.6 J	4.8 J	8.5 J	4.5 J
LEAD	168	11.2	2 J	9.5 J	5.5	2.6 J	1.8	4.3 J	4.6 J	2.2
ZINC	118	40	20.5 J	46.6 J	NA	26.1 J	17.7	32.6 J	32.8 J	29
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.69 U	0.64 U	0.69 U	0.64 U	0.66 U	0.61 U	0.62 U	0.68 U	0.69 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-C09-2448-AVG	DSY-SD-C13-2448	DSY-SD-C17-2448	DSY-SD-C21-2448	DSY-SD-C25-2448	DSY-SD-C29-2448	DSY-SD-G01-2448	DSY-SD-G05-2448-AVG	DSY-SD-G09-2448
LOCATION ID		DSY-SD-C09	DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	12.5 UJ	13 UJ	12 U	11 U	11 U	84 J	400	455	240 J
HIGH MOLECULAR WEIGHT PAHS	13903	280 UJ	289 UJ	271 UJ	244 UJ	253 UJ	414 J	11800 J	10200 J	4150 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	10.5 UJ	11.3 UJ	10.3 U	10.1 U	10.3 U	59 J	24.6 U	195 J	26.7 U
METALS (MG/KG)										
COPPER	74	39.2 J	NA	NA	NA	NA	NA	102	94.2	79.6
LEAD	168	44.8 J	4.7 J	3.7 J	12 J	3.6 J	11.7 J	74.5 J	77.9 J	82.2 J
ZINC	118	245 J	NA	NA	NA	NA	NA	172	248 J	183
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.66 U	0.72 U	0.72 U	0.67 U	0.69 U	1.2 J	2.95	0.8 J

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-G13-2448	DSY-SD-G17-2448-AVG	DSY-SD-G21-2448	DSY-SD-G25-2448	DSY-SD-J26-2448-AVG	DSY-SD-J28-2448	DSY-SD-J30-2448	DSY-SD-K05-2448	DSY-SD-K09-2448
LOCATION ID		DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09
SAMPLE DATE		10/12/11	10/12/11	10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	190	350	430	2100	162 J	170 J	240 J	13 UJ	13 UJ
HIGH MOLECULAR WEIGHT PAHS	13903	2650 J	5700 J	7910 J	26400 J	2250 J	1770 J	4250 J	289 UJ	289 UJ
PCBS (UG/KG)										
TOTAL AROCLOR	1060	130 J	26.7 U	22.6 U	190 J	690 J	400 J	160	9.8 UJ	10.3 U
METALS (MG/KG)										
COPPER	74	57.7	83.6	89.8	284	NA	NA	NA	4	NA
LEAD	168	68.3 J	78.2 J	75.3 J	212 J	44 J	51.9 J	94.1 J	4.4	4.7
ZINC	118	167	171	183	738	NA	NA	NA	25.5	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.75 J	2.1	6.4	1.9	0.72 U	0.69 U	0.66 U	0.7 U	0.68 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-K13-2448	DSY-SD-K17-2448	DSY-SD-K21-2448	DSY-SD-L24-2448	DSY-SD-L26-2448	DSY-SD-L28-2448	DSY-SD-L30-2448	DSY-SD-N24-2448-AVG	DSY-SD-N26-2448
LOCATION ID		DSY-SD-K13	DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26
SAMPLE DATE		10/03/11	10/03/11	10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	13 UJ	13 UJ	22 J	41	57	18 J	12 U	29.5 J	20 J
HIGH MOLECULAR WEIGHT PAHS	13903	289 UJ	289 UJ	22 J	4580 J	217 J	18 J	271 UJ	124 J	20 J
PCBS (UG/KG)										
TOTAL AROCLOR	1060	9.29 UJ	9.71 U	11.3 U	11.3 U	46	32	10.3 U	130 J	12.3 U
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	5.2	3.4	7.2	20.8 J	9.2 J	10.3 J	5.7 J	842 J	45.2 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.68 U	0.69 U	0.65 U	0.68 U	0.68 U	0.65 U	0.685 U	0.71 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-N28-2448	DSY-SD-N30-2448	DSY-SD-O09-2448	DSY-SD-O13-2448	DSY-SD-O17-2448	DSY-SD-O21-2448	DSY-SD-Q25-2448	DSY-SD-Q29-2448	DSY-SD-S09-2448-AVG
LOCATION ID		DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09
SAMPLE DATE		10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	64 J	140 J	26 J	13 U	42	140	12 U	120	14 UJ
HIGH MOLECULAR WEIGHT PAHS	13903	484 J	1820 J	26 J	289 U	42 J	1830 J	271 UJ	810 J	312 UJ
PCBS (UG/KG)										
TOTAL AROCLOR	1060	770 J	76	11.3 U	11.3 U	130	170 J	10.3 U	98	13.3 U
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	390 J	38.5 J	5.6 J	4.5 J	37.2 J	51.7 J	2.4	22.5	7.35 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.72 U	0.61 U	0.7 U	0.69 U	0.69 U	0.7 U	0.66 U	5.7	0.695 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-S13-2448	DSY-SD-S17-2448	DSY-SD-S21-2448-AVG	DSY-SD-T25-2448	DSY-SD-T29-2448	DSY-SD-W09-2448	DSY-SD-W13-2448	DSY-SD-W17-2448	DSY-SD-W21-2448
LOCATION ID		DSY-SD-S13	DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21
SAMPLE DATE		09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)										
BENZO(A)PYRENE	539	43	13 U	16.2 J	68	22 J	9.2 J	14 U	5.2 J	14 U
HIGH MOLECULAR WEIGHT PAHS	13903	43	307 U	16.2 J	338 J	22 J	9.2 J	325 U	5.2 J	307 U
PCBS (UG/KG)										
TOTAL AROCLOR	1060	14.3 U	11.4 UJ	12.3 U	110	120 J	14.3 UJ	12.4 UJ	13.3 UJ	13.3 UJ
METALS (MG/KG)										
COPPER	74	NA	NA	NA	NA	NA	7.9	6.4	5.2	6.6
LEAD	168	19.4 J	6.4 J	12.7 J	36.3	6.6	12.3 J	7 J	6.6 J	7.8 J
ZINC	118	NA	NA	NA	NA	NA	49.8	46.3	42.5	44.5
MISCELLANEOUS PARAMETERS (%)										
ASBESTOS	1									
MISCELLANEOUS PARAMETERS (UG/KG)										
TRIBUTYLTIN (AS TIN)	228	0.66 U	0.66 U	0.69 U	0.69 U	0.62 U	0.7 U	0.67 U	0.71 U	0.68 U

YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 4-4
ANALYTICAL RESULTS SUMMARY FOR 24 TO 48 INCH INTERVAL SEDIMENT SAMPLES
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 - FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria - See Text**	DSY-SD-W24-2448	DSY-SD-W26-2448-AVG	DSY-SD-W28-2448	DSY-SD-W30-2448	DSY-SD-Y03-2448-AVG	DSY-SD-Y25-2448-AVG	DSY-SD-Y26-2448	DSY-SD-Y28-2448
LOCATION ID		DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28
SAMPLE DATE		10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SEMIVOLATILES (UG/KG)									
BENZO(A)PYRENE	539	13 J	150	11 J	55	7.35 J	126	370	230
HIGH MOLECULAR WEIGHT PAHS	13903	13 J	1500 J	11 J	295 J	87.1 J	2110 J	5500 J	3850 J
PCBS (UG/KG)									
TOTAL AROCLOR	1060	11.3 UJ	440 J	11.3 U	67	11.2 U	100 J	800	260 J
METALS (MG/KG)									
COPPER	74	NA	NA	NA	NA	6.8	NA	NA	NA
LEAD	168	5	102	28 J	9.7 J	7.5	48.8	125	52.4
ZINC	118	NA	NA	NA	NA	42.8	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)									
ASBESTOS	1								
MISCELLANEOUS PARAMETERS (UG/KG)									
TRIBUTYLTIN (AS TIN)	228	0.65 U	5.15 J	0.63 U	0.72 U	0.69 U	0.69 U	3.4 U	0.66 U

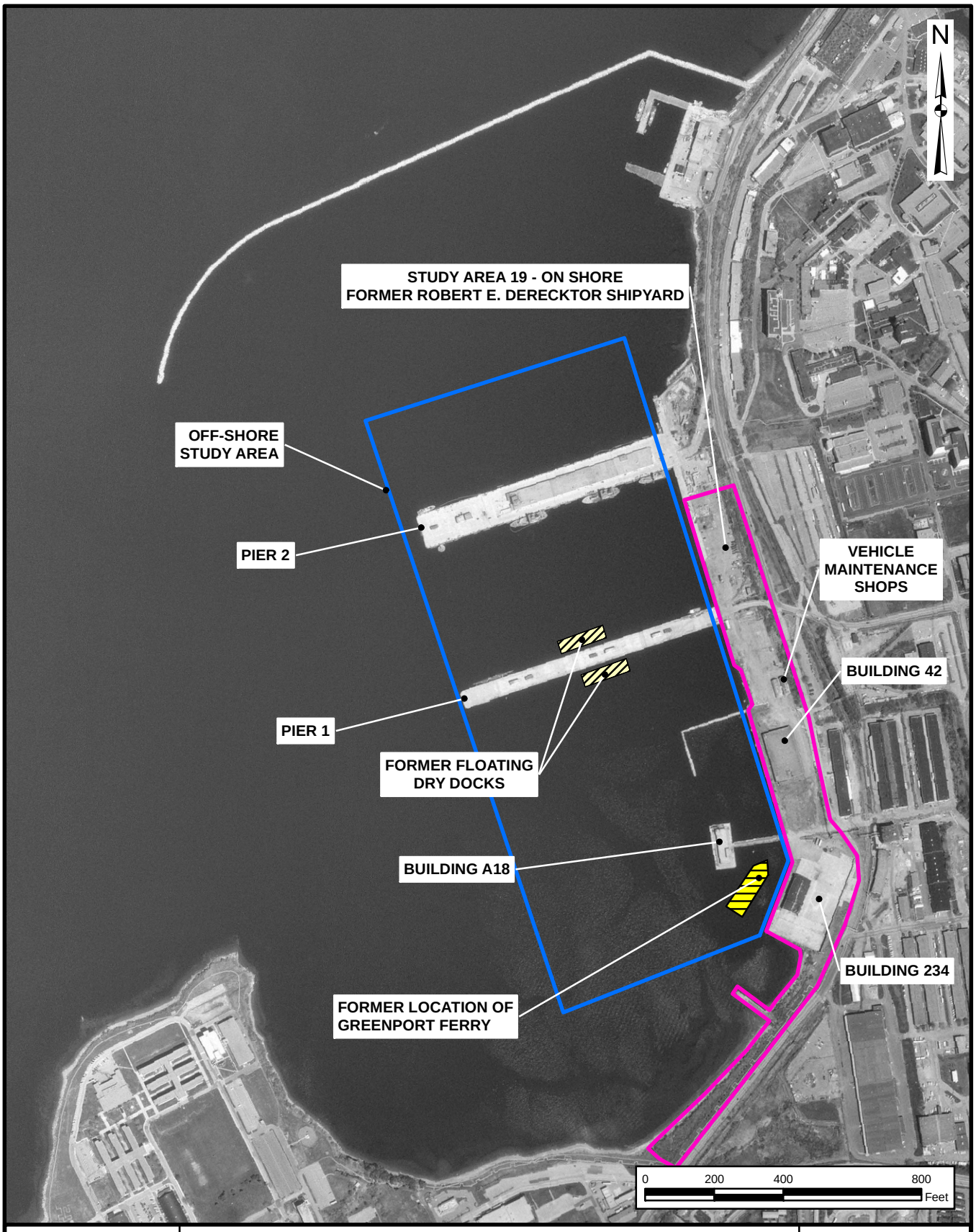
YELLOW SHADING 1 - 2 X RPRG; ORANGE SHADING 2 - 5 X RPRG;
RED SHADING 5 - 10 X RPRG; PURPLE SHADING >10 X RPRG; GREY SHADING <1 X RPRG;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE 5-1
SUMMARY OF INVESTIGATIONS
SUPPLEMENTAL SEDIMENT INVESTIGATION
SITE 19 – FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT, RI

Core Location	Location/ Activity	Chemistry	Bathymetry	Flow Information (near- bottom flow) Average/Max	Sedimentation Rate	Predicted flow required to erode surface sediment
GP01	North of Pier 2, Navy Ship Traffic	Minor exceedances of lead, benzo(a)-pyrene	Dredged 1950s	0.2/13.7 cm/sec	0.08 cm/y	28.7 cm/sec
GP02	Outer Cove	No RPRGs exceeded	Dredged 1950s	1.0/28 cm/sec	0.75 cm/y	28.7 cm/sec
GP03	South of Pier 2	Lead and PCBs >RPRGs in surface sediment	Dredged 1950s	0.3/16.5 cm/sec	0.18 cm/y	28.7 cm/sec
GP04	South of Pier 2	Lead and PAHs >RPRGs	Dredged 1950s	0.3/12.6 cm/sec	2.05 cm/y	28.7 cm/sec
GP05	Near former dry dock and adjacent to Ex-Forrestal,	No RPRGs exceeded	Dredged 1950s, expected to have new deposition	0.6/19.7 cm/sec	0.35 cm/y	28.7 cm/sec
GP06	Near Bulkhead, north of Pier 1	Benzo(a)pyrene, lead and PCBs >RPRGs	Dredged 1950s, some historic deposition likely	0.1/9.7 cm/sec	2.23 cm/y	28.7 cm/sec
GP07	Location of former dry dock and ex-Saratoga	PAHs, lead >RPRGs. TBT found >NOEC	Historic deposition likely, new deposition evident, less than 1 foot in thickness	1.1/11.2 cm/sec	0.45 cm/y	28.7 cm/sec
GP08	Near former outfall from site operations	Lead and PCBs >RPRGs	Dredged 1950s, some historic deposition likely	0.3/14.4 cm/sec	1.43 cm/y	28.7 cm/sec
GP09	Outside small boat basin	No RPRGs exceeded	Not Dredged	1.4/15.3 cm/sec	0.14 cm/y	28.7 cm/sec
GP10	Near former outfall from site operations	PAHs, Benzo(a)pyrene >RPRGs	Not Dredged	0.8/9.2 cm/sec	0.27 cm/y	28.7 cm/sec

FIGURES

I:\02747\FI.TM.1\DER_SITE_BOUND.MXD DWM 02/24/12



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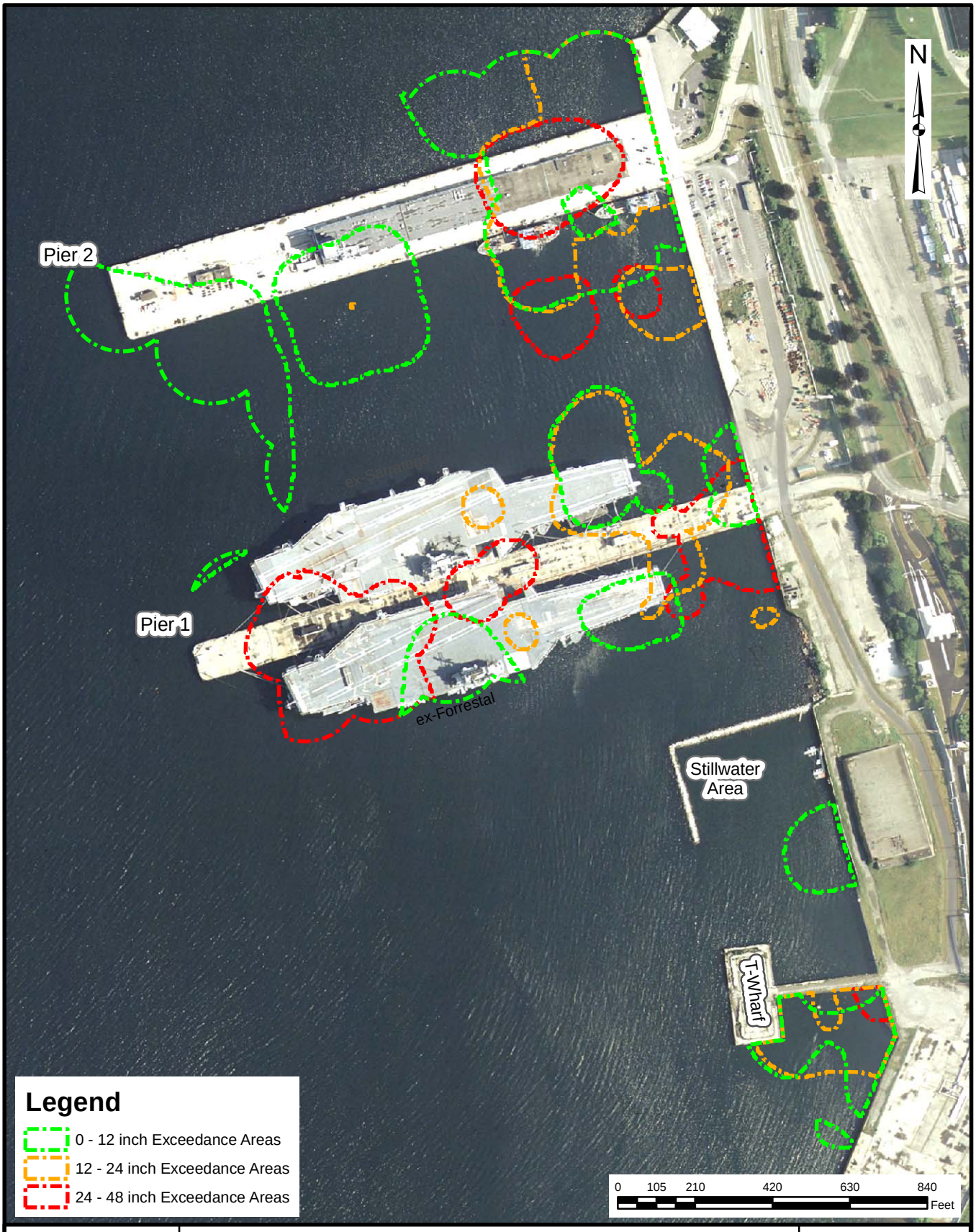
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

SITE BOUNDARIES AND HISTORICAL SITE FEATURES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\DER_SITE_BOUND.MXD	
REV	DATE
0	02/24/12
FIGURE NUMBER	
ES-1	

I:\02747\FI.TM.3\FIGURE_ES-2.MXD MJH/NEC 12/06/12



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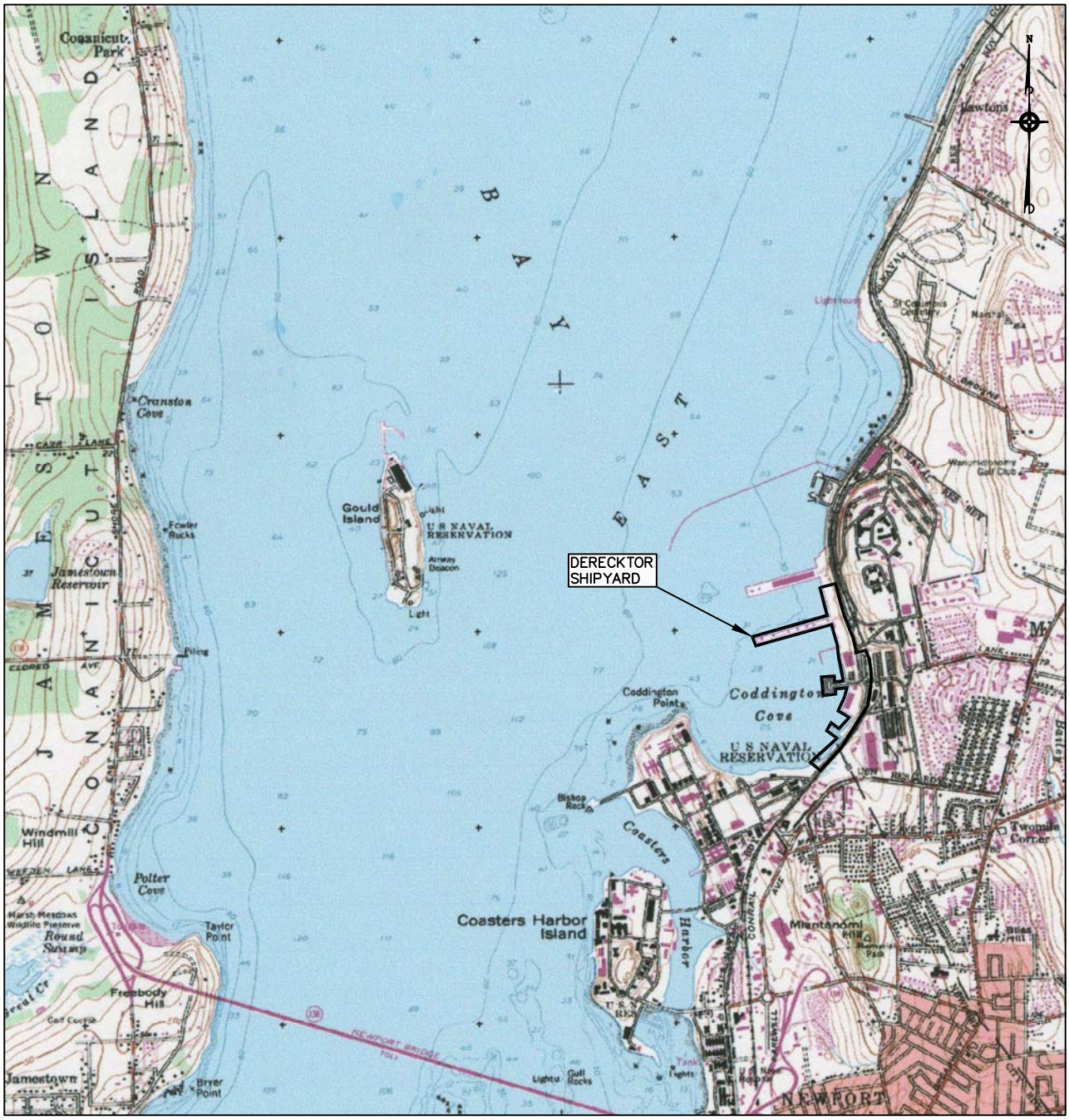
NEWPORT, RHODE ISLAND

EXCEEDANCE AREAS
(PAHS, BENZO(A)PYRENE, PCBS, LEAD)

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_ES-2.MXD
REV	0
DATE	12/06/12
FIGURE NUMBER	ES-2

ACAD:I:\02747\FI.TM.3\DER_LOCUS.DWG 12/5/12 DWM



BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15 MINUTE U.S.G.S. QUADRANGLE:
PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975

QUADRANGLE LOCATION

GRAPHIC SCALE
0 0.5 MILE 1 MILE

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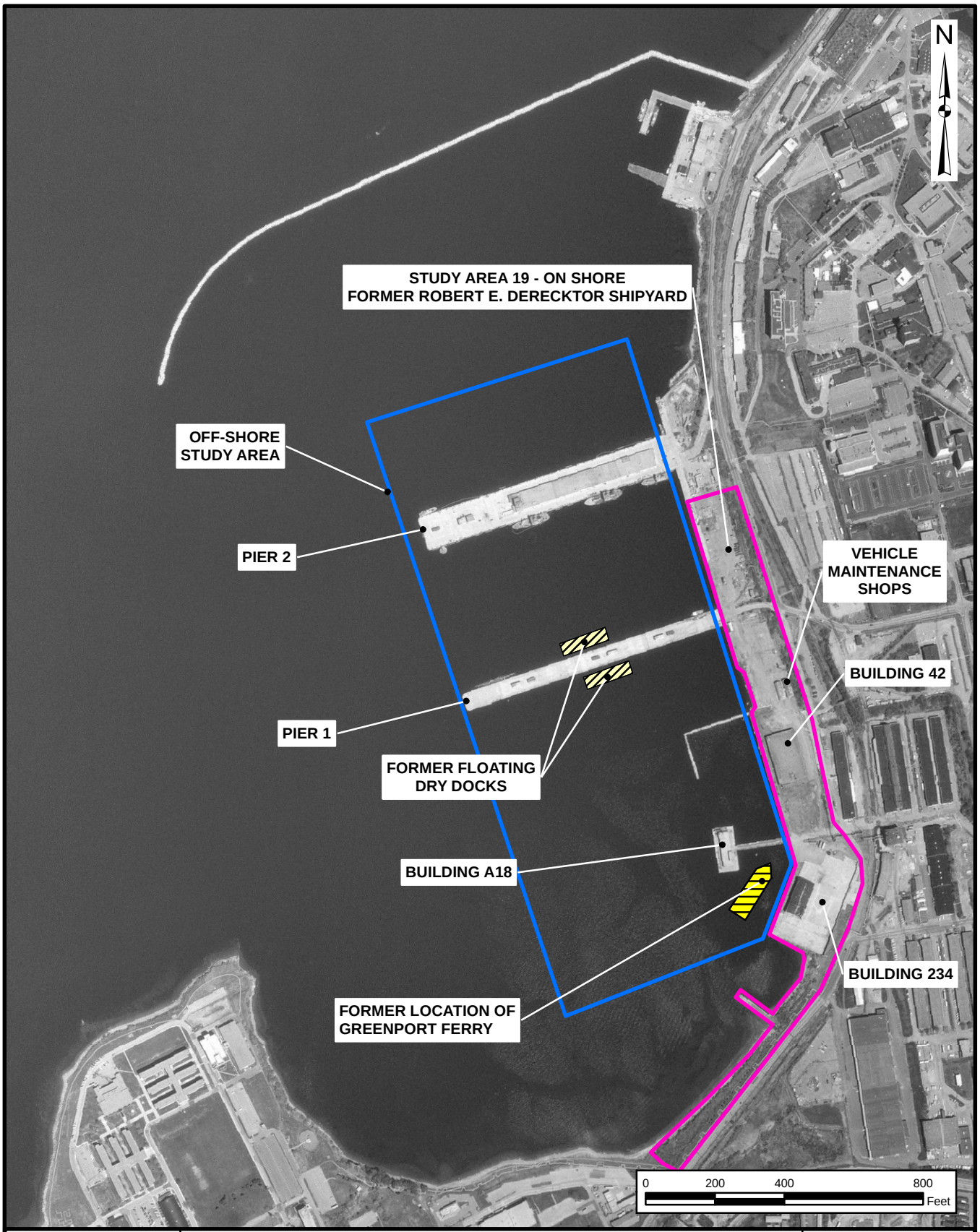
NEWPORT, RHODE ISLAND

SITE LOCUS

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
\..\DER_LOCUS.DWG	
REV	DATE
0	12/5/12
FIGURE NUMBER	
1–1	

I:\02747\FI.TM.1\DER_SITE_BOUND.MXD DWM 02/24/12



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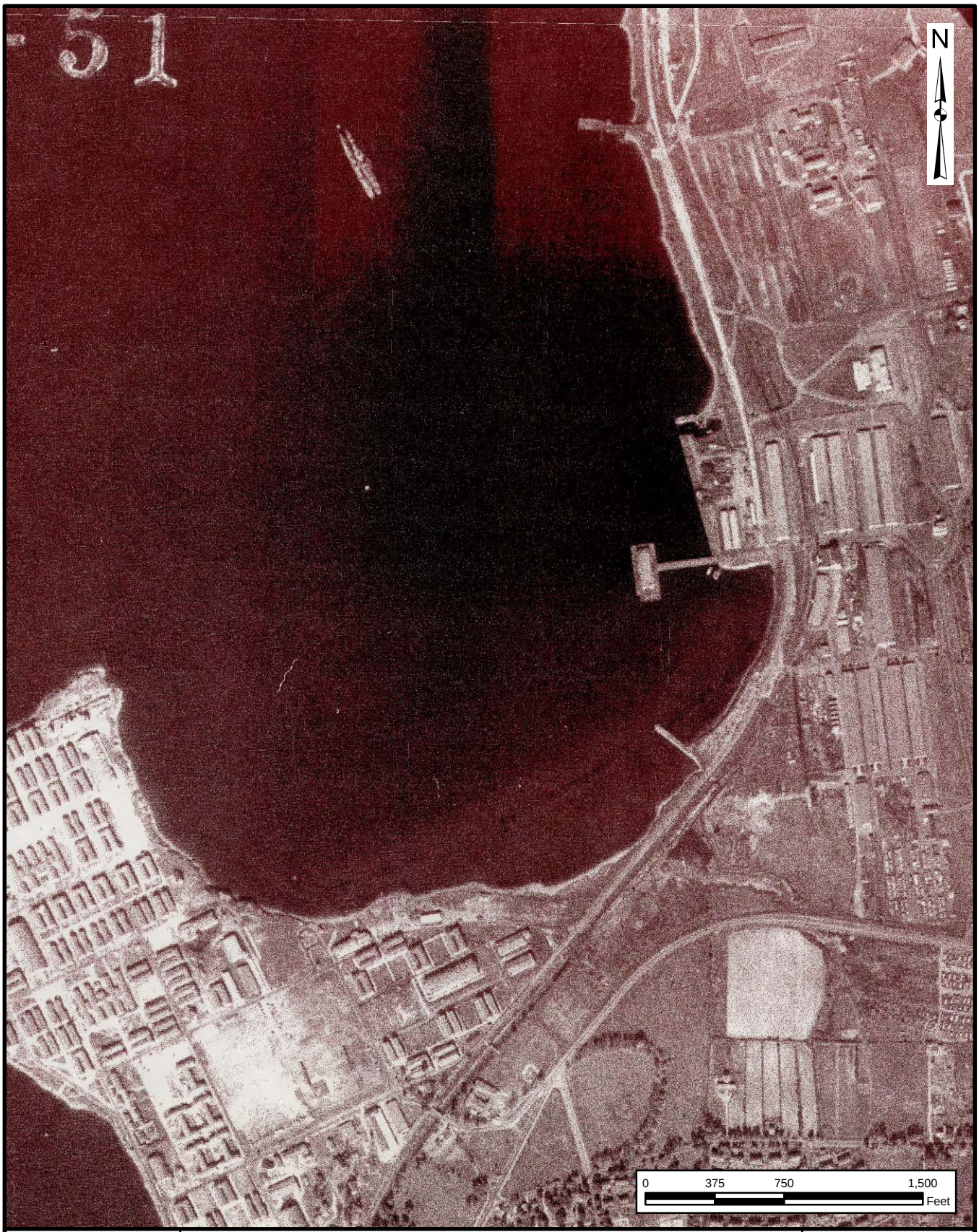
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

SITE BOUNDARIES AND HISTORICAL SITE FEATURES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\DER_SITE_BOUND.MXD	
REV	DATE
0	02/24/12
FIGURE NUMBER	
1-2	

I:\02747\FI.TM.3\DER_1951_ORTHO.mxd DWM 12/5/2012



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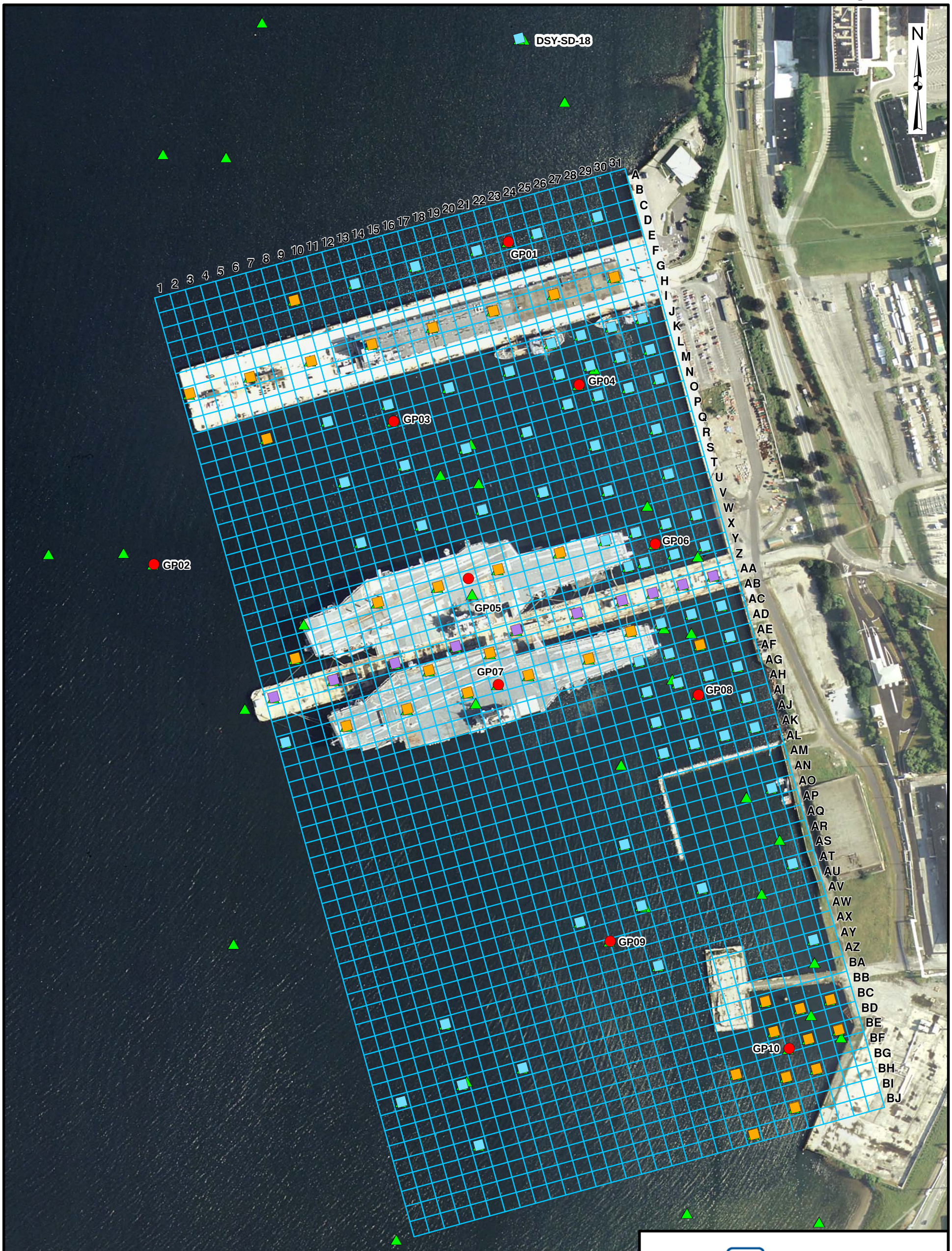
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

1951 AERIAL PHOTO

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\DER_1951_ORTHO.MXD	
REV	DATE
0	12/5/2012
FIGURE NUMBER	
1-3	

I:\02747\FI.TM.3\DER_GRID.mxd DWM 12/5/2012



Legend

Former Sample Locations

- Sediment Sample Locations

Proposed Sediment Sample Locations

- HMW PAHs, PCBs, TBT, and Lead
- Zinc, Copper, HMW PAHs, PCBs, TBT, and Lead
- Zinc, Copper, Asbestos, HMW PAHs, PCBs, TBT, and Lead
- GeoPhysical Data

Note: TOC was collected at stations designated on Worksheet 18 of the SAP.
The southern aircraft carrier shown docked at Pier 1 has been removed.
It remains on this figure to depict sample locations in relation to the carrier.

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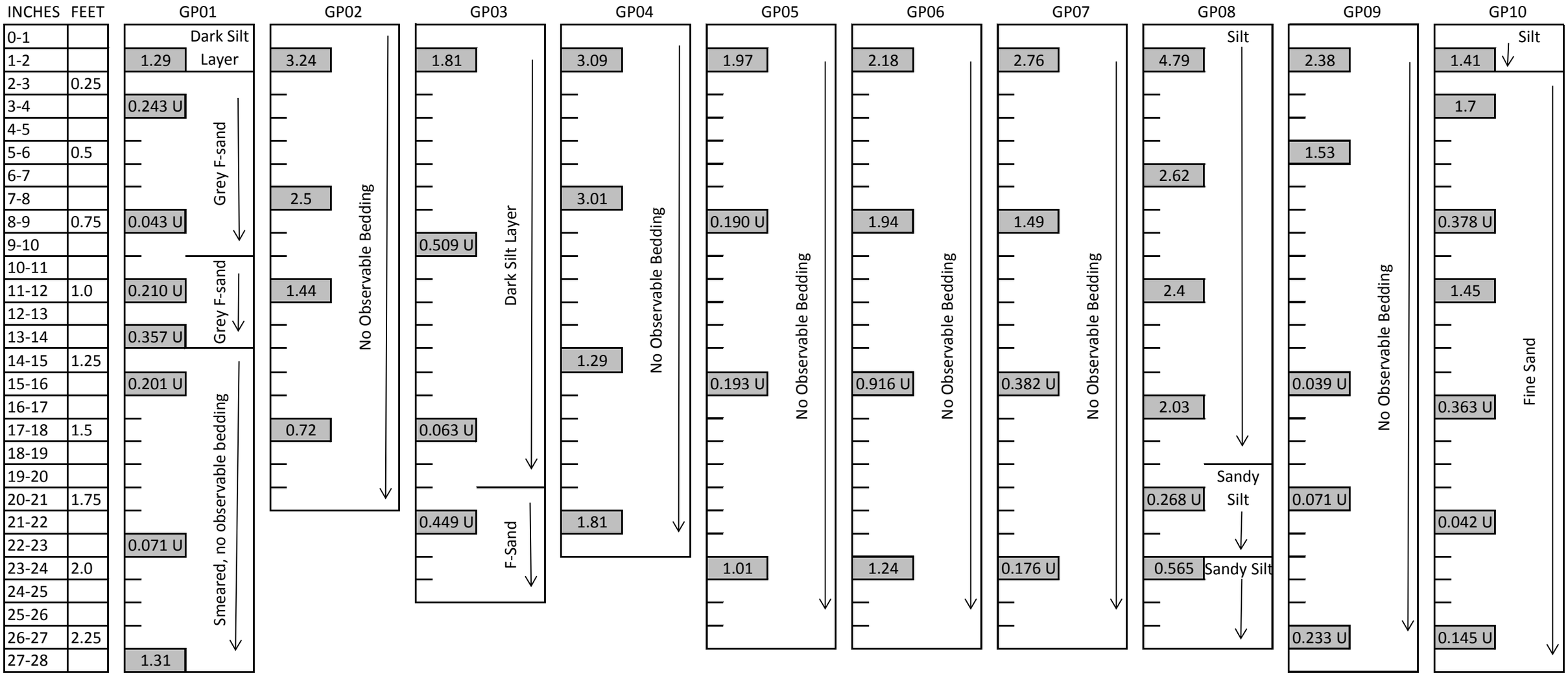
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

SAMPLING LOCATIONS AND REFERENCE GRID

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

FILE	SCALE
I:\..\DER_GRID.MXD	PER SCALE BAR
FIGURE NUMBER	REV / DATE
2-1	0 / 12/5/2012

FIGURE 2-2
RADIOISOTOPE RESULTS AND FIELD OBSERVATIONS
SUPPLEMENTAL SEDIMENT INVESTIGATION
FORMER DERECKTOR SHIPYARD
NAVSTA NEWPORT, NEWPORT RI



NOTE: Grey box indicates Po-210 result in pCi/g

I:\02747\FI.TM.3\FIGURE_3-1(BATHY).MXD MJH/NEC 12/05/12

Legend

Bottom Elevation
Value (ft. from MLLW)

High : 2.28

Low : -43.6

Note: Shading is exaggerated 5x to demonstrate the transitions and relief of bottom conditions.

Note: Image was produced from data gathered from May 25, 2011 to May 27, 2011, and on June 3, 2011

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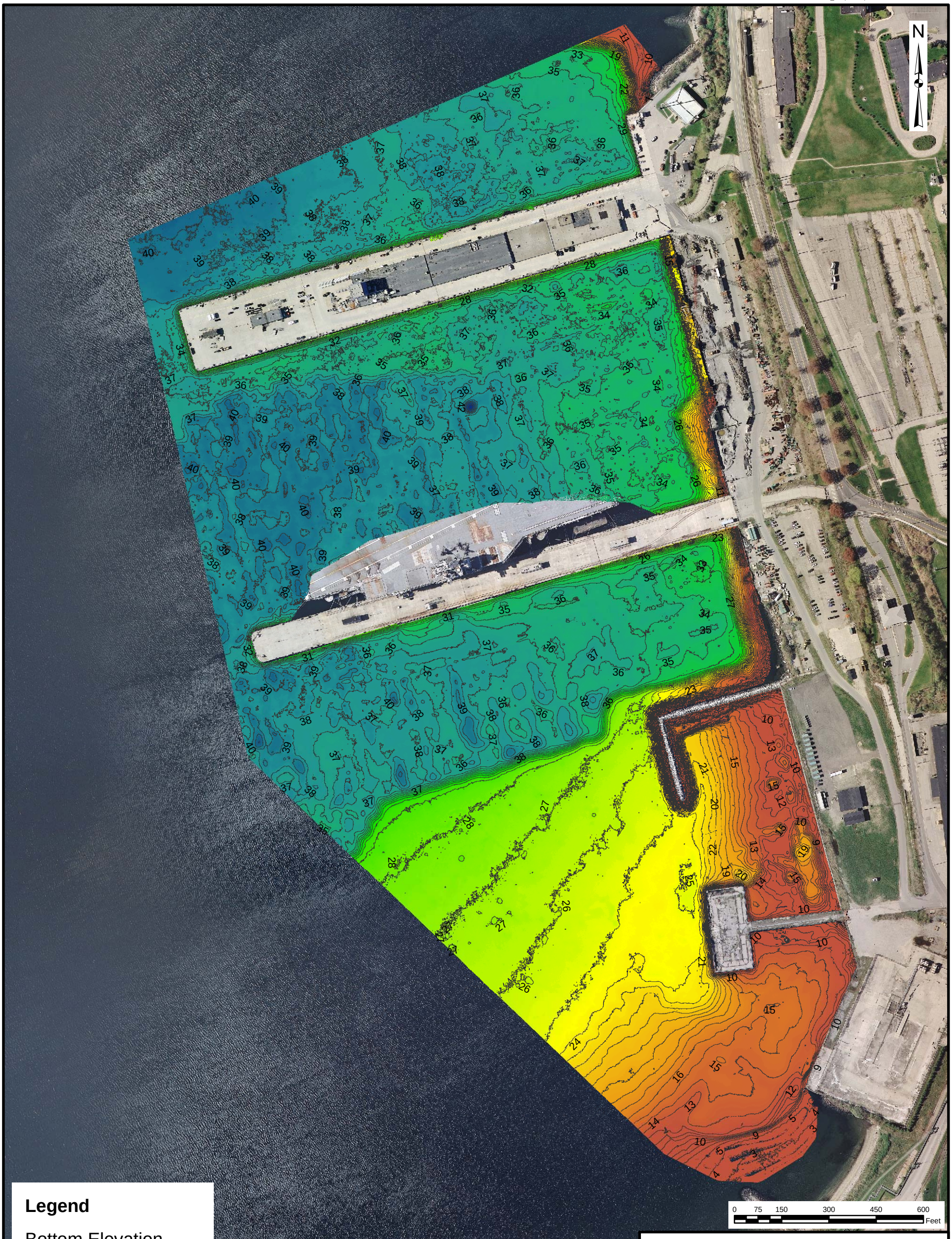
NAVAL STATION NEWPORT
NEWPORT RHODE ISLAND

BATHYMETRIC SURVEY RESULTS

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

FILE	SCALE
I:\...\FIGURE_3-1(BATHY).MXD	PER SCALE BAR
FIGURE NUMBER	REV / DATE
3-1	0 / 12/05/12

I:\02747\FI.TM.3\FIGURE_3-2(TOPO).MXD MJH/NEC 12/06/12



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NAVAL STATION NEWPORT
NEWPORT RHODE ISLAND

TOPOGRAPHIC CONTOUR MAP
CODDINGTON COVE SEDIMENT SURFACE

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

FILE	SCALE
I:\...\FIGURE_3-2(TOPO).MXD	PER SCALE BAR
FIGURE NUMBER	REV / DATE
3-2	0 / 12/06/12

I:\02747\FI.TM.3\FIGURE_4-1A_(PAH0-1).MXD MJH/NEC 12/06/12

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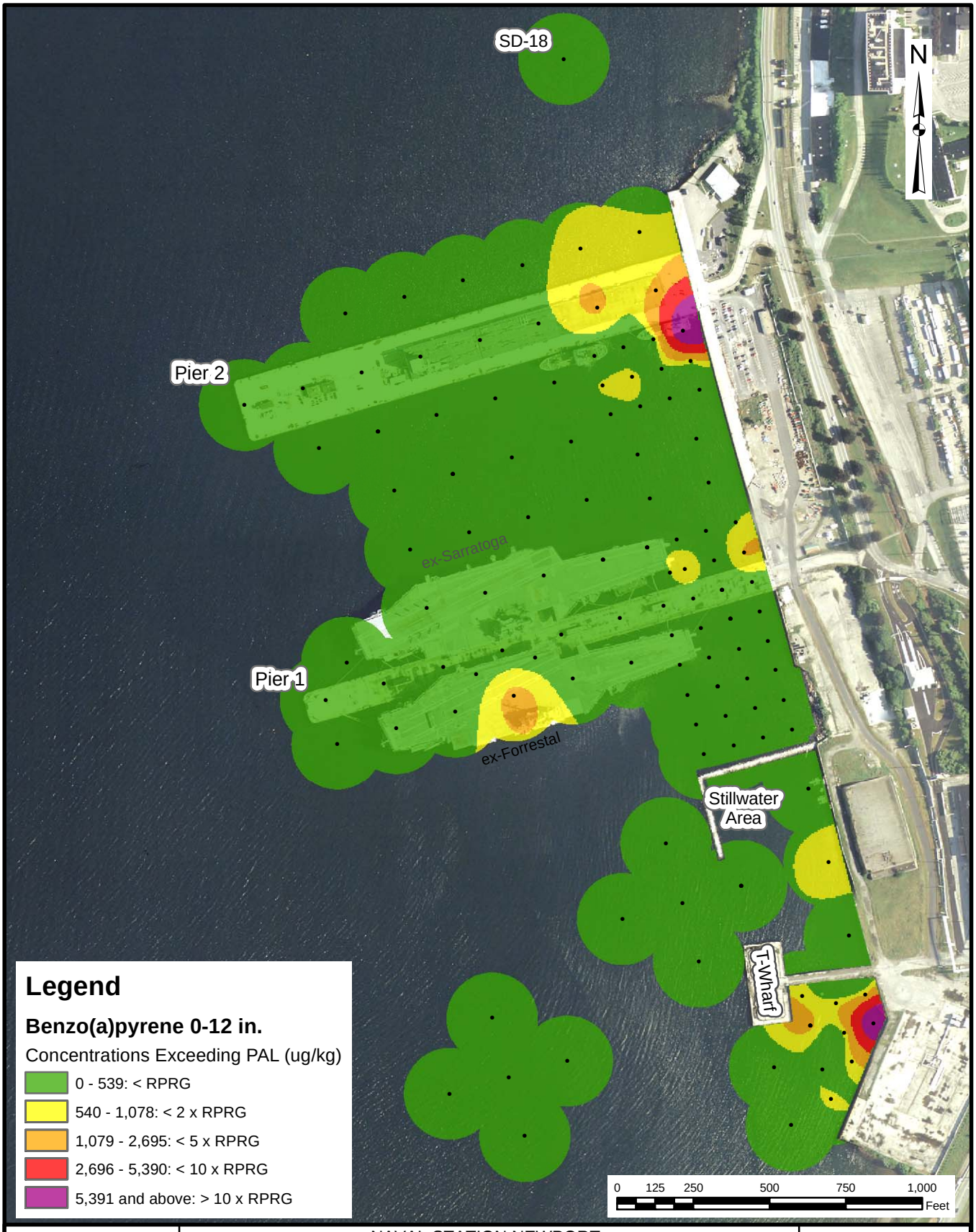
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - HMW PAHS DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-1C_(PAH0-1).MXD
REV	0
DATE	12/06/12
FIGURE NUMBER	4-1A

I:\02747\FI.TM.3\FIGURE_4-1B_(BAP0-1).MXD MJH/NEC 12/05/12



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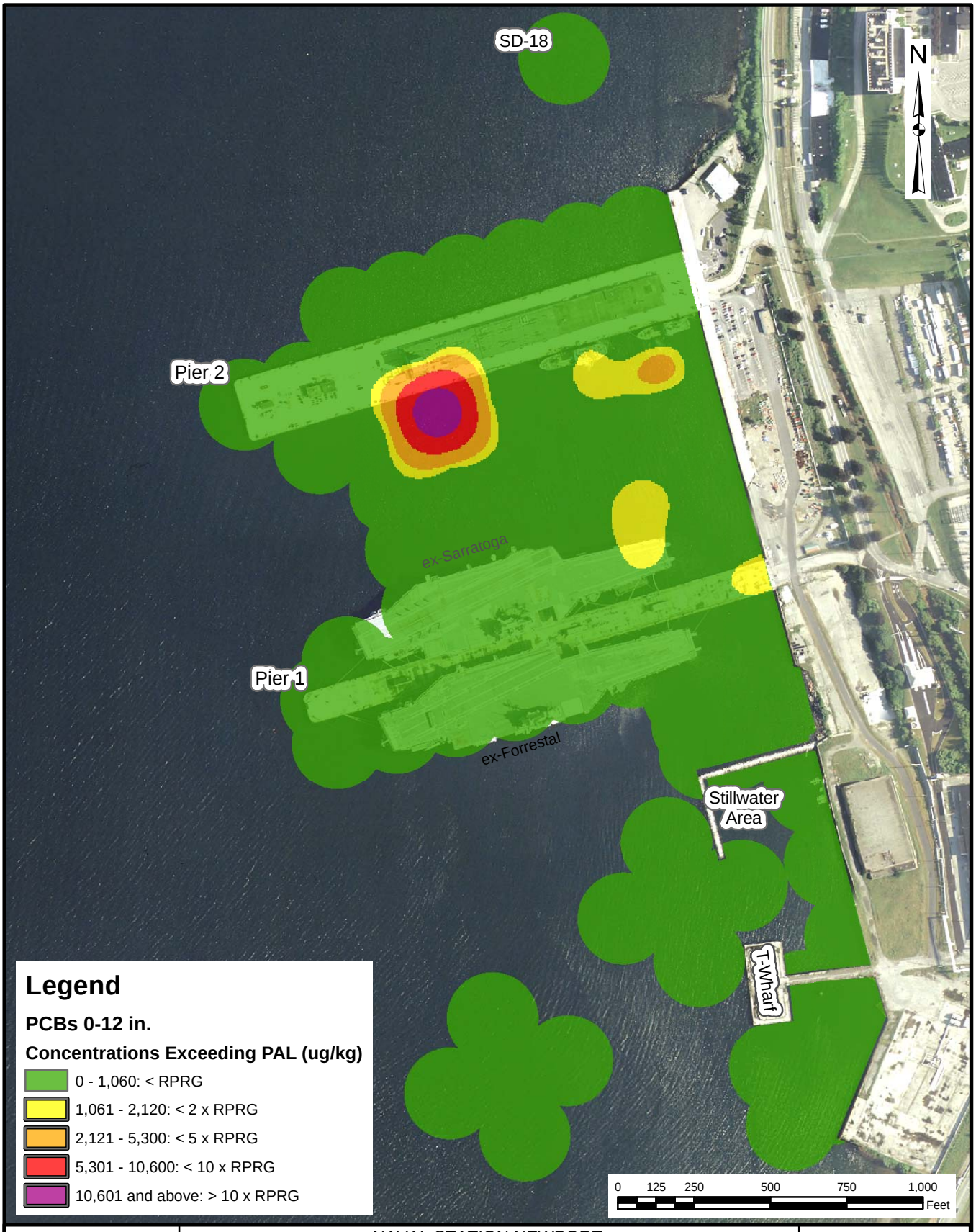
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - BENZO(A)PYRENE DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-1C_(BAP0-1).MXD
REV	0
DATE	12/05/12
FIGURE NUMBER	4-1B

I:\02747\FI_TM.3\FIGURE_4-1C_(PCB0-1).MXD MJH/NEC 12/05/12



TETRA TECH

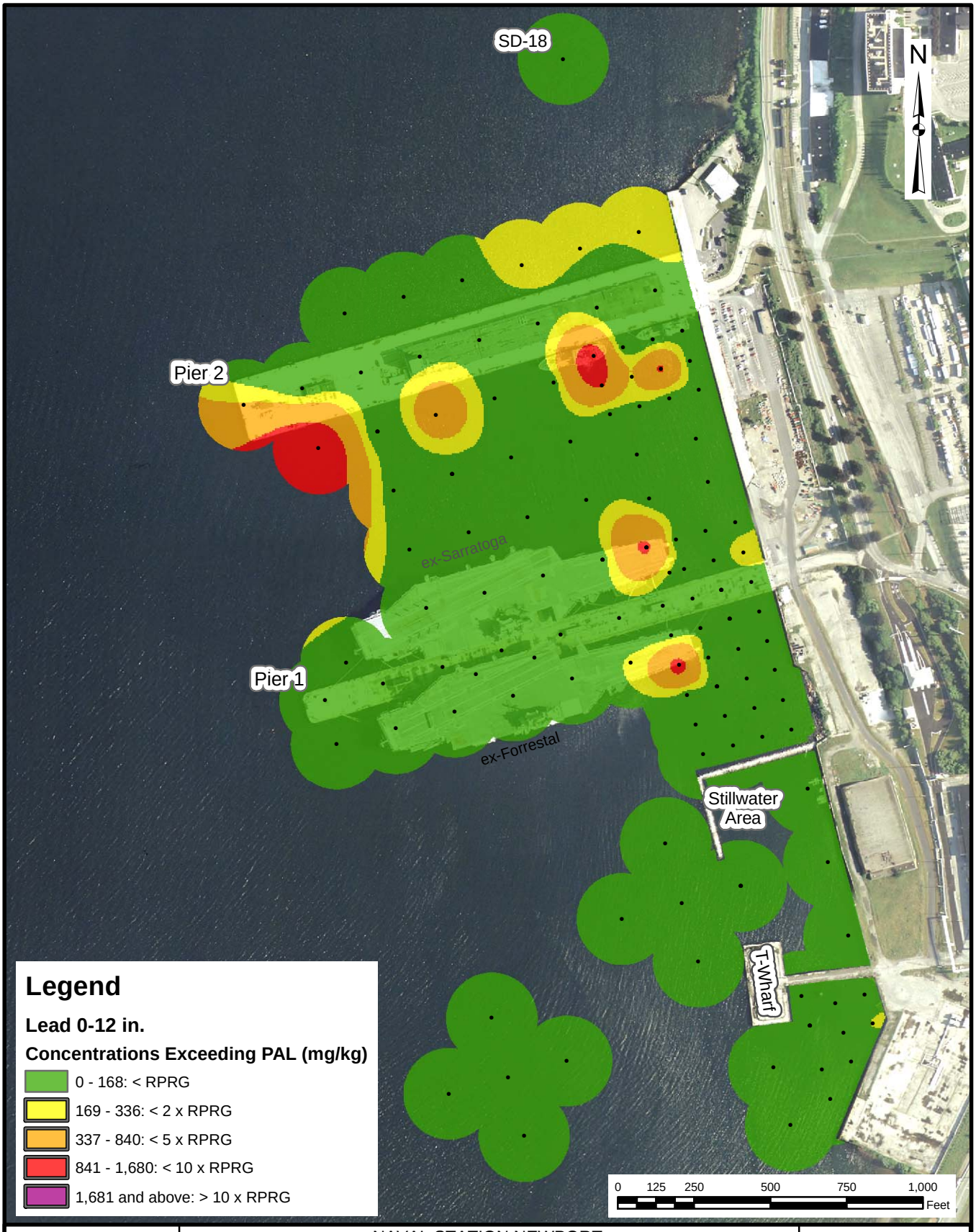
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - PCBS DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-1C_(PCB0-1).MXD
REV	0
DATE	12/05/12
FIGURE NUMBER	4-1C

I:\02747\FI.TM.3\FIGURE_4-1D_(PB0-1).MXD MJH/NEC 12/05/12



Legend

Lead 0-12 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 168: < RPRG
- 169 - 336: < 2 x RPRG
- 337 - 840: < 5 x RPRG
- 841 - 1,680: < 10 x RPRG
- 1,681 and above: > 10 x RPRG

TETRA TECH

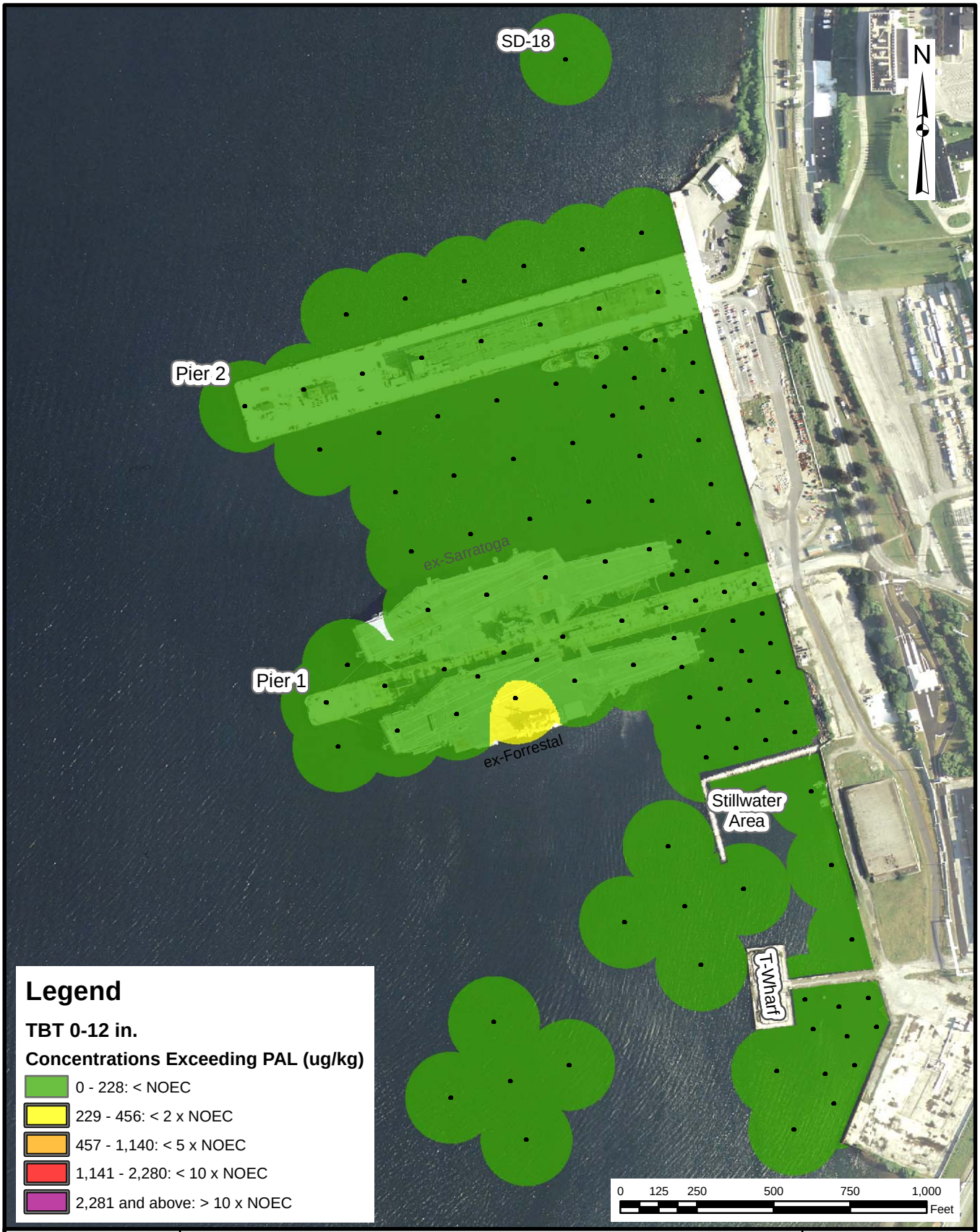
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - LEAD DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\...\FIGURE_4-1D_(PB0-1).MXD	
REV	DATE
0	12/05/12
FIGURE NUMBER	
4-1D	

I:\02747\FI.TM.3\FIGURE_4-1E_(TBT0-1).MXD MJH/NEC 12/06/12



Legend

TBT 0-12 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 228: < NOEC
- 229 - 456: < 2 x NOEC
- 457 - 1,140: < 5 x NOEC
- 1,141 - 2,280: < 10 x NOEC
- 2,281 and above: > 10 x NOEC

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - TRIBUTYLTIN DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\...\FIGURE_4-1C_(TBT0-1).MXD	
REV	DATE
0	12/06/12
FIGURE NUMBER	
4-1E	

I:\02747\FI.TM.3\FIGURE_4-1F_(CU0-1).MXD MJH/NEC 12/05/12

Legend

Copper 0-12 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 74: < BPRG
- 75 - 148: < 2 x BPRG
- 149 - 370: < 5 x BPRG
- 371 - 740: < 10 x BPRG
- 741 and above: > 10 x BPRG

TETRA TECH

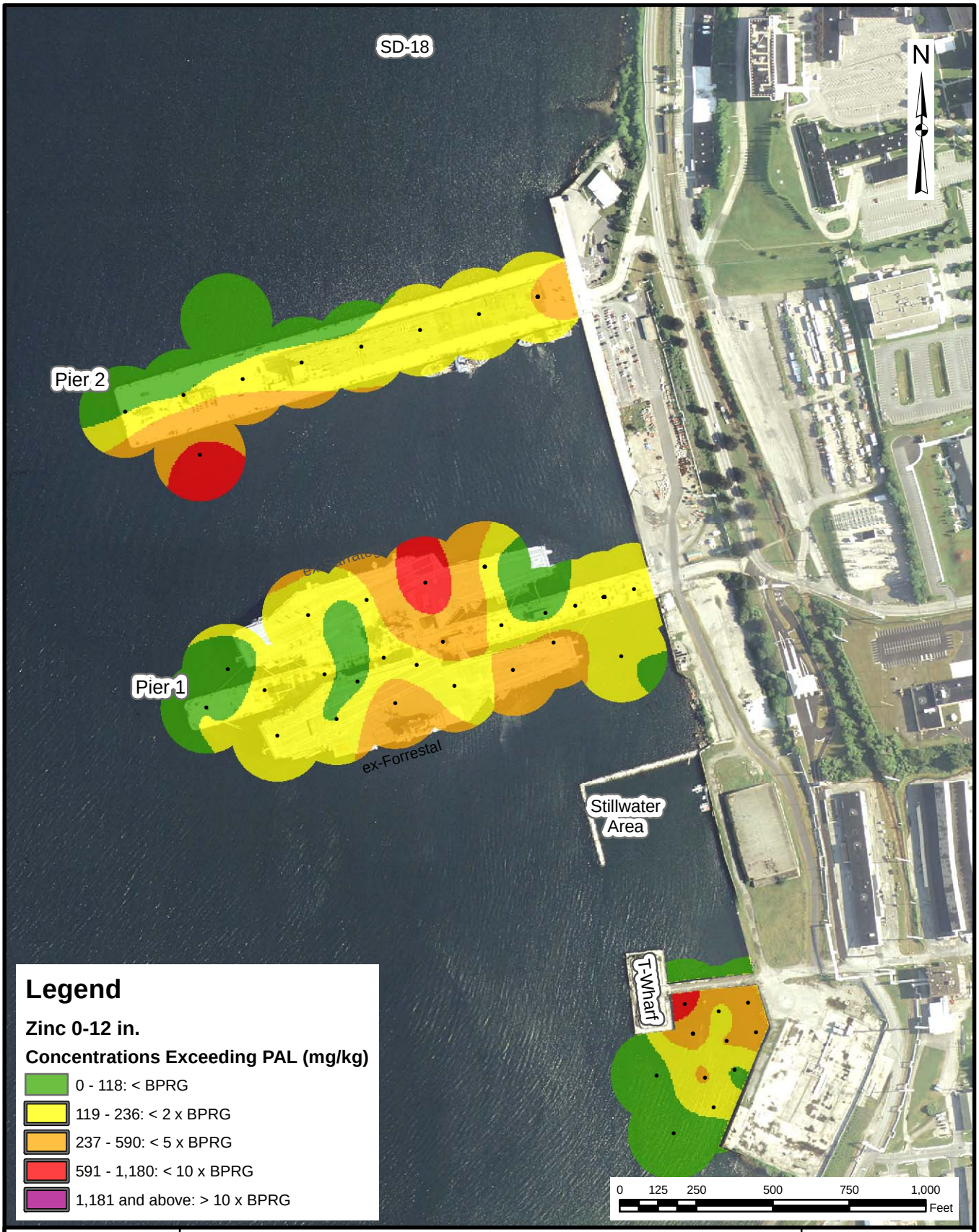
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - COPPER DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-1F_(CU0-1).MXD
REV	0
DATE	12/05/12
FIGURE NUMBER	4-1F

I:\02747\FI.TM.3\FIGURE_4-1G_(ZN0-1).MXD MJH/NEC 12/05/12



Legend

Zinc 0-12 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 118: < BPRG
- 119 - 236: < 2 x BPRG
- 237 - 590: < 5 x BPRG
- 591 - 1,180: < 10 x BPRG
- 1,181 and above: > 10 x BPRG

TETRA TECH

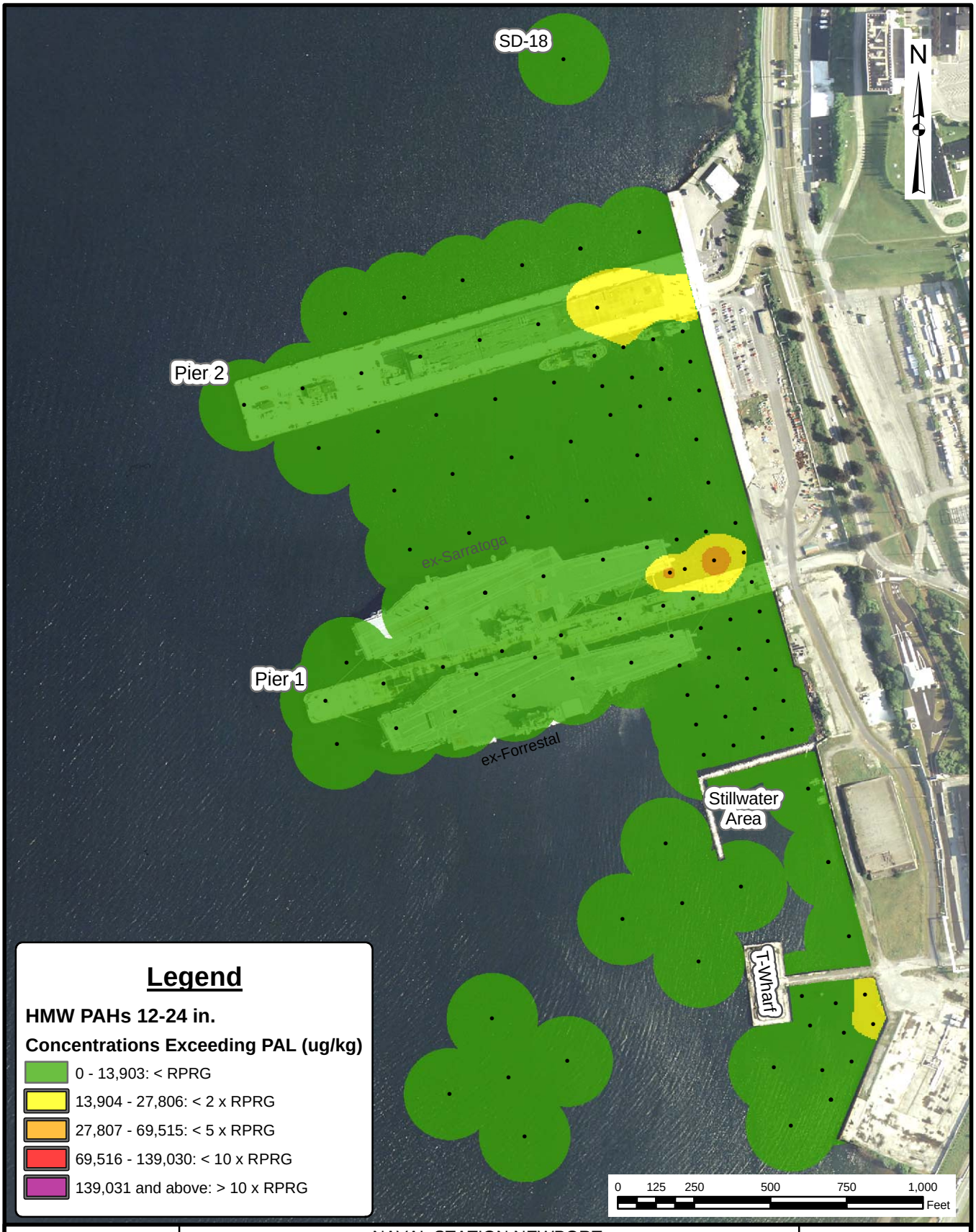
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - ZINC DEPTH: 0 - 12 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\...\FIGURE_4-1C_(ZN0-1).MXD	
REV	DATE
0	12/05/12
FIGURE NUMBER	
4-1G	

I:\02747\FI.TM.3\FIGURE_4-2A_(PAH1-2).MXD MJH/NEC 12/06/12



Legend

HMW PAHs 12-24 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 13,903: < RPRG
- 13,904 - 27,806: < 2 x RPRG
- 27,807 - 69,515: < 5 x RPRG
- 69,516 - 139,030: < 10 x RPRG
- 139,031 and above: > 10 x RPRG

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - HMW PAHS DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-2A_(PAH1-2).MXD
REV	0
DATE	12/06/12
FIGURE NUMBER	4-2A

I:\02747\FI.TM.3\FIGURE_4-2B_(BAP1-2).MXD MJH/NEC 12/05/12

Legend

Benzo(a)pyrene 12-24 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 539: < RPRG
- 540 - 1,078: < 2 x RPRG
- 1,079 - 2,695: < 5 x RPRG
- 2,696 - 5,390: < 10 x RPRG
- 5,391 and above: > 10 x RPRG

TETRA TECH

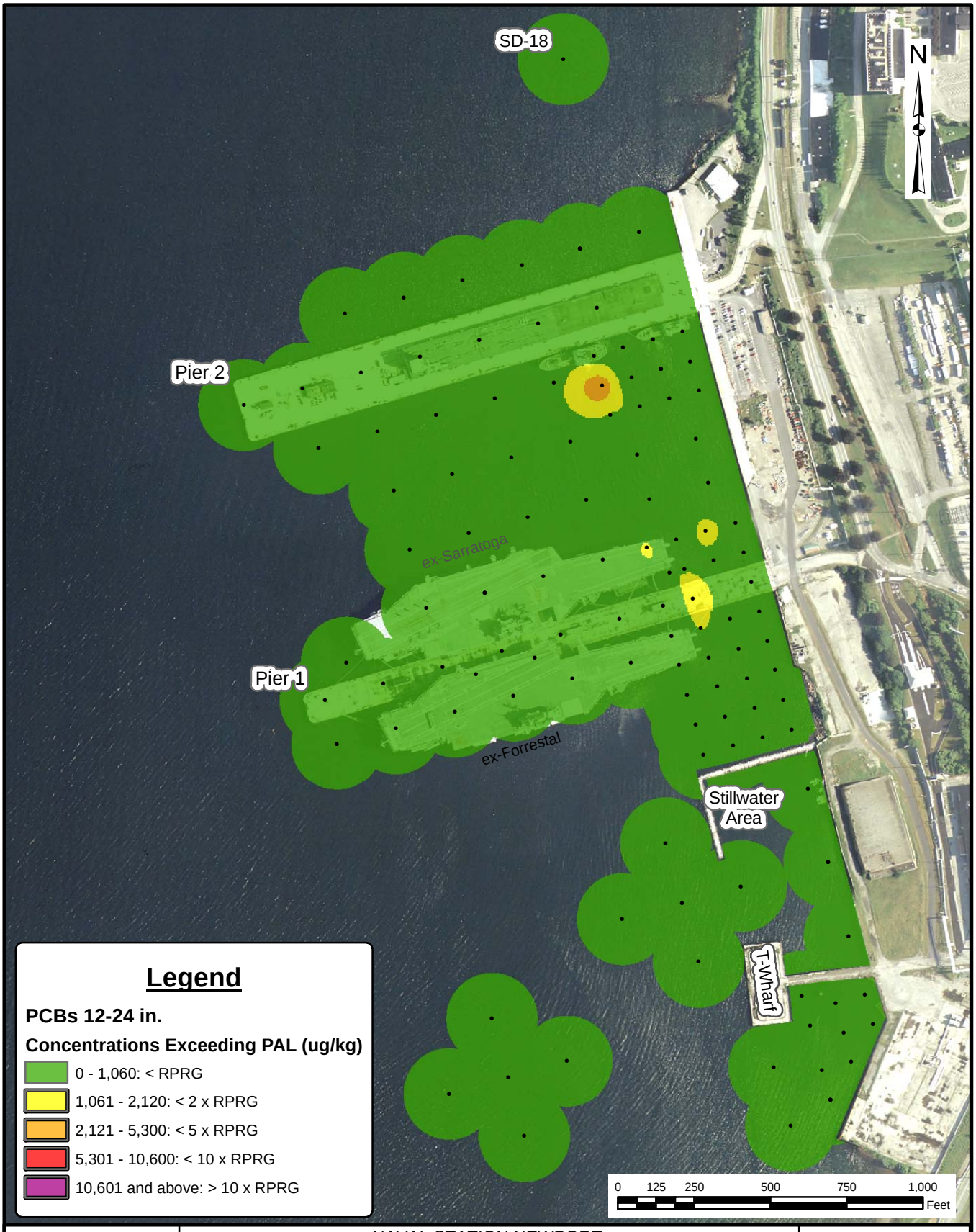
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - BENZO(A)PYRENE DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-2B_(BAP1-2).MXD
REV	0
DATE	12/05/12
FIGURE NUMBER	4-2B

I:\02747\FI_TM.3\FIGURE_4-2C_(PCB1-2).MXD MJH/NEC 12/05/12



Legend

PCBs 12-24 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 1,060: < RPRG
- 1,061 - 2,120: < 2 x RPRG
- 2,121 - 5,300: < 5 x RPRG
- 5,301 - 10,600: < 10 x RPRG
- 10,601 and above: > 10 x RPRG

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - PCBS DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\...\FIGURE_4-2C_(PCB1-2).MXD	
REV	DATE
0	12/05/12
FIGURE NUMBER	
4-2C	

I:\02747\FI.TM.3\FIGURE_4-2D_(PB1-2).MXD MJH/NEC 12/05/12

Legend

Lead 12-24 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 168: < RPRG
- 169 - 336: < 2 x RPRG
- 337 - 840: < 5 x RPRG
- 841 - 1,680: < 10 x RPRG
- 1,681 and above: > 10 x RPRG

TETRA TECH

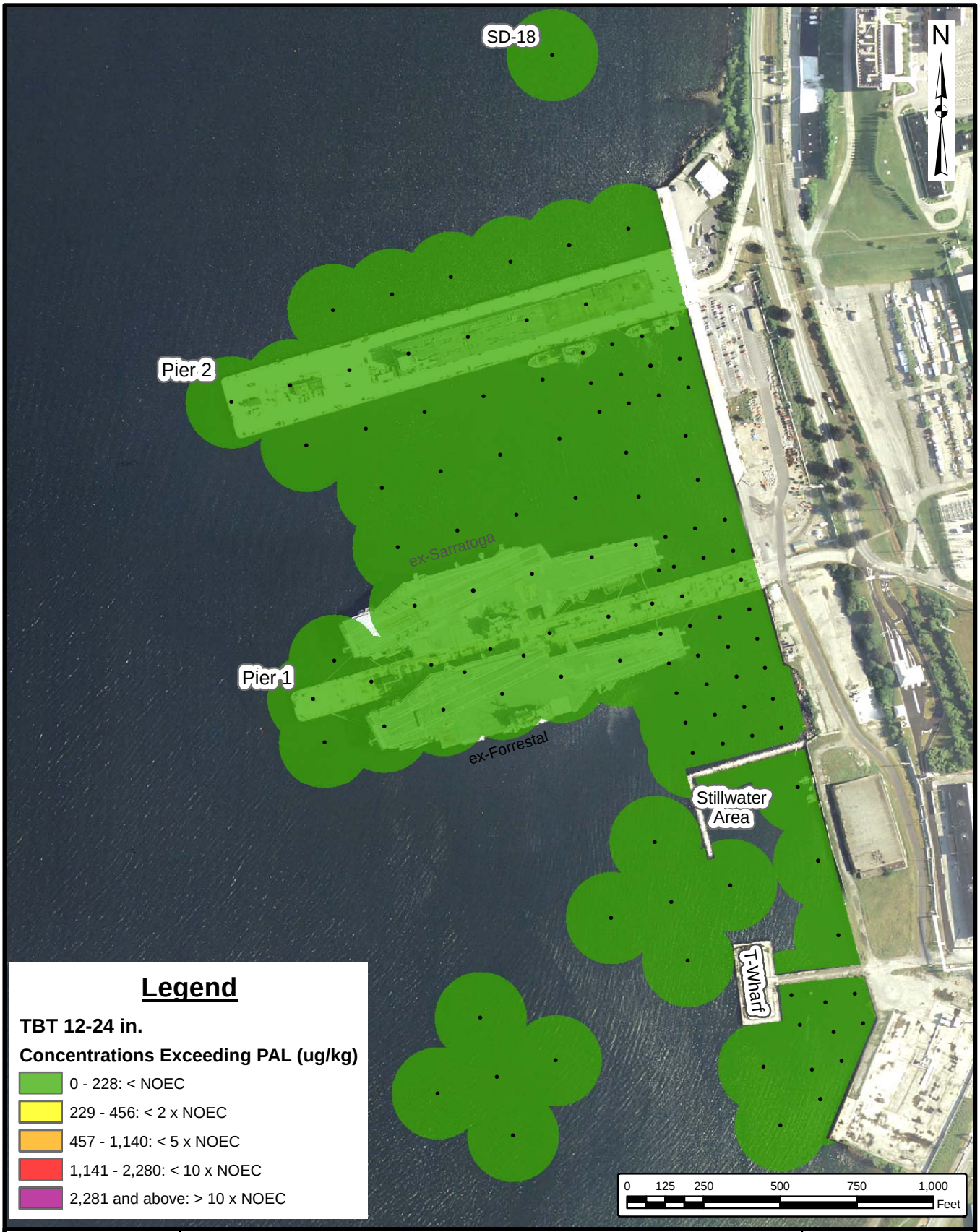
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - LEAD DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\...\FIGURE_4-2C_(PB1-2).MXD
REV	0
DATE	12/05/12
FIGURE NUMBER	4-2D

I:\02747\FI.TM.3\Figure_4-2E_(TBT1-2).mxd DWM 12/6/2012



Legend

TBT 12-24 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 228: < NOEC
- 229 - 456: < 2 x NOEC
- 457 - 1,140: < 5 x NOEC
- 1,141 - 2,280: < 10 x NOEC
- 2,281 and above: > 10 x NOEC

TETRA TECH

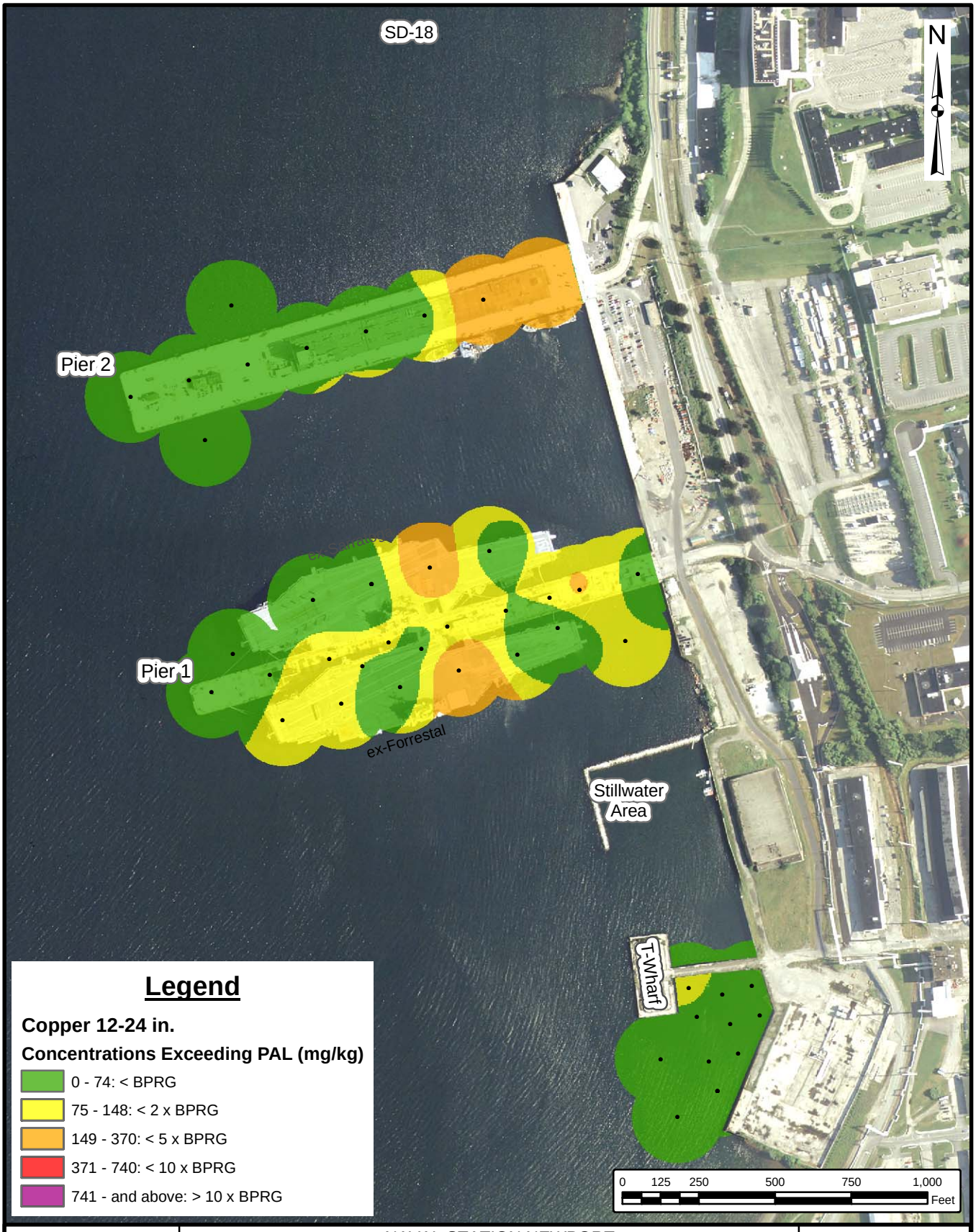
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - TRIBUTYLTIN DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-2E_(TBT1-2)
REV	0
DATE	12/6/2012
FIGURE NUMBER	4-2E

I:\02747\FI.TM.3\Figure_4-2F_(Cu1-2).mxd DWM 12/5/2012



Legend

Copper 12-24 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 74: < BPRG
- 75 - 148: < 2 x BPRG
- 149 - 370: < 5 x BPRG
- 371 - 740: < 10 x BPRG
- 741 - and above: > 10 x BPRG

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - COPPER DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-2F_(CU1-2)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-2F

I:\02747\FI.TM.3\Figure_4-2G_(Zn1-2).mxd DWM 12/5/2012

TETRA TECH

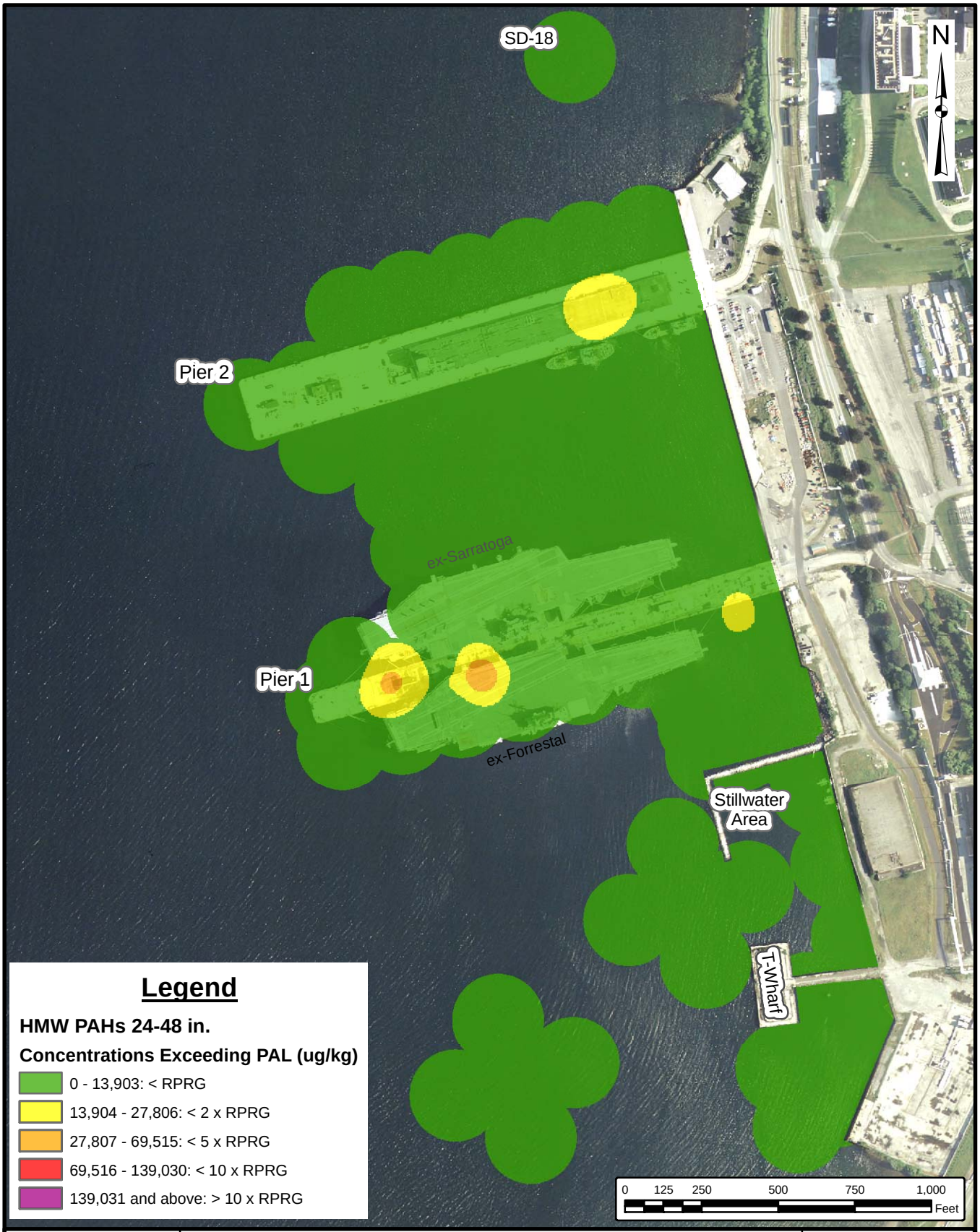
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - ZINC DEPTH: 12 - 24 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-2G_(ZN1-2)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-2G

I:\02747\FI.TM.3\Figure_4-3A_(PAH2-4).mxd DWM 12/5/2012



Legend

HMW PAHs 24-48 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 13,903: < RPRG
- 13,904 - 27,806: < 2 x RPRG
- 27,807 - 69,515: < 5 x RPRG
- 69,516 - 139,030: < 10 x RPRG
- 139,031 and above: > 10 x RPRG

TETRA TECH

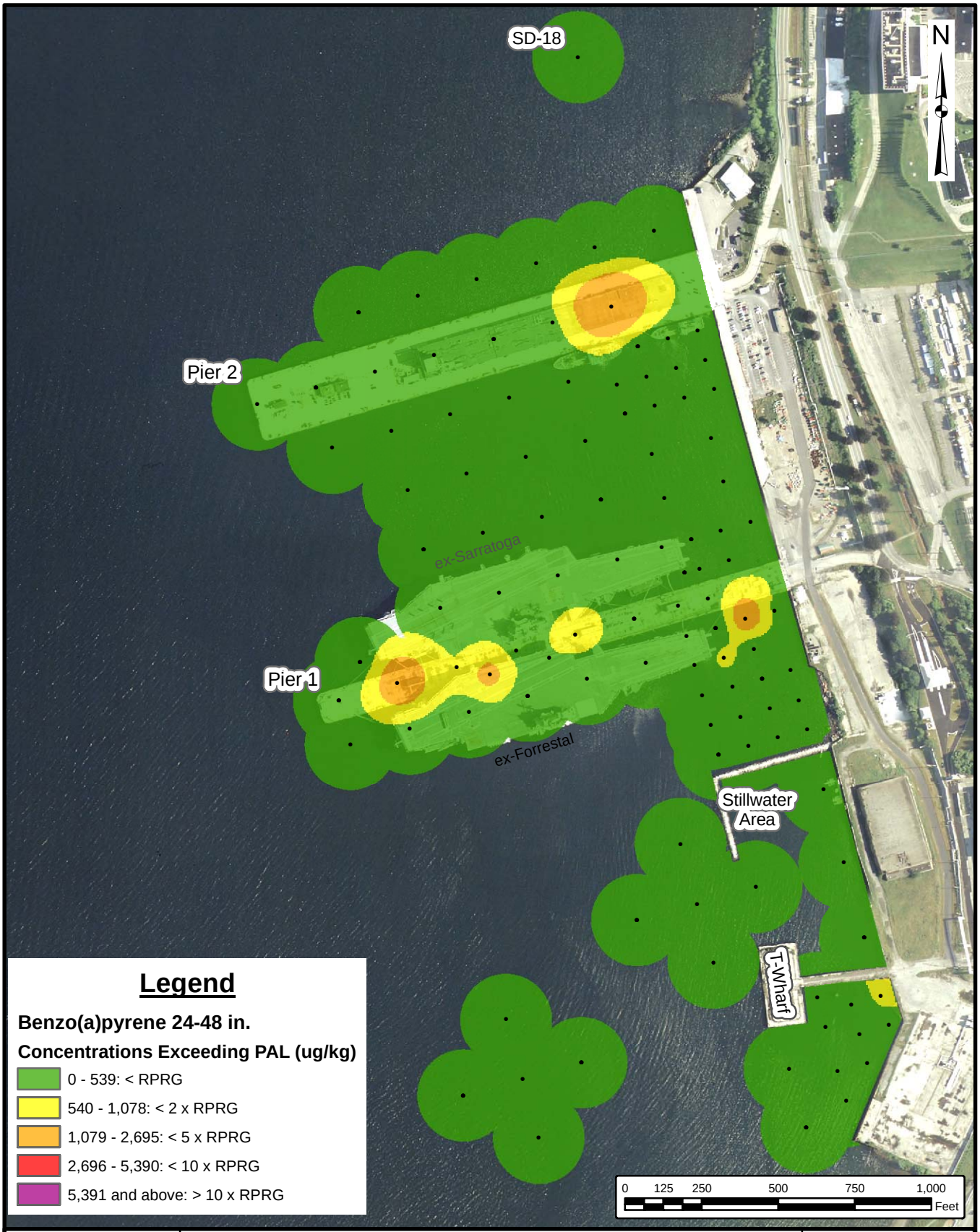
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - HMW PAHS DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-3A_(PAH2-4)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-3A

I:\02747\FI.TM.3\Figure_4-3B_(BAP2-4).mxd DWM 12/5/2012



Legend

Benzo(a)pyrene 24-48 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 539: < RPRG
- 540 - 1,078: < 2 x RPRG
- 1,079 - 2,695: < 5 x RPRG
- 2,696 - 5,390: < 10 x RPRG
- 5,391 and above: > 10 x RPRG

TETRA TECH

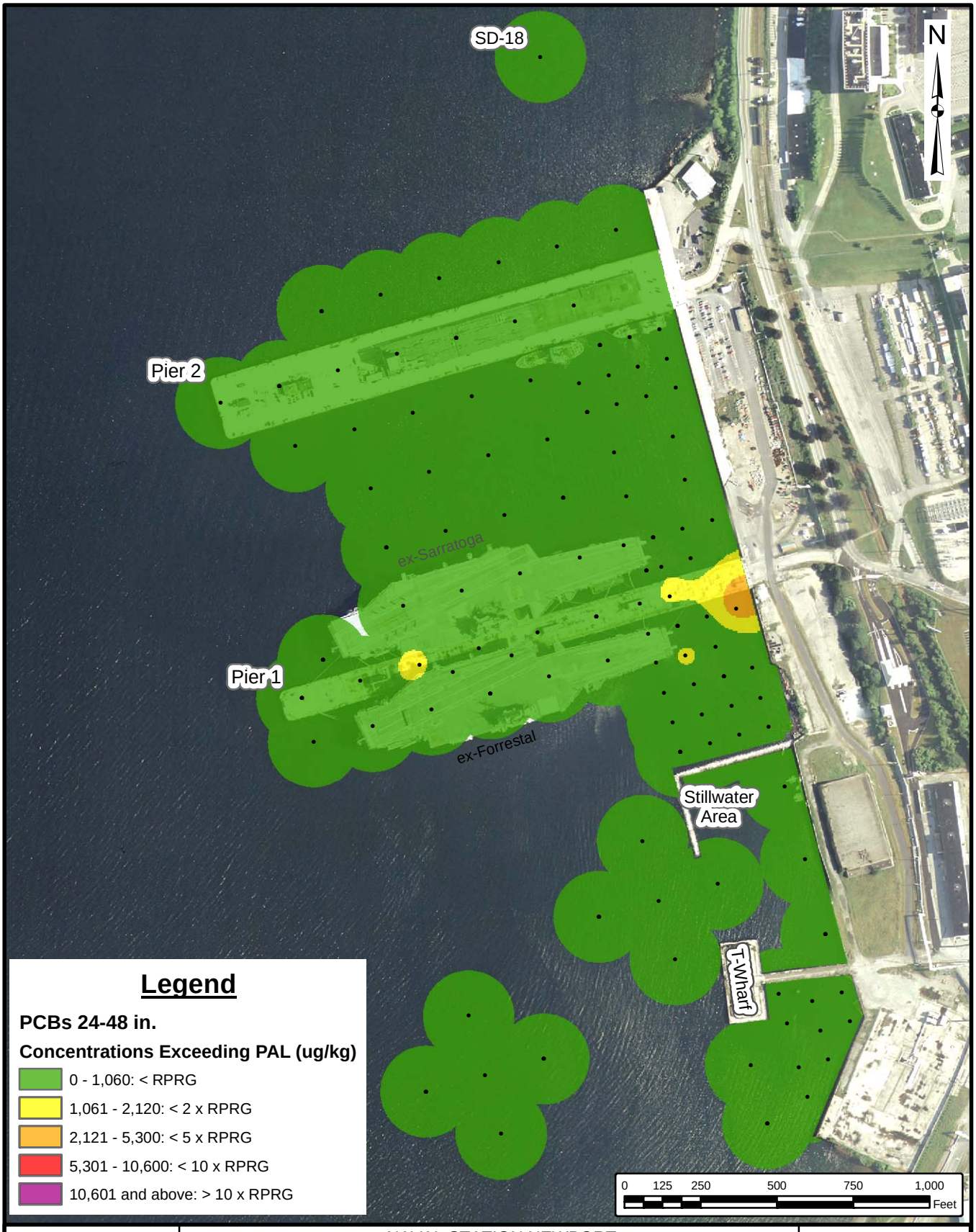
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - BENZO(A)PYRENE DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\FIGURE_4-3B_(BAP2-4)	
REV	DATE
0	12/5/2012
FIGURE NUMBER	
4-3B	

I:\02747\FI.TM.3\Figure_4-3C_(PCB2-4).mxd DWM 12/5/2012



Legend

PCBs 24-48 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 1,060: < RPRG
- 1,061 - 2,120: < 2 x RPRG
- 2,121 - 5,300: < 5 x RPRG
- 5,301 - 10,600: < 10 x RPRG
- 10,601 and above: > 10 x RPRG

TETRA TECH

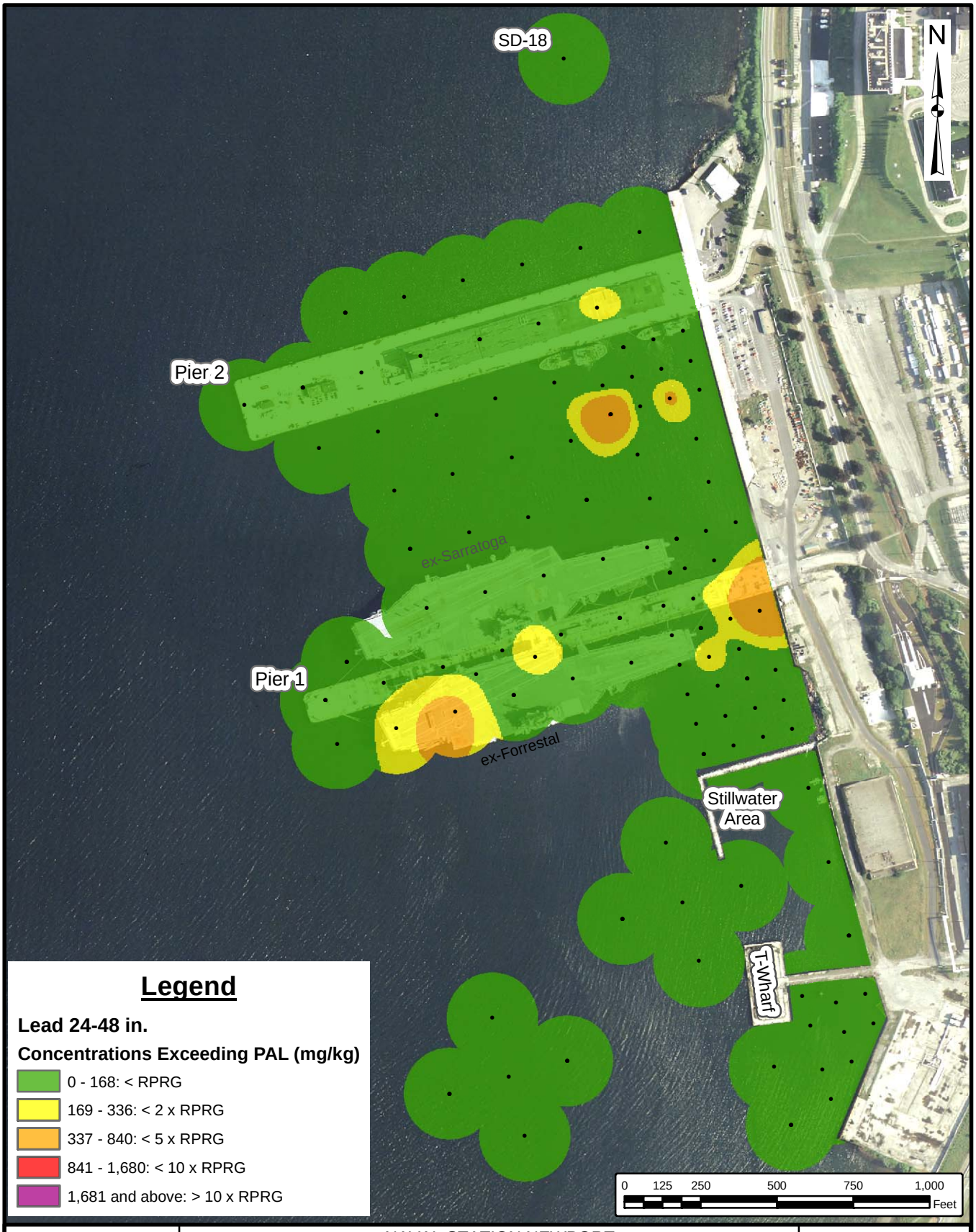
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - PCBS DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-3C_(PCB2-4)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-3C

I:\02747\FI.TM.3\Figure_4-3D_(Pb2-4).mxd DWM 12/5/2012



Legend

Lead 24-48 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 168: < RPRG
- 169 - 336: < 2 x RPRG
- 337 - 840: < 5 x RPRG
- 841 - 1,680: < 10 x RPRG
- 1,681 and above: > 10 x RPRG

TETRA TECH

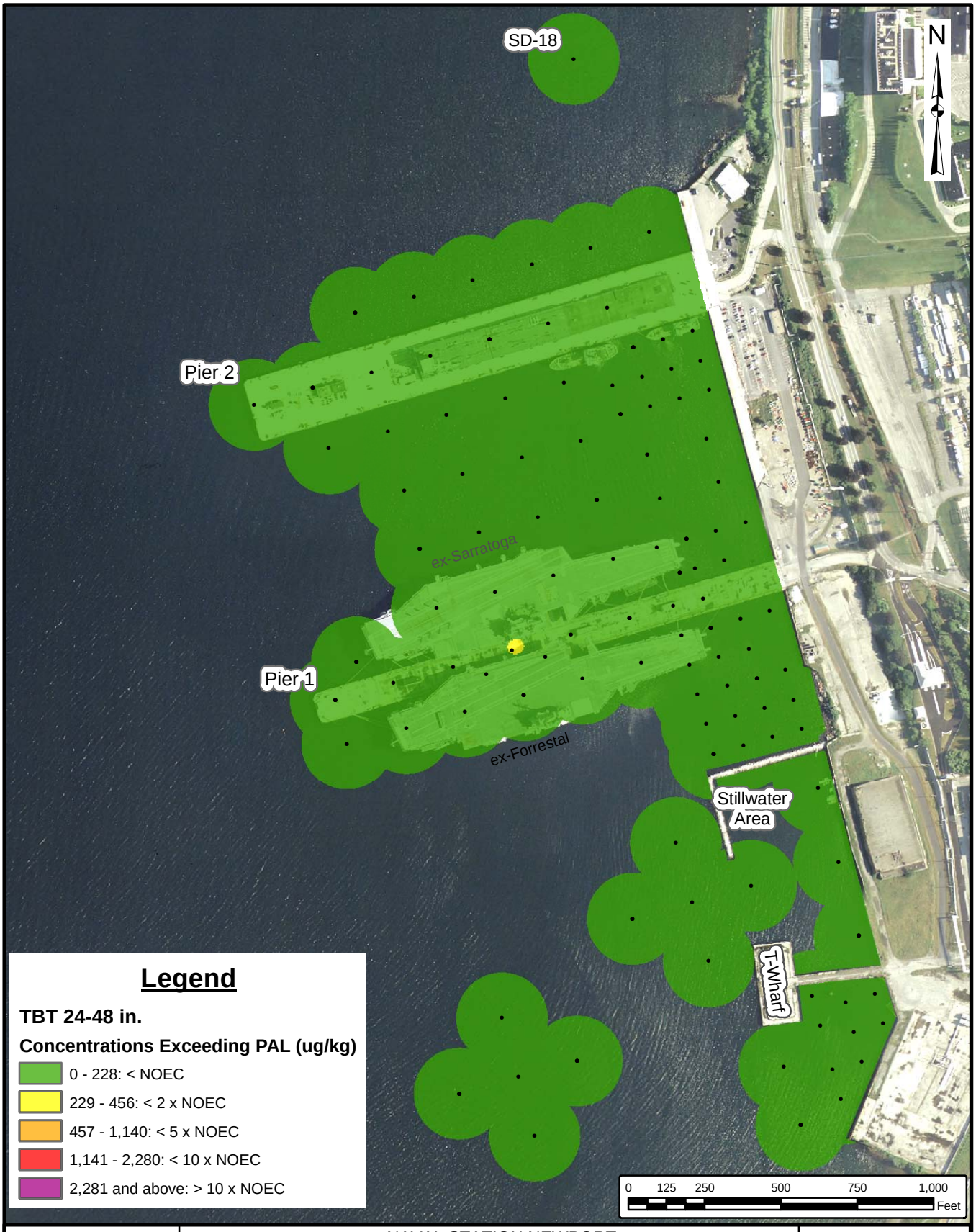
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - LEAD DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-3D_(PB2-4)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-3D

I:\02747\FI.TM.3\Figure_4-3E_(TBT2-4).mxd DWM 12/6/2012



Legend

TBT 24-48 in.

Concentrations Exceeding PAL (ug/kg)

- 0 - 228: < NOEC
- 229 - 456: < 2 x NOEC
- 457 - 1,140: < 5 x NOEC
- 1,141 - 2,280: < 10 x NOEC
- 2,281 and above: > 10 x NOEC

TETRA TECH

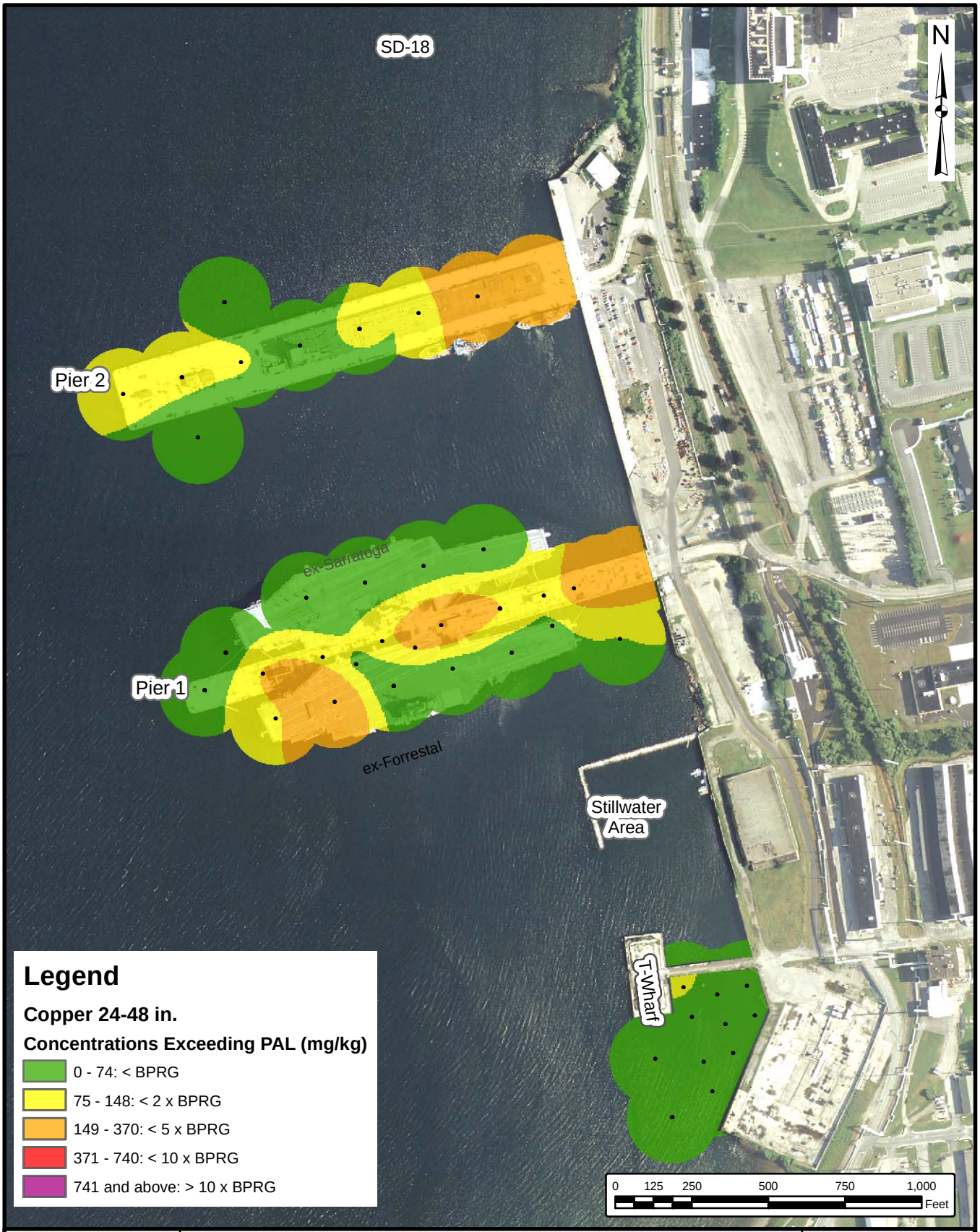
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - TRIBUTYLTIN DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\FIGURE_4-3E_(TBT2-4)	
REV	DATE
0	12/6/2012
FIGURE NUMBER	
4-3E	

I:\02747\FI.TM.3\Figure_4-3F_(Cu2-4).mxd DWM 12/5/2012



Legend

Copper 24-48 in.

Concentrations Exceeding PAL (mg/kg)

- 0 - 74: < BPRG
- 75 - 148: < 2 x BPRG
- 149 - 370: < 5 x BPRG
- 371 - 740: < 10 x BPRG
- 741 and above: > 10 x BPRG

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - COPPER DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	PER SCALE BAR
FILE	I:\..\FIGURE_4-3F_(CU2-4)
REV	0
DATE	12/5/2012
FIGURE NUMBER	4-3F

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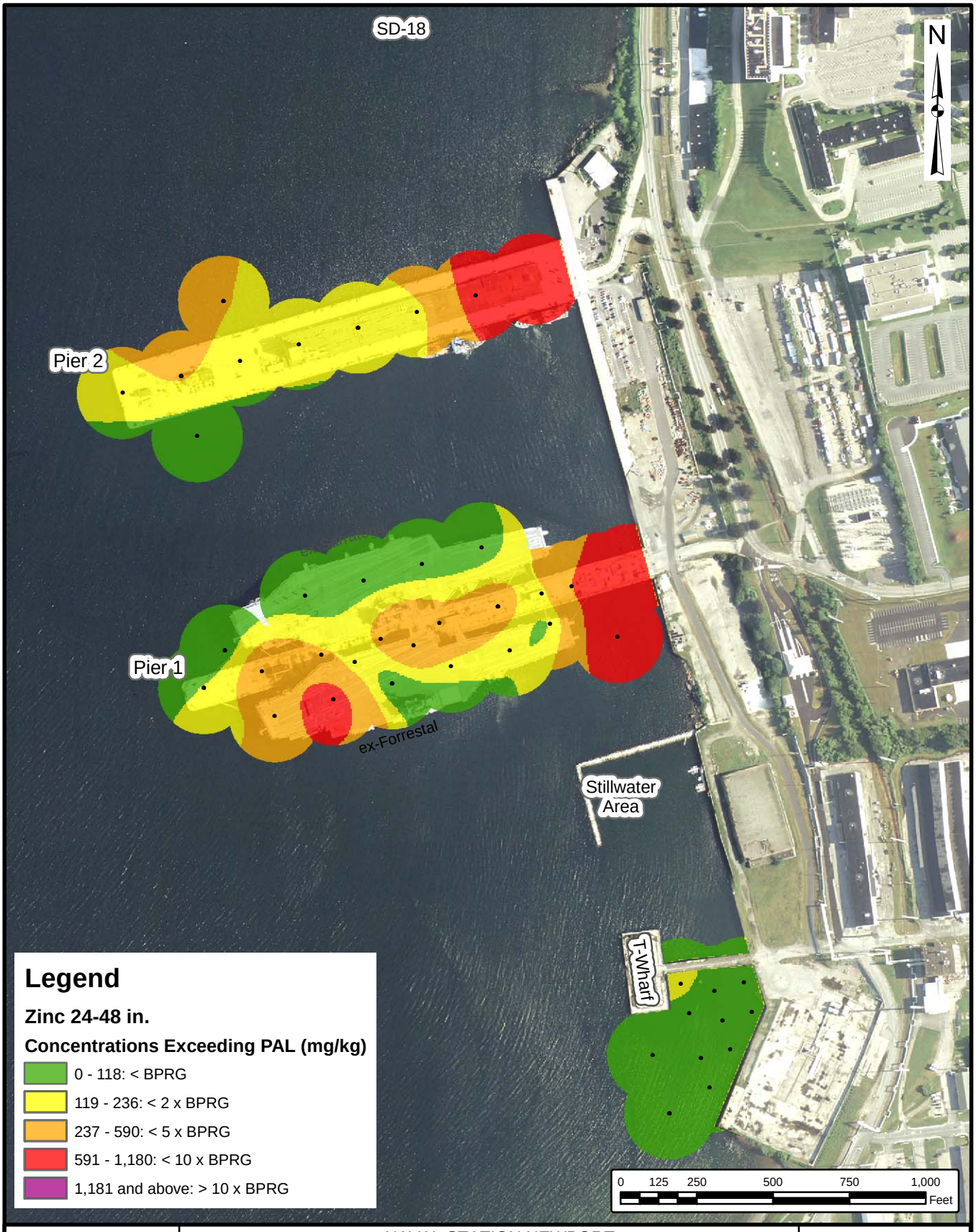

TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

INTERPOLATED EXTENT OF SEDIMENT EXCEEDING TARGET ANALYTES - ZINC DEPTH: 24 - 48 INCHES

SITE 19 - FORMER DERECKTOR SHIPYARD
SUPPLEMENTAL SEDIMENT INVESTIGATION REPORT

SCALE	
PER SCALE BAR	
FILE	
I:\..\FIGURE_4-3G_(ZN2-4)	
REV	DATE
0	12/5/2012
FIGURE NUMBER	
4-3G	

REFERENCES

REFERENCES

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APPENDIX A

FIELD DATA COLLECTION RECORDS

A1 FMRS

TETRA TECH NUS
FIELD TASK MODIFICATION REQUEST FORM

NAUSTA Newport Project/Installation Name	CTOWE61 - 112602747 CTO & Project Number	602747-01 Task Mod. Number
UFP SAP Modification To (e.g. Work Plan)	Dereck for Shipyard Supplemental Sediment Investigation Site/Sample Location	9/26/11 Date

Activity Description: Worksheet #20 of the SAP requires that one rinsate blank be collected for every 20 samples. The field team is collecting 30-40 samples per day. The field team will continue to collect one RB per day or one RB per 20 samples, whichever is fewest.

Reason for Change: Avoid stopping sampling in the middle of the day to collect RB, and avoid collecting 2 RBs at the end of each day

Recommended Disposition: Continue collecting one RB per day or one RB per 20 samples, whichever is fewest

Field Operations Leader (Signature) — Date: 10/18/11

Approved Disposition: Accept as proposed. Lead chemist consulted, and agreed that one RB per day is adequate.

Project/Task Order Manager (Signature) — Date: 10/18/11

Distribution:

Program/Project File –
Project/Task Order Manager –
Field Operations Leader –

Other: _____

Horton, Mike

From: Franke, Ann
Sent: Monday, September 26, 2011 12:06 PM
To: Horton, Mike; Parker, Stephen
Subject: FW: Rinsate Blanks

Lucy agreed, one per day is reasonable for these samples, if you document the reasons as you stated in a FMR.

From: Guzman, Lucy
Sent: Monday, September 26, 2011 11:53 AM
To: Franke, Ann
Subject: RE: Rinsate Blanks

I will go with one RB per day and write a FMR to document the change indicating the reason for it

---

From: Franke, Ann
Sent: Monday, September 26, 2011 11:51 AM
To: Guzman, Lucy
Subject: FW: Rinsate Blanks

Please see below. Do we have any leeway?

From: Horton, Mike
Sent: Sunday, September 25, 2011 3:35 PM
To: Franke, Ann
Cc: Parker, Stephen
Subject: Rinsate Blanks

Ann, we are sampling very quickly at Derecktor (10 to 15 locations per day). We are collecting 3 samples per location so the samples are adding up very quickly. I am certainly able to keep up with duplicate samples and LabQCs, but doing one rinsate (equipment) blank at the end of each day is not enough. We are obviously not going to stop work at 20 samples simply to collect a rinsate blank and it seems foolish to collect 2 rinsate blanks at the end of the day when we are using the same decon procedure and equipment. Is there any way we can get around the every 20 samples and say once per day or every 20 samples whichever is fewest?

Thanks

Mike

TETRA TECH NUS
FIELD TASK MODIFICATION REQUEST FORM

NAVSTA Newport	CTO WE61, 112G02747	G02747-02
Project/Installation Name	CTO & Project Number	Task Mod. Number
UFP SAP	Dereck for Shipyard Supplemental Soil Investigation	10/11/11
Modification To (e.g. Work Plan)	Site/Sample Location	Date

Activity Description: Worksheet 20 requires that 1 duplicate be collected for every 10 radioisotope (Po-210) samples collected

Reason for Change: Inadequate Volume

Recommended Disposition: Duplicate samples were not collected because the method used to process the samples did not yield enough volume

Field Operations Leader (Signature) — Date: 10/18/11

Approved Disposition:
Lab Assigns Duplicate samples which is adequate for ~~one~~
Data not used for Risk Assessment.

Project/Task Order Manager (Signature) — Date: 10/18/11

Distribution:

Program/Project File –
Project/Task Order Manager –
Field Operations Leader –

Other:

A2 FIELD LOGS SHEETS CHEMISTRY CORES

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: SD18
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 1
Total Recovery: 3.2/4 Water Depth: 18.6

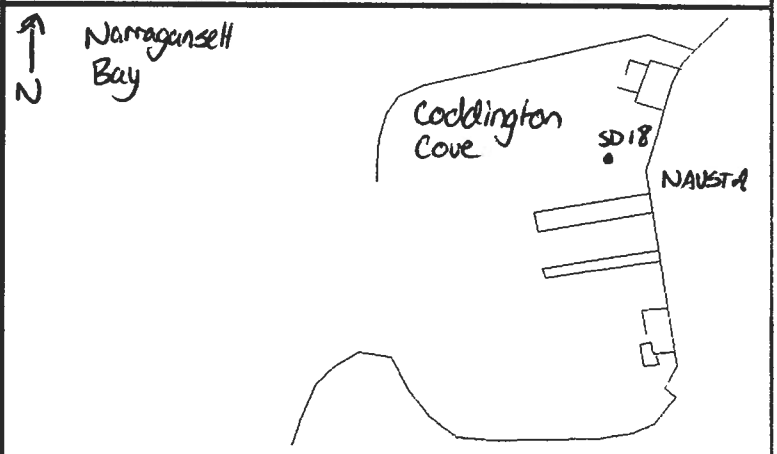
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000 Method: VibraCore Sample ID: DSY-SD-18-0012	0-12	0-9	SILT- top 0" F-C SAND 2+"
Time: 1003 Method: VibraCore Sample ID: DSY-SD-18-1224	12-24	9-18	F-C ~~Sample~~ SAND - some gravel & silt
Time: 1006 Method: VibraCore Sample ID: DSY-SD-18-2448	24-48	18-38	Gravel - some silt & F-C sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C09
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 3
Total Recovery: 3.6/4 Water Depth: 39.0

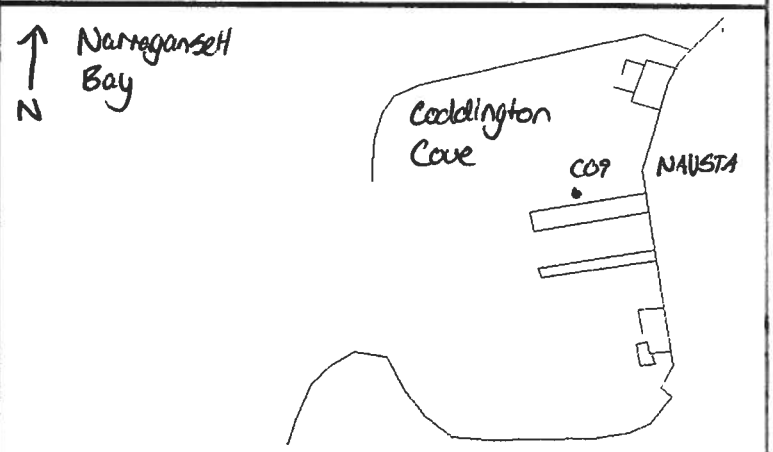
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020 Method: VibraCore Sample ID: DSY-SD-C09-0012	0-12	Grey 0-11	Top 2" SILT 2+" F-M silty Sand
Time: 1023 Method: VibraCore Sample ID: DSY-SD-C09-1224	12-24	Grey 11-22	
Time: 1026 Method: VibraCore Sample ID: DSY-SD-C09-2448	24-48	Grey 22-44	DUP30
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~ Cu, Zn	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP30-100711
DUP30 → C09-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C13
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 1
Total Recovery: 35/4 Water Depth: 37.5

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100 Method: VibraCore Sample ID: DSY-SD-C13-0012	0-12	Grey/ 0-10 Black	Top 4" SILT 4+" F-M SAND - some silt
Time: 1103 Method: VibraCore Sample ID: DSY-SD-C13-1224	12-24	Grey 10-21	↓
Time: 1106 Method: VibraCore Sample ID: DSY-SD-C13-2448	24-48	~~Black~~ 21-42 Grey	↓
Time: Method: Sample ID:			

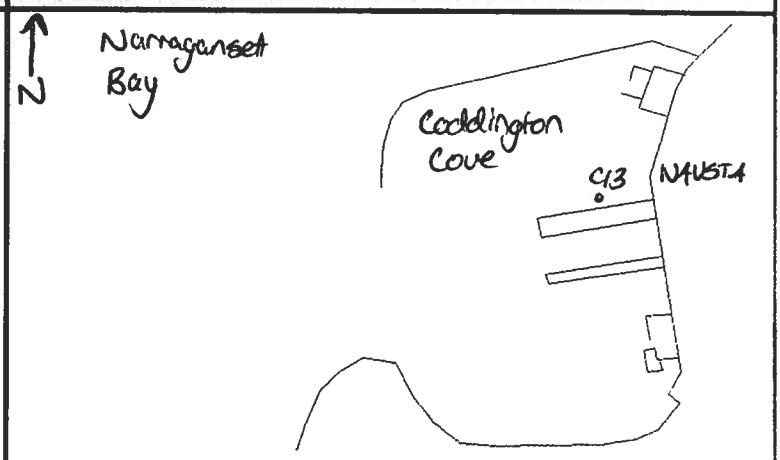
Lab QC

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-2" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2449

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C17
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 3
Total Recovery: 3/4 Water Depth:

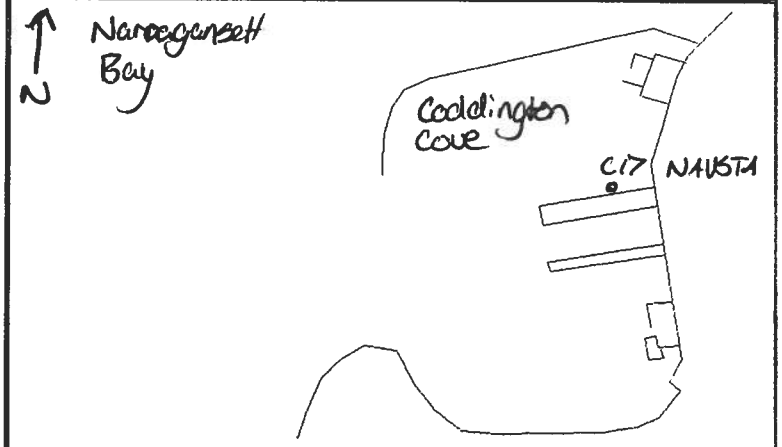
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1150 Method: VibraCore Sample ID: DSY-SD-C17-0012	0-12	0-9	silty sand F-M grained
Time: 1153 Method: VibraCore Sample ID: DSY-SD-C17-1224	12-24	9-18	F-M sand - some silt & shell fragments
Time: 1156 Method: VibraCore Sample ID: DSY-SD-C17-2448	24-48	18-36	F-C sand - some silt
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C21
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 5
Total Recovery: 3 / 4 Water Depth: 38.9

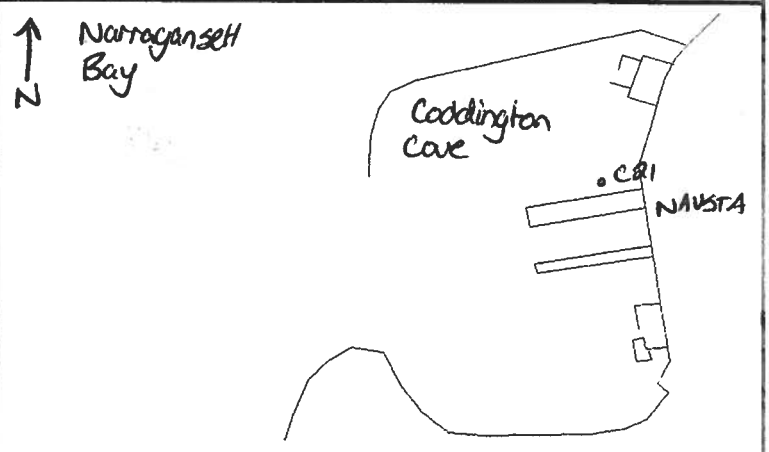
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0840 Method: VibraCore Sample ID: DSY-SD-C21-0012	0-12	0-9	Top - SILT Bottom - F-M SAND
Time: 0843 Method: VibraCore Sample ID: DSY-SD-C21-1224	12-24	9-18	F-M SAND
Time: 0846 Method: VibraCore Sample ID: DSY-SD-C21-2448	24-48	18-36	F-C SAND -some gravel
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-2" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C25
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 1
Total Recovery: 3.5/4 Water Depth: 38.5

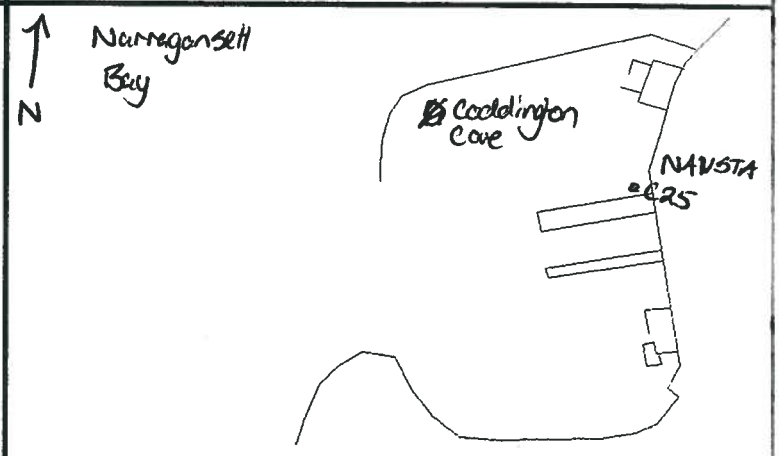
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0800 Method: VibraCore Sample ID: DSY-SD-C25-0012	0-12	0-10	SILT - trace F Sand
Time: 0803 Method: VibraCore Sample ID: DSY-SD-C25-1224	12-24	10-21	top SILT - trace F Sand Bottom - F-M SAND DUP29
Time: 0806 Method: VibraCore Sample ID: DSY-SD-C25-2448	24-48	21-42	F-M SAND
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP29-100711
DUP29 → C25-1224

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: C29
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/7/11 Attempts: 3
Total Recovery: 2.5 4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1125 Method: VibraCore Sample ID: DSY-SD-C29-0012	0-12	Black 0-8	SILT - Trace F-Sand
Time: 1128 Method: VibraCore Sample ID: DSY-SD-C29-1224	12-24	Black 8-16 Grey	SILT - Some F-M Sand
Time: 1131 Method: VibraCore Sample ID: DSY-SD-C29-2448	24-48	Black 16-30 Grey	SILT - Some F-M Sand
Time: Method: Sample ID:			

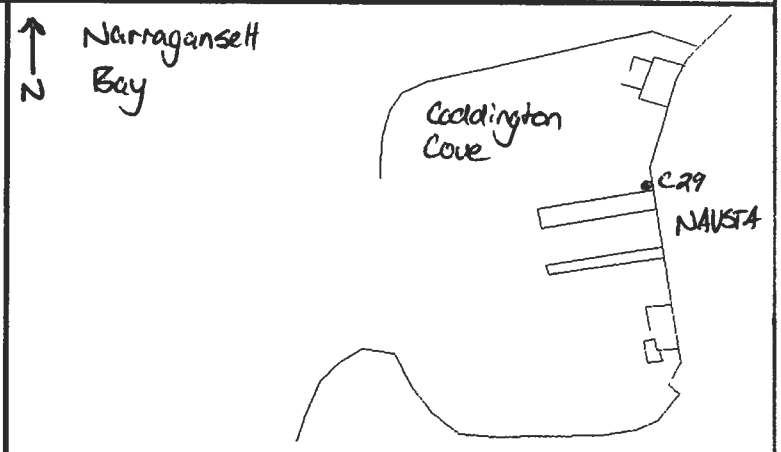
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Could not continue coring in this area b/c of diver activity

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G01
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 31

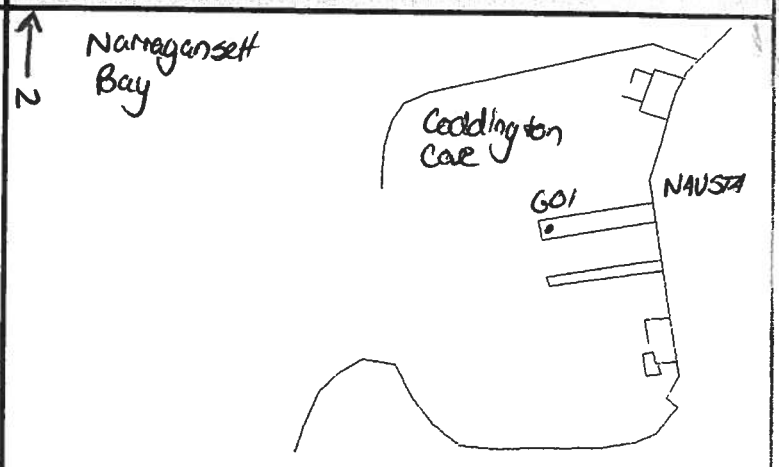
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0926 Method: ~~VibraCore~~ PushCore Sample ID: DSY-SD-G01-0012	0-12	Black 100%	SILT - Many shells & shell fragments
Time: 0923 Method: ~~VibraCore~~ PushCore Sample ID: DSY-SD-G01-1224	12-24	100 %	SILT - some shells
Time: 0926 Method: ~~Vibra-Core~~ PushCore Sample ID: DSY-SD-G01-2448	24-48	100 %	SILT - some shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC			Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G05
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth: 33

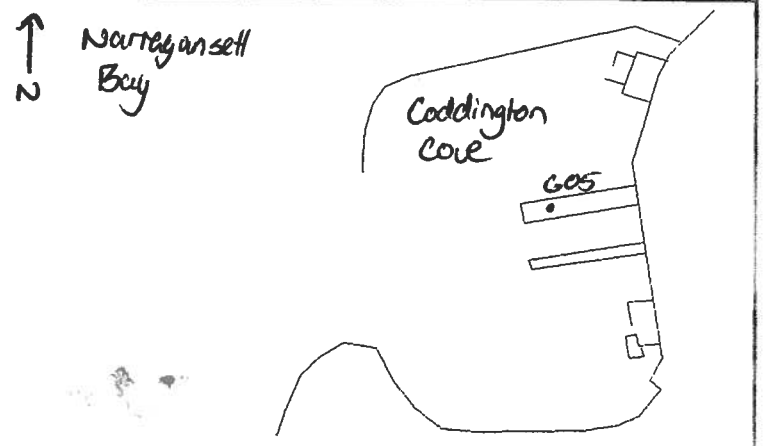
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1205 Method: ~~VibraCore~~ Push Core Sample ID: DSY-SD-G05-0012	0-12	Black ~~10cm~~ 0-11	SILT - some shells
Time: 1208 Method: ~~VibraCore~~ Push Core Sample ID: DSY-SD-G05-1224	12-24	Black 11-23	SILT - some shells
Time: 1211 Method: ~~Di~~ Push Core Sample ID: DSY-SD-G05-2448	24-48	Black 23-46	SILT - few shells DUP3
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP31-101211

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G09
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 3.1/4 Water Depth: 33

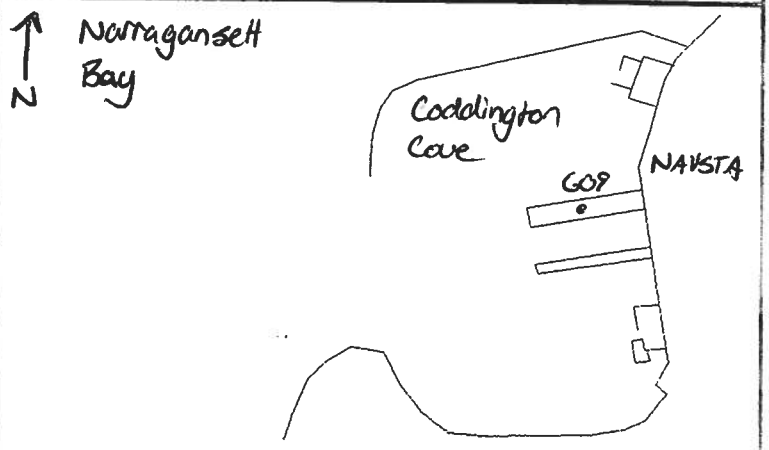
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1240 Method: Push Core Sample ID: OSY-SD-G09-0012	0-12	Black 0-9	SILT - some shells
Time: 1243 Method: Push Core Sample ID: OSY-SD-G09-1224	12-24	9-18	SILT - Few shells
Time: 1246 Method: Push Core Sample ID: OSY-SD-G09-2448	24-48	18-37	
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
NA	NA	

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G13
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 2
Total Recovery: 3.0/4 Water Depth: 31

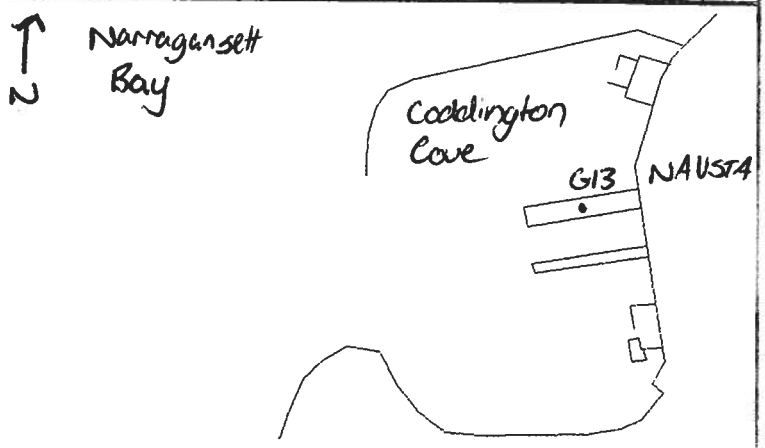
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1310 Method: Push Core Sample ID: DSY-SD-G13-0012	0-12	Black 0-9	SILT - some shells
Time: 1313 Method: Push Core Sample ID: DSY-SD-G13-1224	12-24	9-18	SILT - some shells
Time: 1316 Method: Push Core Sample ID: DSY-SD-G13-2448	24-48	18-38	SILT - few shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G17
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 3.1/4 Water Depth: 30

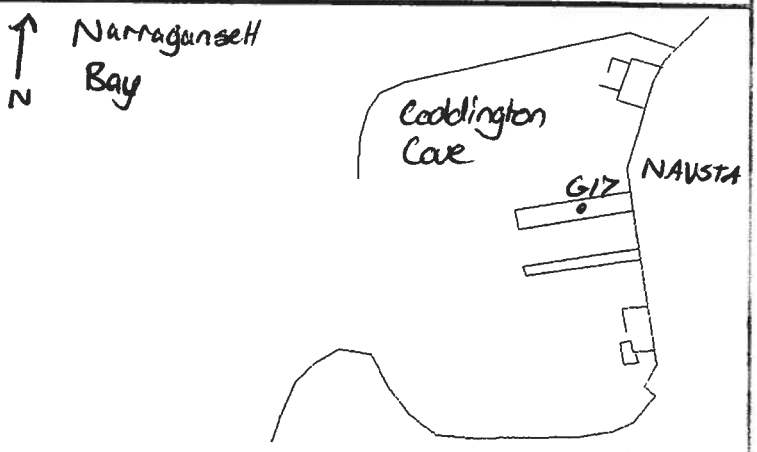
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1325 Method: Push Core Sample ID: DSY-SD-G17-0012	0-12	Black 0-9	SILT - Many shells
Time: 1328 Method: Push Core Sample ID: DSY-SD-G17-1224	12-24	9-18	SILT - some shells
Time: 1331 Method: Push Core Sample ID: DSY-SD-G17-2448	24-48	18-36	SILT - some shells DUP32
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	~~NA~~ DSY-SD-DUP32-101211 G17-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G21
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 2
Total Recovery: 30.4 Water Depth:

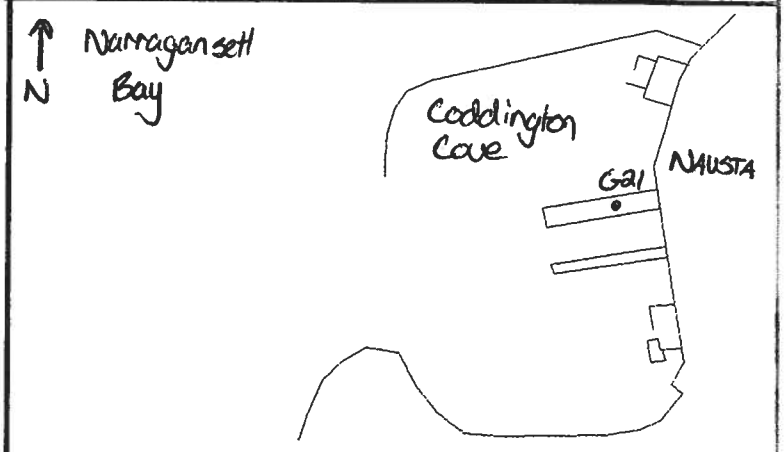
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1345 Method: Push Core Sample ID: DSY-SD-G21-0012	0-12	Black 0-9	SILT - some shells
Time: 1348 Method: Push core Sample ID: DSY-SD-G21-1224	12-24	9-18	↓
Time: 1351 Method: Push Core Sample ID: DSY-SD-G21-2448	24-48	18-36	SILT - few shells Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD (2448) Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G-25
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 4
Total Recovery: 2.61 4 Water Depth: 20

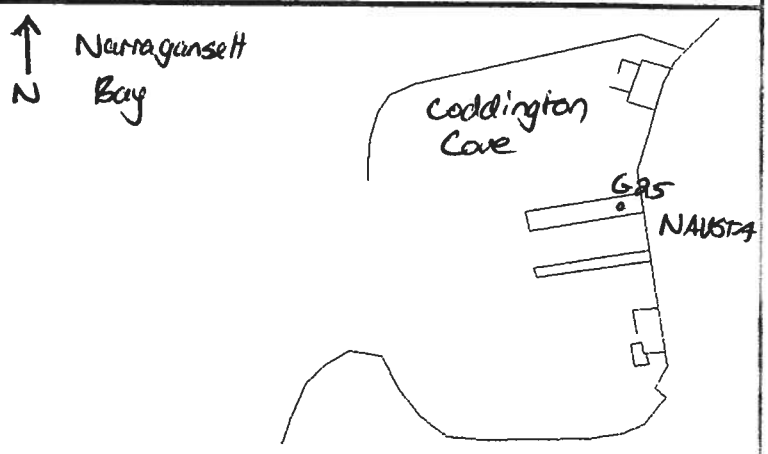
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1405 Method: Push Core Sample ID: DSY-SD-G25-0012	0-12	Black 0-8	SILT - Some Shells
Time: 1408 Method: Push Core Sample ID: DSY-SD-G25-1224	12-24	8-16	SILT - Some shells
Time: 1411 Method: Push Core Sample ID: DSY-SD-G25-2448	24-48	16-32	SILT - some shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
N1

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: G30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 4
Total Recovery: 0.9/1.5 Water Depth: 16

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1455 Method: Sample ID: DSY-SD-G30-0018	0-18	0-10"	SILT- many shells
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

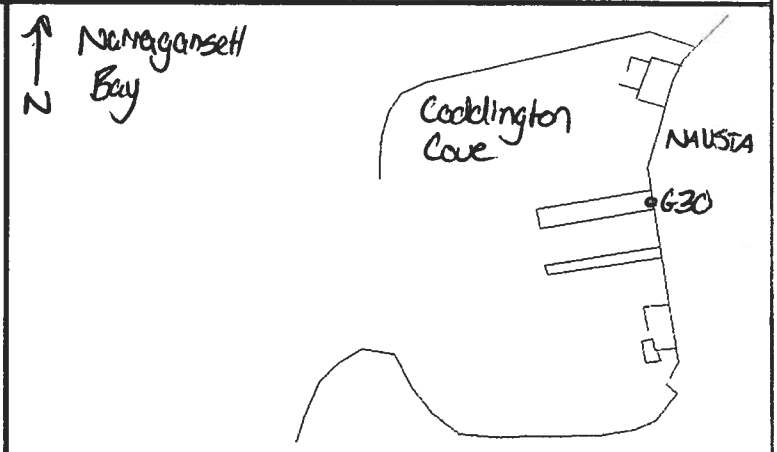
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

Refusal at 1.5'

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: J24
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 4
Total Recovery: 1.7/4 Water Depth: 36

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045 Method: Vibra Core Sample ID: DSY-SD-J24-0012	0-12	Black 0-16	-SILT - trace F-Sand sheen - petroleum like odor
Time: 1048 Method: Vibra Core Sample ID: DSY-SD-J24-1224	12-24	Black 10-20	-F-M Sand - some shell fragments sheen - petroleum like odor
Time: Method: Sample ID:			
Time: Method: Sample ID:			

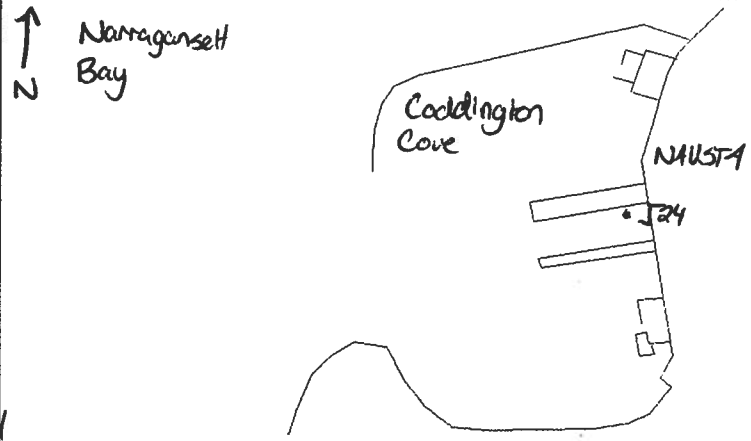
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°		Yes	0-12" only

OBSERVATIONS / NOTES:

- Product observed smeared on inside of core tube
- Strong petroleum like odor upon opening core tube
- Sheen observed on water in core tube
- Dense material at about 10" that caused "refusal" - only 1.7' of recovery (represents top 2' of material)
- looked like 4' in tube but top was very dark suspended sediment that poured off with water

MAP:



Circle if Applicable:

MS/MSD
N1

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: J26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 2
Total Recovery: 2.8/4 Water Depth: 36.7

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115 Method: ViboCore Sample ID: DSY-SD-J26-0012	0-12	Black ~~0-8~~ ~~0-9~~ 0-8	SILT
Time: 1118 Method: Vibra Core Sample ID: DSY-SD-J26-1224	12-24	Black 9-18 8-16	SILT - ~~some~~ trace F-sand
Time: 1121 Method: VibraCore Sample ID: DSY-SD-J26-2448	~~24-48~~ ~~24-35~~ ~~24-36~~ 24-48	Black/ Grey ~~18-35~~ 35 16-32	SILT - some F-M sand - bottom very compact silt clay layer
Time: Method: Sample ID:			

DUP24

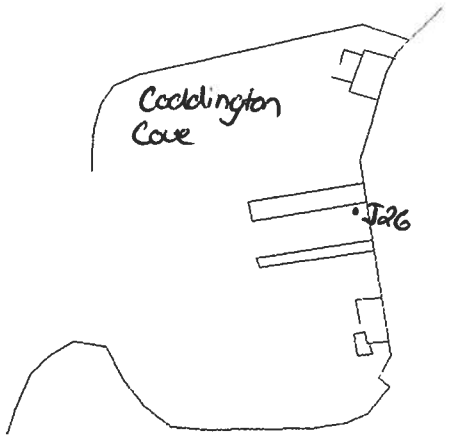
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Bottom of core very compact clay silt layer (almost dry)

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP24-100411
DUP24 → J26-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: J28
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.6/4 Water Depth:

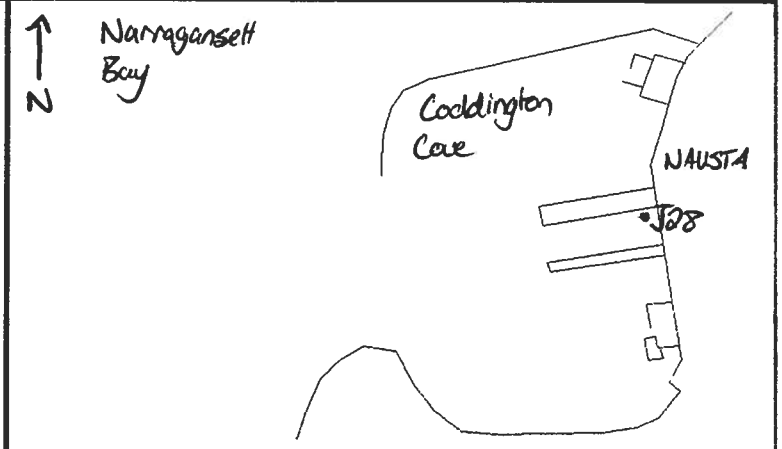
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1205 Method: VibraCore Sample ID: DSY-SD-J28-0012	0-12	Black 0-11	SILT - some shell fragments
Time: 1208 Method: VibraCore Sample ID: DSY-SD-J28-1224	12-24	Black 11-22	SILT - trace F-sand
Time: 1211 Method: VibraCore Sample ID: DSY-SD-J28-2448	24-48	Black/ 22-44 Grey	Top - SAA Bottom - (F-M) SAND - Trace shell fragments
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: J30
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.3/4 Water Depth: 37

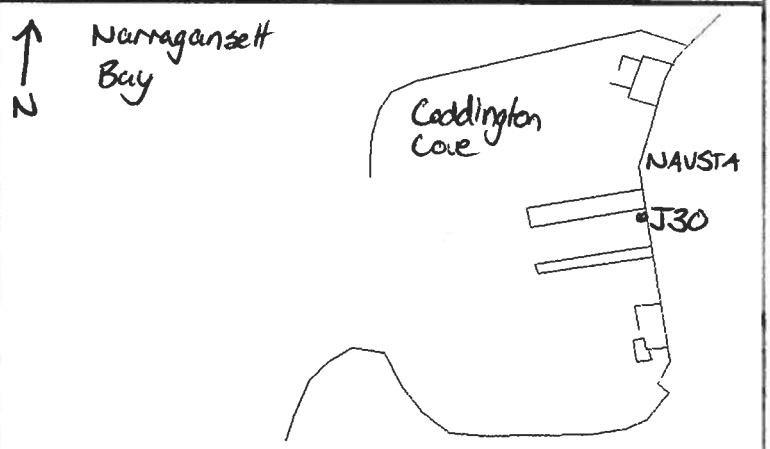
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1235 Method: VibraCore Sample ID: DSY-SD-J30-0012	0-12	Black 0-10	SILT - trace F-Sand
Time: 1238 Method: VibraCore Sample ID: DSY-SD-J30-1224	12-24	Black 10-20	SILT - some F-Sand
Time: ~~1239~~ 1241 Method: VibraCore Sample ID: DSY-SD-J30-2448	24-48	Black 20-40 Grey	F-M Sand, some Silt
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: K05
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 1
Total Recovery: 38 / 4 Water Depth: 36.5

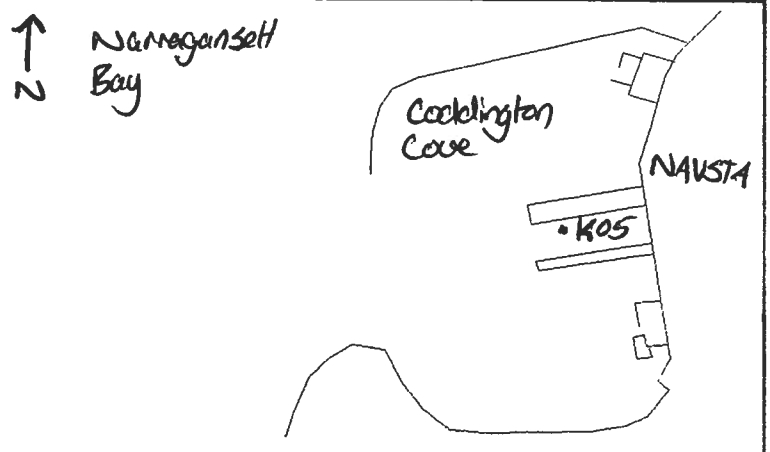
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1010 Method: VibraCore Sample ID: DSY-SD-K05-0012	0-12	Black/ Grey 0-11	Top 5" - SILT - w/ some organics and trace shell fragments - Sandy (F-M) Silt
Time: 1013 Method: VibraCore Sample ID: DSY-SD-K05-1224	12-24	Grey 11-22	Fgrained Sandy silt - trace shell fragments
Time: 1016 Method: VibraCore Sample ID: DSY-SD-K05-2448	24-48	Grey 22-44	F-M grained sand - some silt - trace shell fragments
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: K09
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 1
Total Recovery: 3.8/4 Water Depth: 37.5

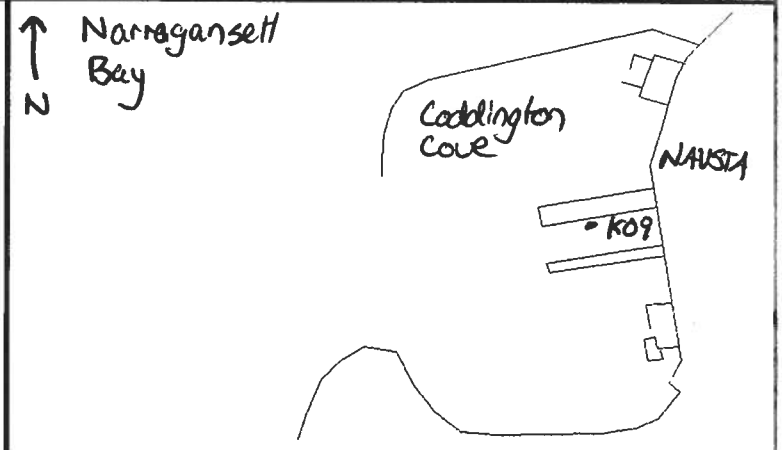
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0950 Method: VibraCore Sample ID: DSY-SD-K09-0012	0-12	Grey/ Black 0-11	F-M - Sandy Silt Trace Shell Frags DUP21
Time: 0953 Method: Vibracore Sample ID: DSY-SD-K09-1224	12-24	Grey 11-22	F-M - Sandy Silt
Time: 0956 Method: VibraCore Sample ID: DSY-SD-K09-2448	24-48	Grey 22-44	F-Sand - some silt, Trace shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
NA	DSY-SD-DUP21-100311 ~~DUP20~~ → 0012 DUP21	

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: K13
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 1
Total Recovery: 3.2/4 Water Depth: 37.0

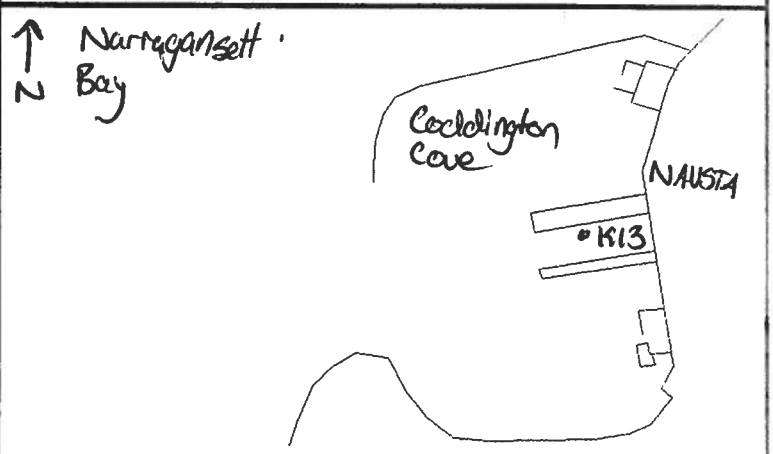
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100 Method: VibreCore Sample ID: DSY-SD-K13-0012	0-12	Black 0-10	SILT - some shell fragments - some sand blast grit Sheen
Time: 1103 Method: VibraCore Sample ID: DSY-SD-K13-1224	12-24	Black 10-20	↓ slight petroleum odor Sheen
Time: 1106 Method: VibreCore Sample ID: DSY-SD-K13-2448	24-48	Grey 20-40	- F-M sand - some silt -Sheen on outside of core probably cross contamination during penetration Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD K13-2448
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: K17
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 16/3/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 38.4

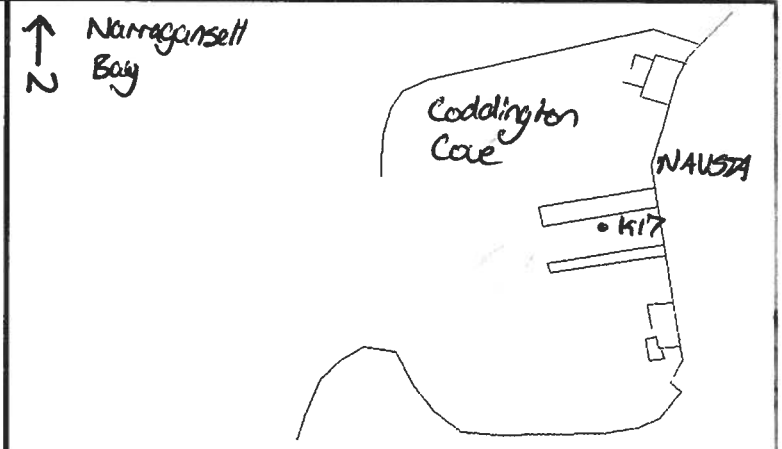
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130 Method: VibraCore Sample ID: DSY-SD-K17-0012	0-12	0-9	SILT
Time: 1133 Method: Vibracore Sample ID: DSY-SD-K17-1224	12-24	9-18	0-4" SILT 4+ F-M SAND - Trace SILT - some Shell Fragments
Time: 1136 Method: VibraCore Sample ID: DSY-SD-K17-2448	24-48	18-36	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: K21
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 39.4

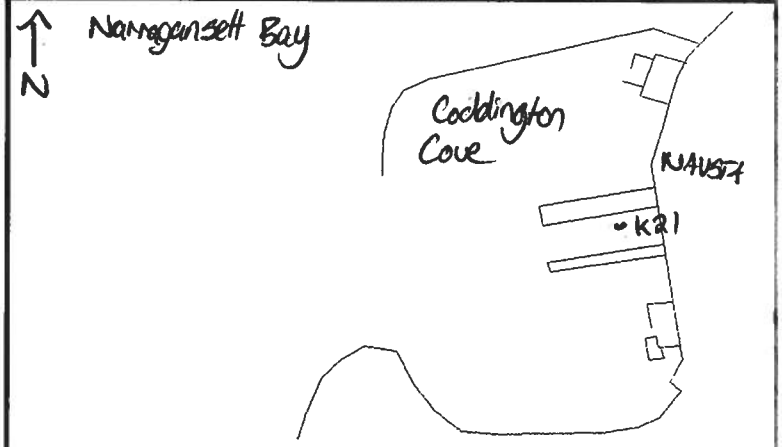
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245 Method: VibreCore Sample ID: DSY-SD-K21-0012	0-12	Black 0.9	SILT
Time: 1248 Method: VibreCore Sample ID: DSY-SD-K21-1224	12-24	Black 9-18	↓
Time: 1251 Method: VibreCore Sample ID: DSY-SD-K21-2448	24-48	Grey/ Brown 18-36	SAND (F-M)
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: L24
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.8/4 Water Depth:

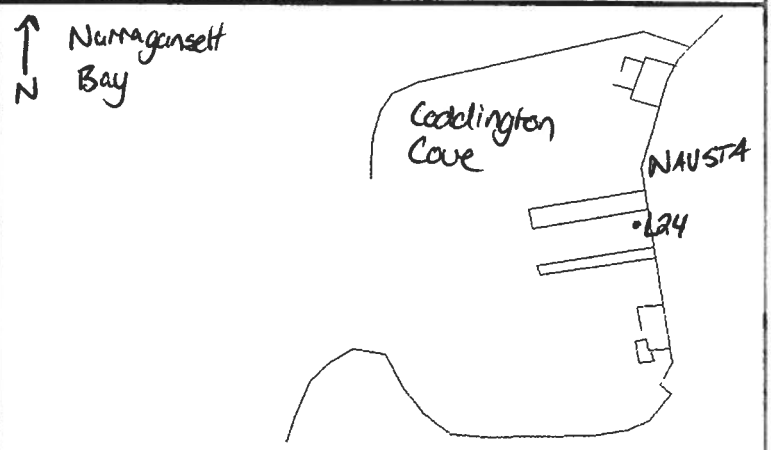
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1450 Method: VibraCore Sample ID: DSY-SD-L24-0012	0-12	Black 0-11.5	SILT - some shell fragments
Time: 1453 Method: VibraCore Sample ID: DSY-SD-L24-1224	12-24	Black 11.5-23	SILT - trace clay & F-sand
Time: 1453 Method: VibraCore Sample ID: DSY-SD-L24-2448	24-48	Black/ 23-46 Grey	SILT - some F-M sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: L26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.8/4 Water Depth: 37.9

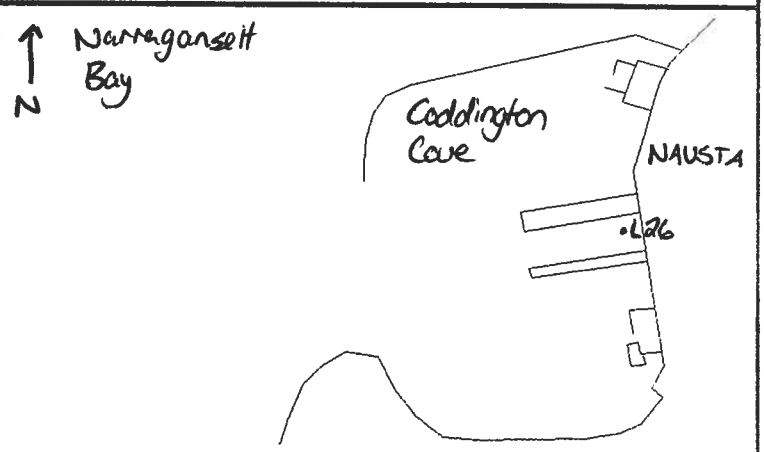
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430 Method: VibraCore Sample ID: DSY-SD-L26-0012	0-12	0-11	SILT w some debris, F-M sand
Time: 1433 Method: VibraCore Sample ID: DSY-SD-L26-1224	12-24	11-22	F-M Sand - trace Shell Frags & silt
Time: 1436 Method: Vibracore Sample ID: DSY-SD-L26-2448	24-48	22-44	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: L28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.4 / 4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~1333~~ 1335 Method: Vibra Core Sample ID: ~~DSY-SD-~~L28-0012	0-12	Black 0-10	SILT - Some Shell Fragments
Time: ~~13~~ 1338 Method: VibraCore Sample ID: DSY-SD-L28-1224	12-24	Grey 10-20	F-M-Sand - Some Silt
Time: 1341 Method: Vibra Core Sample ID: DSY-SD-L28-2448	24-48	Grey 20-40	F-M Sand - some Silt
Time: Method: Sample ID:			

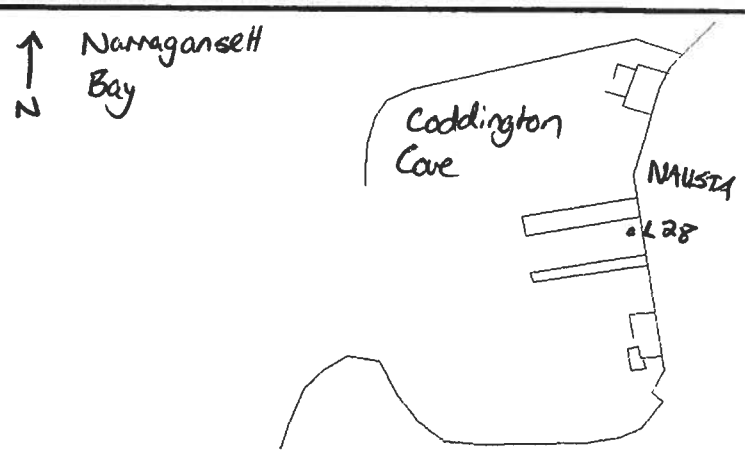
DUP 25

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP25-100411
DUP25 → L28-1224

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: L30
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/4/11 Attempts: 1
Total Recovery: 3.6/4 Water Depth:

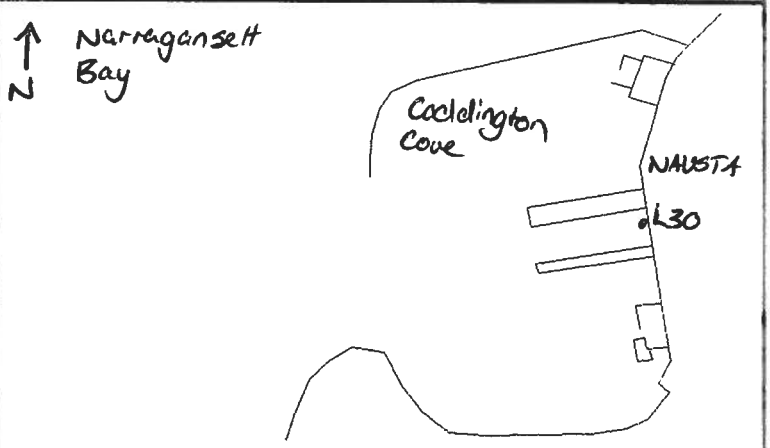
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1315 Method: VibraCore Sample ID: DSY-SD-L30-0012	0-12	Black 0-10.5	SILT - trace F-Sand labQC
Time: 1318 Method: VibraCore Sample ID: DSY-SD-L30-1224	12-24	Grey 10.5-21	F-M-Sand -some silt
Time: 1321 Method: VibraCore Sample ID: DSY-SD-L30-2448	24-48	Grey 21-42	F-M-Sand trace silt
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		~~YES~~ / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

~~MS/MSD~~ 0012

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: N24
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 3
Total Recovery: 37/4 Water Depth: 37

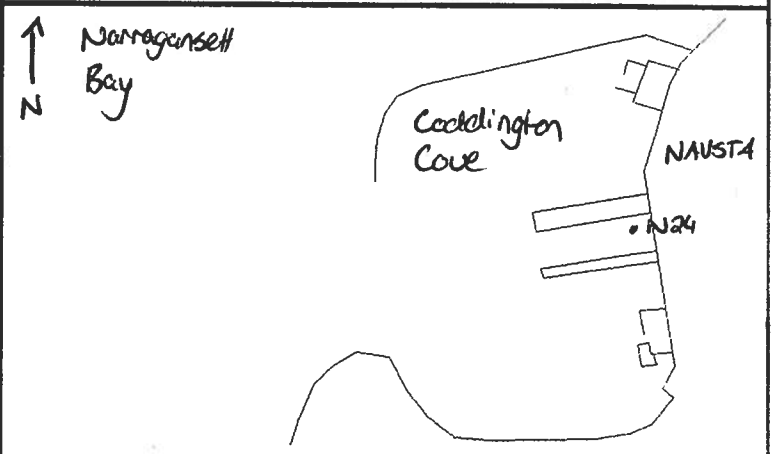
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0830 Method: VibraCore Sample ID: DSY-SD-N24-0012	0-12	Black 0-11	SILT
Time: 0833 Method: Vibra Core Sample ID: DSY-SD-N24-1224	12-24	Black 11-22	SILT - some F-M sand
Time: 0836 Method: VibraCore Sample ID: DSY-SD-N24-2448	24-48	Black/ Brown/ Grey 22-44	F-C sand with some Silt DUP 26
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP26-100511
DUP26 → N24-2448

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: N26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 36.5

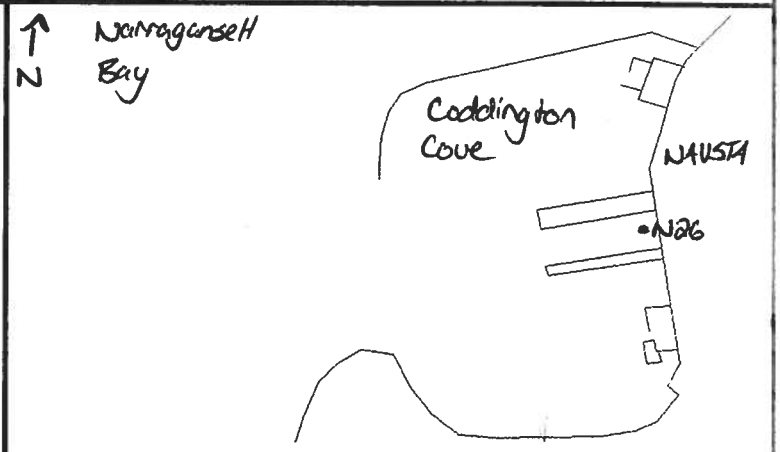
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0850 Method: VibraCore Sample ID: DSY-SD-N26-0012	0-12	Black 0-9	SILT - trace F Sand
Time: 0853 Method: VibraCore Sample ID: DSY-SD-N26-1224	12-24	Black/ Grey 9-18	F-M Sand - some Silt ↓
Time: 0856 Method: VibraCore Sample ID: DSY-SD-N26-2448	24-48	Black/ Grey 18-36	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper~~, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: N28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 1
Total Recovery: 3 / 4 Water Depth:

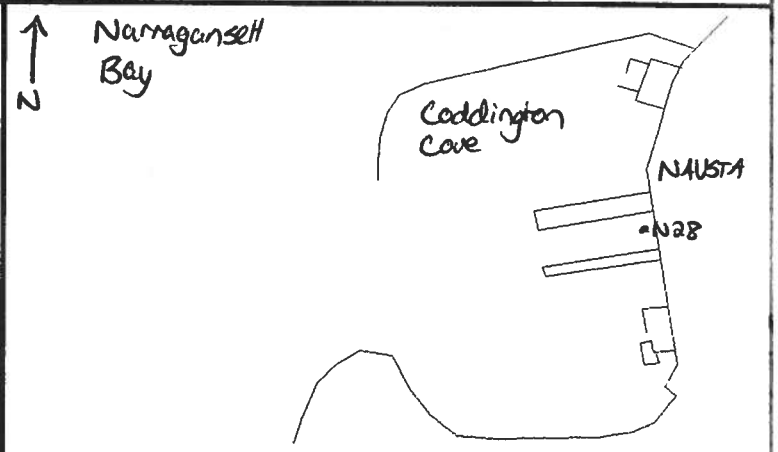
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0945 Method: VibraCore Sample ID: DSY-SD-N28-0012	0-12	Black 0-9	SILT
Time: 0948 Method: VibraCore Sample ID: DSY-SD-N28-1224	12-24	Black 9-18	SILT - trace F-Sand
Time: 0951 Method: VibraCore Sample ID: DSY-SD-N28-2448	24-48	Black . 18-36	SILT - some F-sand Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: N30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 3
Total Recovery: 2.7/4 Water Depth: 37.2

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000 Method: VibraCore Sample ID: DSY-SD-N30-0012	0-12	Black 0-8	SILT
Time: 1003 Method: VibraCore Sample ID: DSY-SD-N30-1224	12-24	Black 8-16	SILT - trace F-Sand
Time: 1006 Method: VibraCore Sample ID: DSY-SD-N30-2448	24-48	Black 16-32	SILT - some F-M sand
Time: Method: Sample ID:			

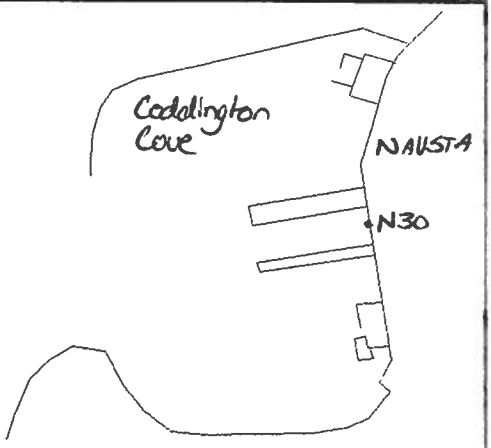
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	

OBSERVATIONS / NOTES:

-3 attempts - same recovery every time

MAP:



Circle If Applicable:

MS/MSD
N4

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: 0 09
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3.5/4 Water Depth: 43.1

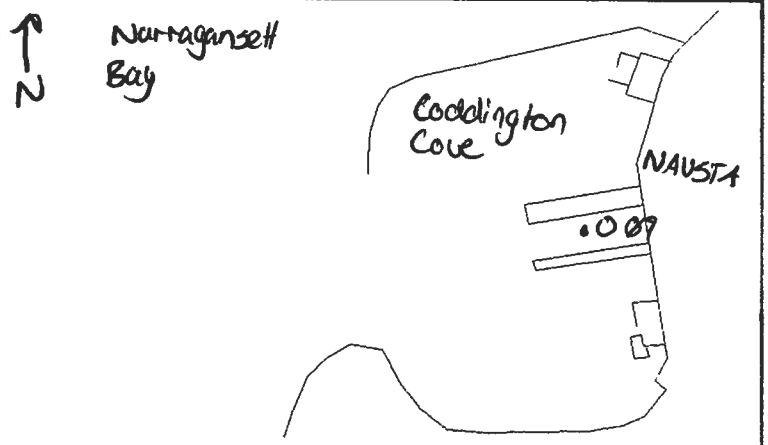
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0940 Method: VibraCore Sample ID: DSY-SD-009-0012	0-12	Grey/Black 0-10	SILT - Trace shell fragments
Time: 0943 Method: VibraCore Sample ID: DSY-SD-009-~~0012~~ 1224	12-24	Grey 10-20	SILT - Trace F-Sand
Time: 0946 Method: VibraCore Sample ID: DSY-SD-009-2448	24-48	Grey 20-40	SILT - some F-Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: 013
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 41

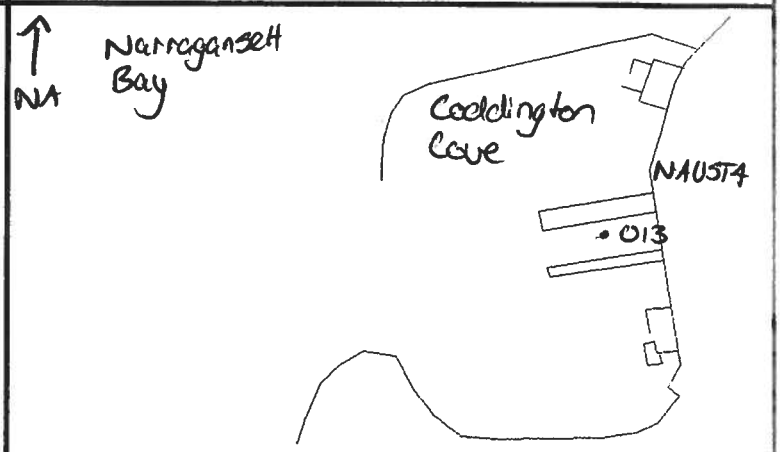
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0905 Method: VibraCore Sample ID: DSY-SD-013-0012	0-12	Grey 0-9	SILT - Some F-M Sand and trace Shell Fragments DUP17
Time: 0908 Method: VibraCore Sample ID: DSY-SD-013-1224	12-24	Grey 9-18	
Time: 0911 Method: VibraCore Sample ID: DSY-SD-013-2448	24-48	Grey 18-36	
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP17-093011
DUP17 → 013-0012

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: 017
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 41.0

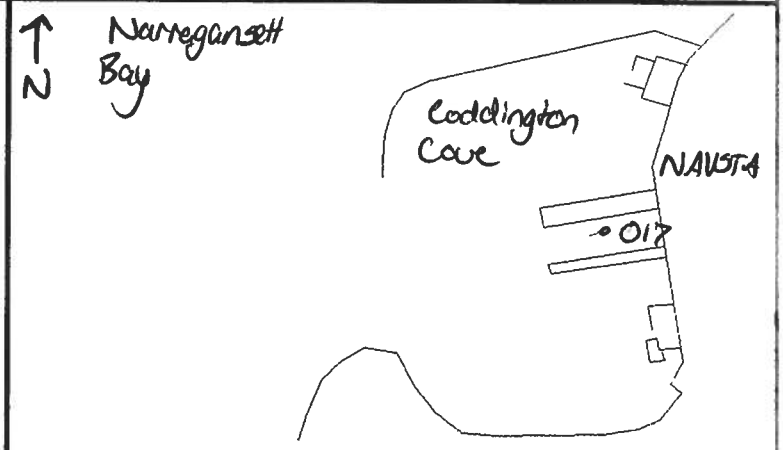
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0920 Method: VibraCore Sample ID: DSY-SD-017-0012	0-12	Black 0-9	SILT - trace F-Sand and trace shell fragments
Time: 0923 Method: VibraCore Sample ID: DSY-SD-017-1224	12-24	Black 9-18	SILT - trace fine Sand
Time: 0926 Method: VibraCore Sample ID: DSY-SD-017-2448	24-48	Black/Grey 18-36	SILT - some F-Sand Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: 021
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 4
Total Recovery: 2.81 4 Water Depth: 41.2

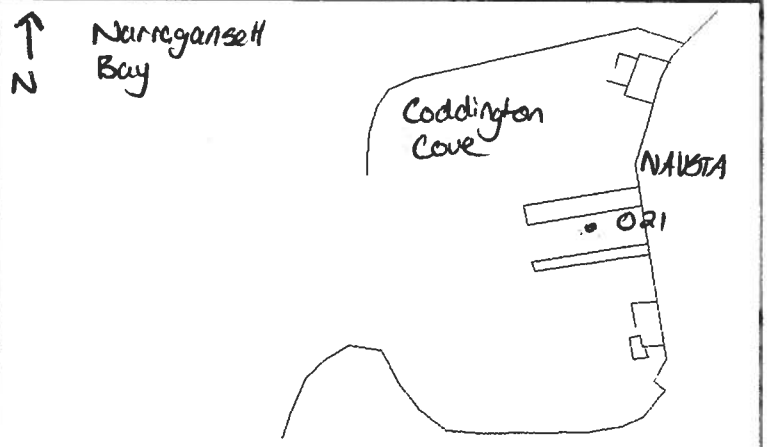
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1335 Method: VibraCore Sample ID: DSY-SD-021-0012	0-12	Black 0-8	SILT - Trace F-Sand
Time: 1338 Method: VibraCore Sample ID: DSY-SD-021-~~0012~~ 1224	12-24	Black/Grey 8-16	↓
Time: 1341 Method: VibraCore Sample ID: DSY-SD-021-2448	24-48	Black/Grey 16-32	SILT - some F-Sand Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Q25
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 1
Total Recovery: 3.5/4 Water Depth: 36

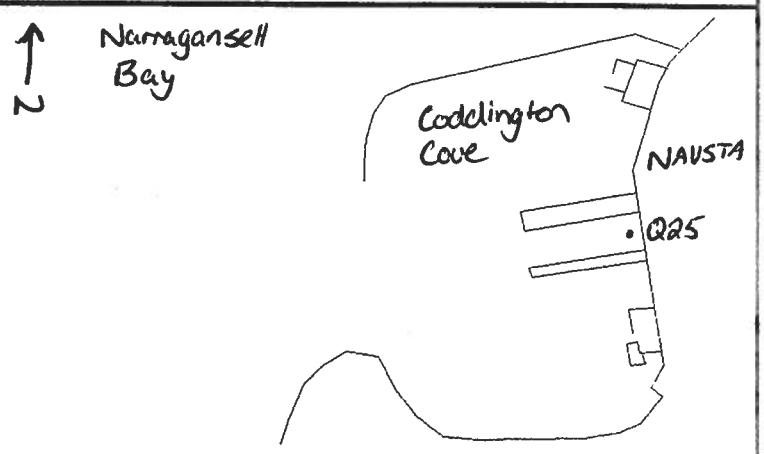
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015 Method: VibraCore Sample ID: DSY-SD-Q25-0012	0-12	Black 0-10	SILT
Time: 1018 Method: VibraCore Sample ID: DSY-SD-Q25-1224	12-24	Grey/Black 10-20	SILT - some F-Sand
Time: 1021 Method: VibraCore Sample ID: DSY-SD-Q25-2448	24-48	Grey 20-40	F-M Sand - trace silt
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Q29
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/11 Attempts: 1
Total Recovery: 3.2/4 Water Depth: 34.9

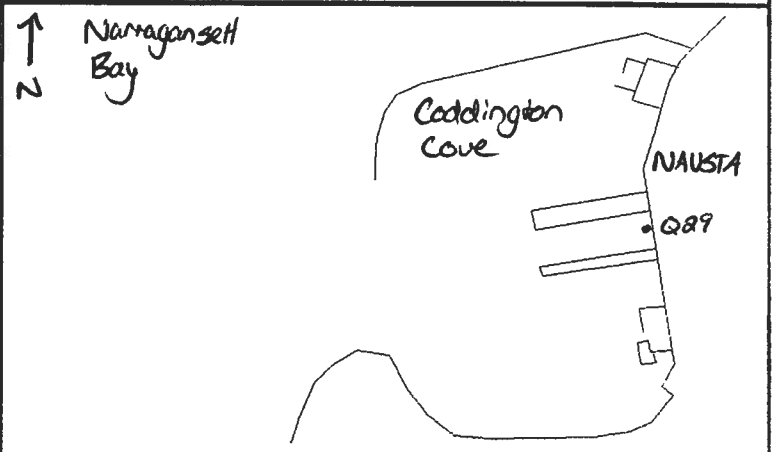
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045 Method: VibraCore Sample ID: DSY-SD-Q29-0012	0-12	Black 0-10	SILT- trace F-Sand
Time: 1048 Method: VibraCore Sample ID: DSY-SD-Q29-1224	12-24	Black 10-20	SILT-Trace F-Sand
Time: 1051 Method: VibraCore Sample ID: DSY-SD-Q29-2448	24-48	Black/Grey 20-40	F-M-Silty Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: ~~SY~~ SD9
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3.5/4 Water Depth:

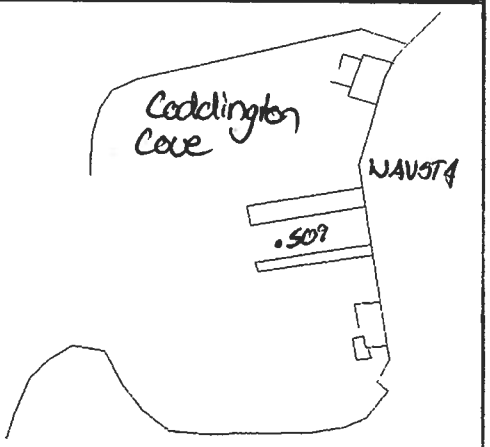
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0755 Method: VibraCore Sample ID: DSY-SD-509-0012	0-12"	Grey/ Black 0-10	SILT - w/Trace F-Sand
Time: 0758 Method: VibraCore Sample ID: DSY-SD-509-1224	12-24"	Grey 10-20	CLAEY SILT - w Trace F-Sand
Time: 0801 Method: VibraCore Sample ID: DSY-SD-509-2448	24-48"	Grey 20-40	Clayey Silt - Trace F-M Sand DUP16
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: N4

Duplicate ID No.: DSY-SD DUP16-093011
DUP16 → SD9-2448

Signature(s):

~~AAS3150A/H~~

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: S13
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth: 43.9

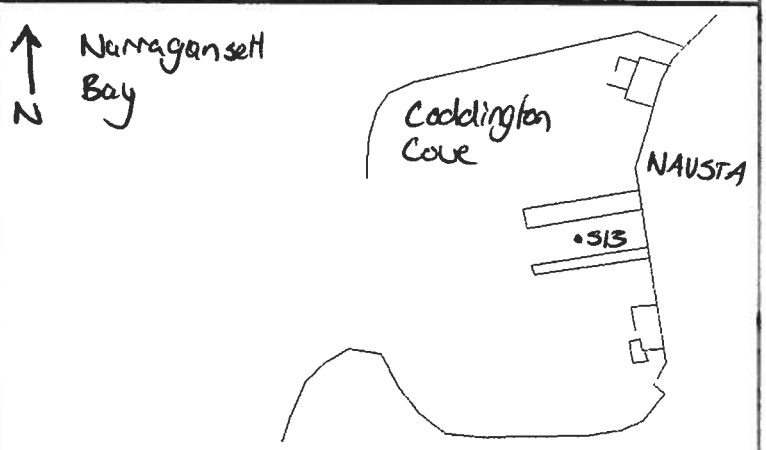
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050 Method: VibraCore Sample ID: DSY-SD-S13-0012	0-12	Grey Black 0-11.5	SLCT
Time: 1053 Method: VibraCore Sample ID: DSY-SD-S13-1224	12-24	Grey/ Black ~~11-22~~ 11.5-23	Clayey Silt
Time: 1056 Method: VibraCore Sample ID: DSY-SD-S13-2448	24-48	Grey ~~22-44~~ 23-46	Clayey Silt Labac
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (ND)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: S17
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/20/11 Attempts: 4
Total Recovery: 207/4 Water Depth: 41.5

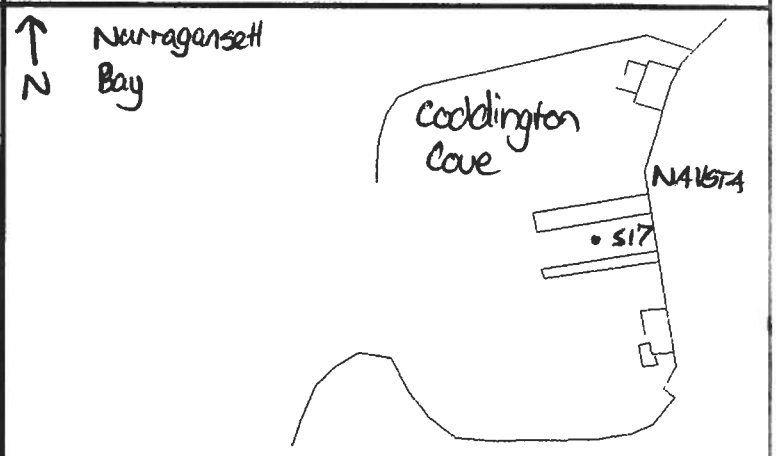
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1320 Method: VibraCore Sample ID: DSY-SD-S17-0012	0-12	Black Grey 0-8	SILT - Trace Clay
Time: 1323 Method: VibraCore Sample ID: DSY-SD-S17-1224	12-24	Grey 8-16	SILT - Some clay trace F Sand
Time: 1326 Method: VibraCore Sample ID: DSY-SD-S17-2448	24-48	Grey 16-32	SILT - some clay some F-Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: S21
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 4
Total Recovery: 2.7/4 Water Depth: 39.7

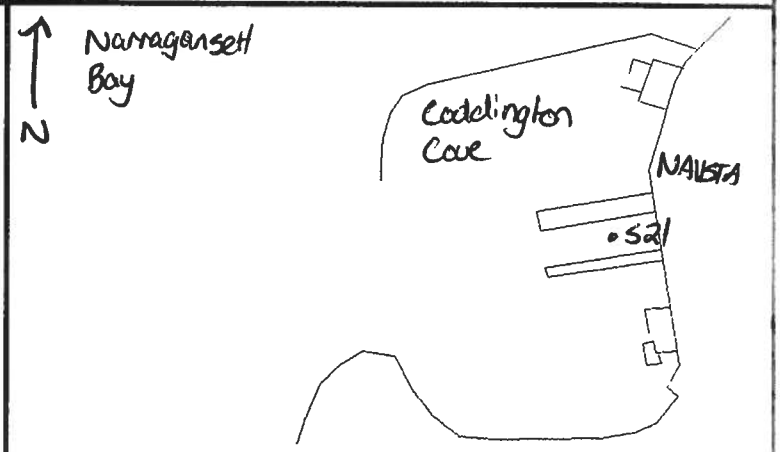
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350 Method: ViboraCore Sample ID: DSY-SD-S21-0012	0-12	Black/Grey 0-8	SILT
Time: 1353 Method: ViboraCore Sample ID: DSY-SD-S21-1224	12-24	8-16	SILT - Trace F-Sand
Time: 1356 Method: ViboraCore Sample ID: DSY-SD-S21-2448	24-48	16-32	SILT - Trace Clay & F-Sand DUP20
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only*

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP20-093011
DUP20 → S21-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: T25
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/5/11 Attempts: 1
Total Recovery: 3.24 Water Depth: 36.0

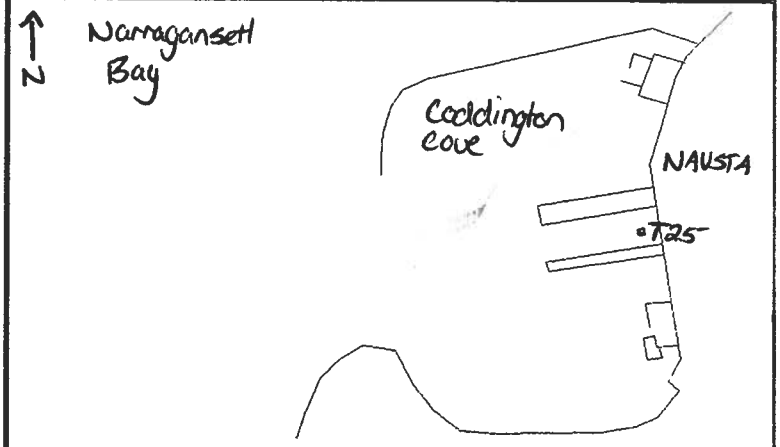
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1055 Method: VibraCore Sample ID: DSY-SD-T25-0012	0-12	Black 0-9	SILT
Time: 1058 Method: VibraCore Sample ID: DSY-SD-T25-1224	12-24	Black 9-18	SILT - Trace F-Sand
Time: 1101 Method: VibraCore Sample ID: DSY-SD-T25-2448	24-48	Black 18-36	SILT - Some F-M Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: T29
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/14 Attempts: 3 - All 3 same recovery
Total Recovery: 2.8/4 Water Depth: 34.0

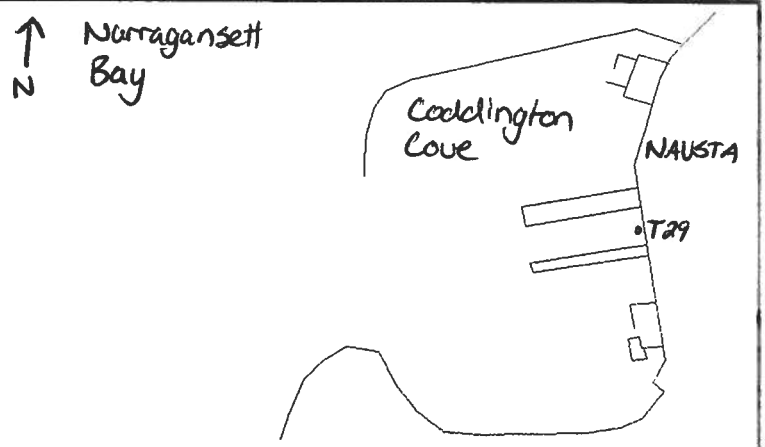
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1110 Method: VibraCore Sample ID: DSY-SD-T29-0012	0-12	Black 0-9	F-M Silty Sand
Time: 1113 Method: VibraCore Sample ID: DSY-SD-T29-1224	12-24	Black/Grey 9-17	↓
Time: 1116 Method: VibraCore Sample ID: DSY-SD-T29-2448	24-48	Black/Grey 17-34	F-M-sand - some silt - trace coarse sand Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W09
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/20/11 Attempts: 1
Total Recovery: 3.81 4 Water Depth:

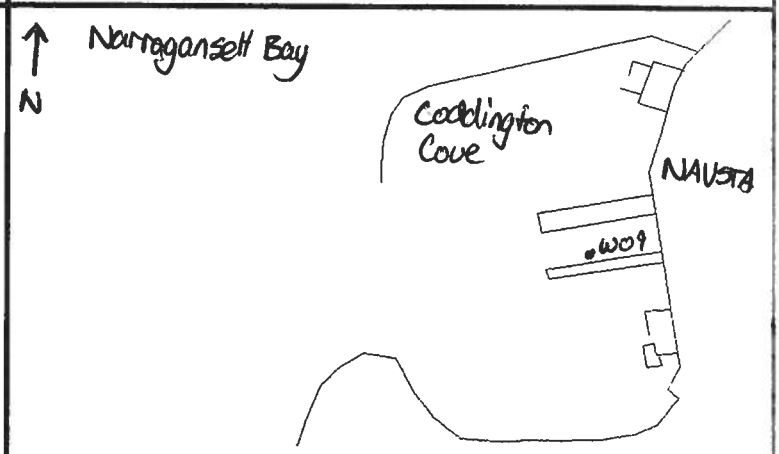
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015 Method: VibraCore Sample ID: DSY-SD-W09-0012	0-12	Grey/Black 0-11	SILT
Time: 1018 Method: VibraCore Sample ID: DSY-SD-W09-1224	12-24	Grey 11-22	SILT
Time: 1021 Method: VibraCore Sample ID: DSY-SD-W09-2448	24-48	Grey 22-44	SILT - some clay - Trace F-Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~ Cu, Zn	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C			

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W13
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth: 45.5

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1030 Method: VibraCore Sample ID: DSY-SD-W13-0012	0-12"	0-11	Clayey Silt - trace F Sand
Time: 1033 Method: VibraCore Sample ID: DSY-SD-W13-1224	12-24"	11-22	Clayey Silt - some F-Sand
Time: 1036 Method: VibraCore Sample ID: DSY-SD-W13-2448	24-48"	22-44	↓
Time: Method: Sample ID:			

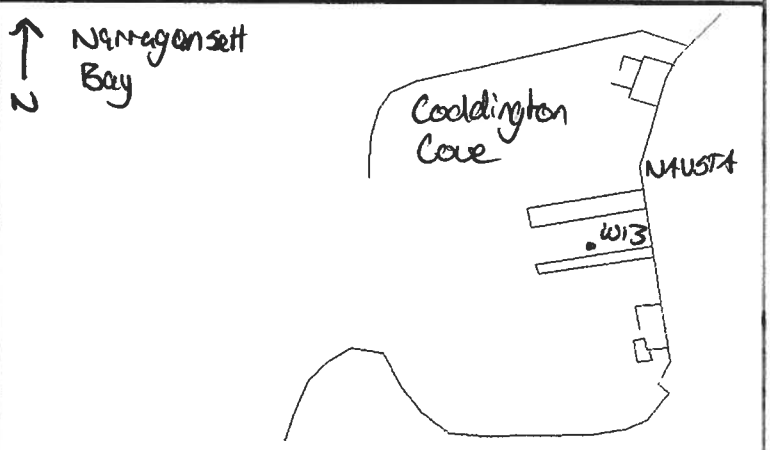
DUP18

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP18-093011
DUP18 → W13-1224

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W17
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[x] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 7/30/11 Attempts: 1
Total Recovery: 3.7/4 Water Depth:

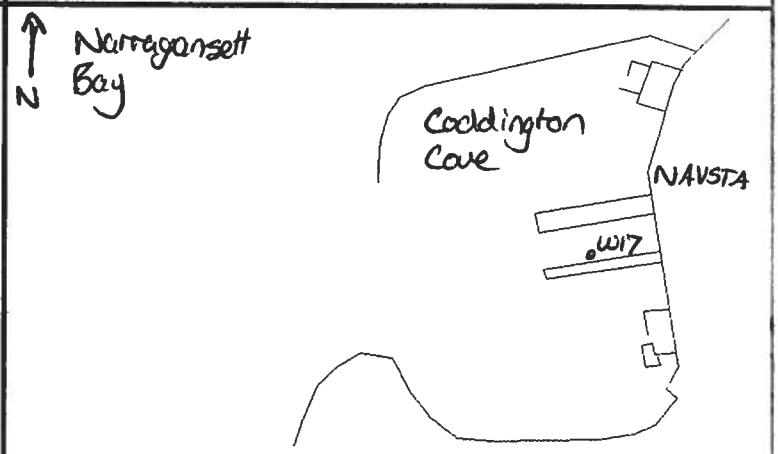
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200 Method: VibraCore Sample ID: DSY-SD-W17-0012	0-12	Black/Grey 0-10	SILT
Time: 1203 Method: VibraCore Sample ID: DSY-SD-W17-1224	12-24	Black/Grey 10-20	Clayey SILT w/Trace F-Sand
Time: 1206 Method: VibraCore Sample ID: DSY-SD-W17-2448	24-48	GREY 20-40	clayey silt with some F-C sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: DSY-SD-W21
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/30/11 Attempts: 1
Total Recovery: 3.3/4 Water Depth:

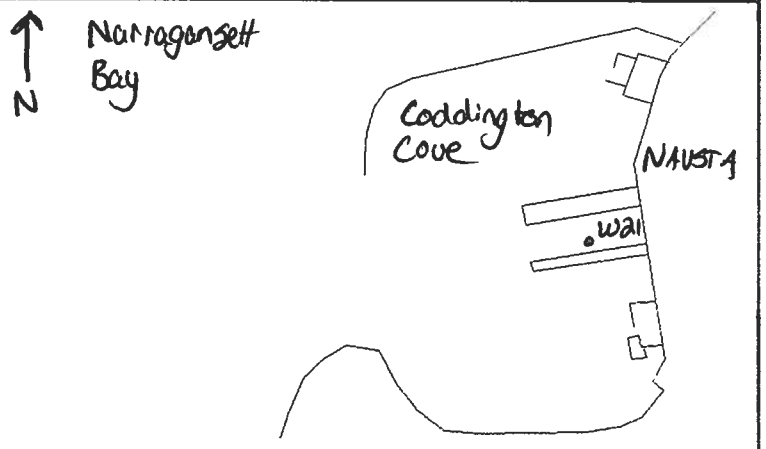
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220 Method: VibraCore Sample ID: DSY-SD-W21-0012	0-12"	BLACK, 0-10 GREY	SILT DUP19
Time: 1223 Method: VibraCore Sample ID: DSY-SD-W21-1224	12-24"	BLACK 10-20 GREY	SILT trace Clay
Time: 1226 Method: VibraCore Sample ID: DSY-SD-W21-2448	24-48"	GREY 20-40	Clayey Silt - trace F-Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: DSY-SD-DUP19-093011
NA	DUP19 → W21-0012

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W24
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/11 Attempts: 1
Total Recovery: 38/4 Water Depth: 35.2

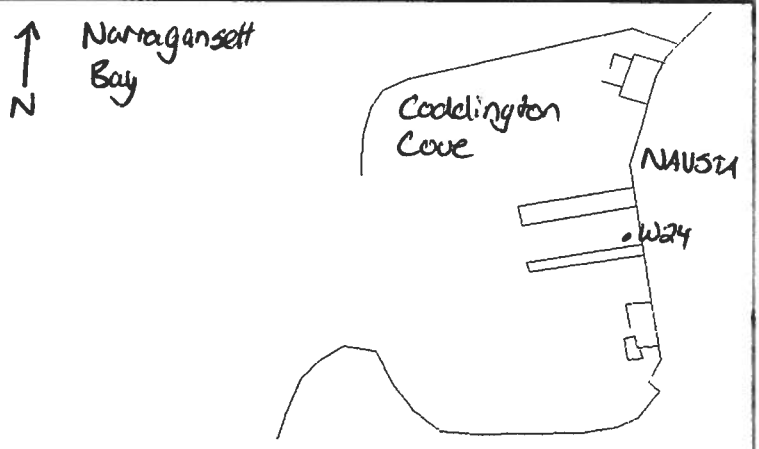
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1225 Method: VibraCore Sample ID: DSY-SD-W24-0012	0-12	Black 0-11	SILT - Trace F-Sand DUP28
Time: 1228 Method: VibraCore Sample ID: DSY-SD-W24-1224	12-24	Black/ Grey 11-22	SILT - Some F-M sand Petroleum like odor
Time: 1231 Method: VibraCore Sample ID: DSY-SD-W24-2448	24-48	Grey 22-44	SILT - Some F-M Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-2" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP28-100611
DUP28 → 0012

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/11 Attempts: 2
Total Recovery: 2.9/4 Water Depth: 35

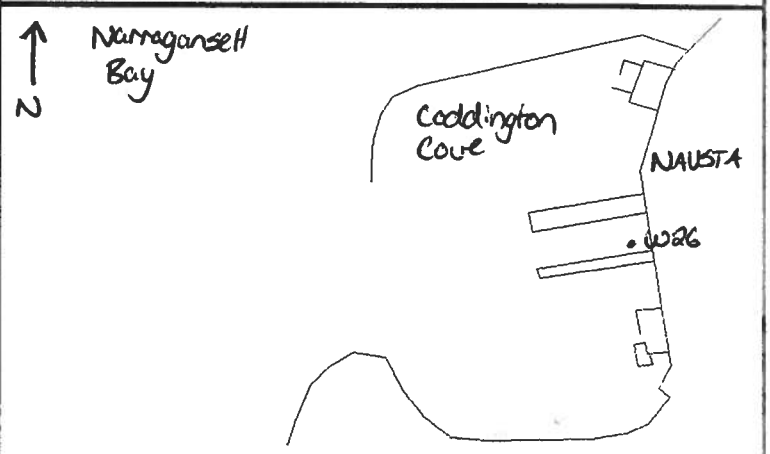
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1035 Method: Vibra Core Sample ID: DSY-SD-W26-0012	0-12	Black 0-9	SILT
Time: 1038 Method: Vibra Core Sample ID: DSY-SD-W26-1224	12-24	Black 9-18	SILT - trace F-sand
Time: 1041 Method: Vibra Core Sample ID: DSY-SD-W26-2448	24-48	Black 18-35	SILT - some F-M sand DUP27
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DSY-SD-DUP26-100511
DUP26 → W26-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W28
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/11 Attempts: 1
Total Recovery: 3.4/4 Water Depth: 37.1

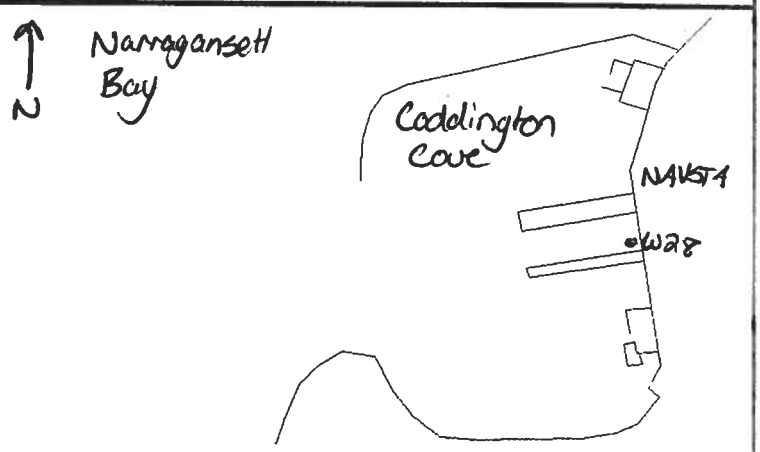
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1300 Method: VibraCore Sample ID: DSY-SD-W28-0012	0-12	Black	SILT
Time: 1303 Method: VibraCore Sample ID: DSY-SD-W28-1224	12-24	Black	SILT - Trace F-sand
Time: 1306 Method: VibraCore Sample ID: DSY-SD-W28-2448	24-48	Black/ Grey	SILT - some F-M sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: W30
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/6/11 Attempts: 4
Total Recovery: 2.5/4 Water Depth: 26.3

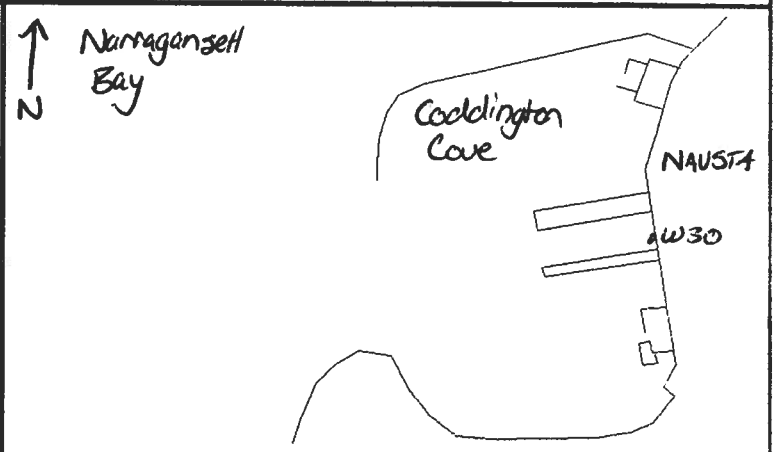
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245 Method: VibraCore Sample ID: DSY-SD-W30-0012	0-12	Black/ Grey	SILT - some F-C sand
Time: 1248 Method: VibraCore Sample ID: DSY-SD-W30-1224	12-24	Grey	F-C SAND - some silt
Time: 1251 Method: VibraCore Sample ID: DSY-SD-W30-2448	24-48	Grey	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Y03
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 1
Total Recovery: 3.7/4 Water Depth:

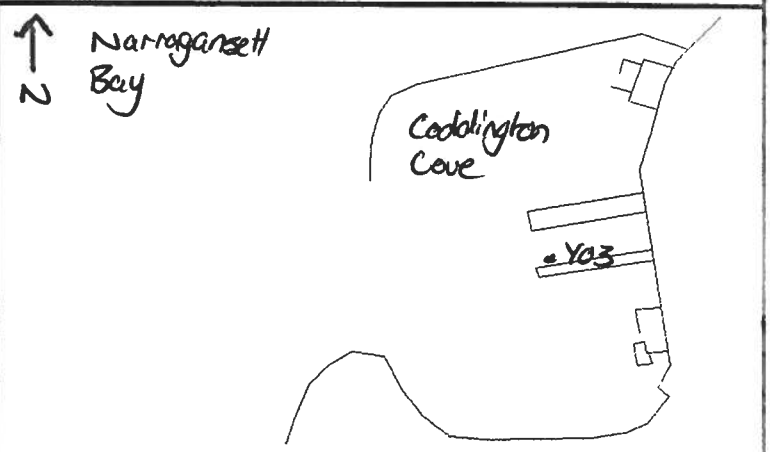
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215 Method: VibraCore Sample ID: DSY-SD-Y03-0012	0-12	Dark Grey 0-10	SILT
Time: 1218 Method: Vibra Core Sample ID: DSY-SD-Y03-1224	12-24	Grey 10-20	↓
Time: 1221 Method: Vibra Core Sample ID: DSY-SD-Y03-2448	24-48	Grey 20-40	SILT - Trace F-Sand DUP22
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP22-100311
Dup2a → Y03-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Y25
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: ~~10/3/11~~ 10/31/11 Attempts: 1
Total Recovery: 3.9 / 4 Water Depth:

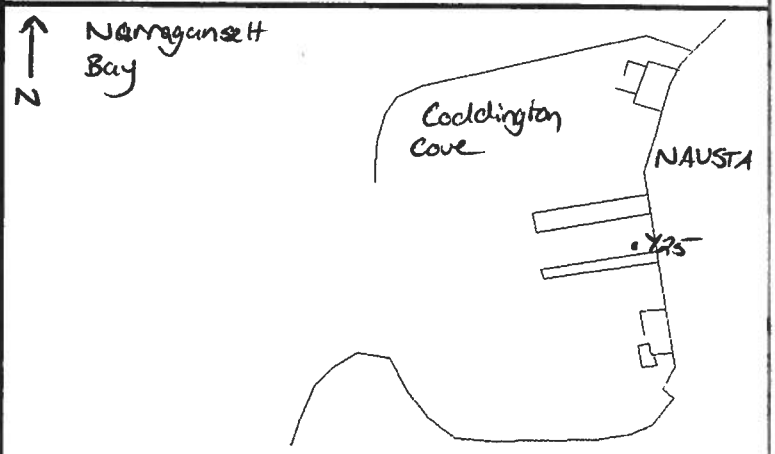
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1345 Method: Vibra Core Sample ID: DSY-SD-Y25-0012	0-12	Black 0-11.5	SILT - trace shell fragments
Time: 1348 Method: Vibra Core Sample ID: DSY-SD-Y25-1224	12-24	Black 11.5-23	
Time: 1351 Method: Vibra Core Sample ID: DSY-SD-Y25-2448	24-48	Black 23-46	Trace F-SAND DUP23
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP23-100311
DUP23 → Y25-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Y26
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 2
Total Recovery: 3.7/4 Water Depth: 39.0

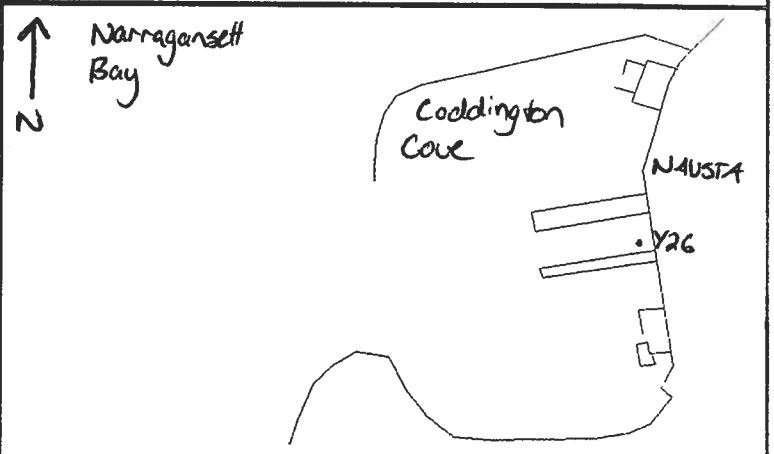
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1405 Method: VibraCore Sample ID: DSY-SD-Y26-0012	0-12	Black 0-11	SILT - some shell fragments
Time: 1408 Method: VibraCore Sample ID: DSY-SD-Y26-1224	12-24	Black 11-22	SILT - trace shell fragments & F-sand
Time: 1411 Method: VibraCore Sample ID: DSY-SD-Y26-2448	24-48	Black 22-44	SILT - some shell fragments & F-sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Y28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts:
Total Recovery: 3/4 Water Depth:

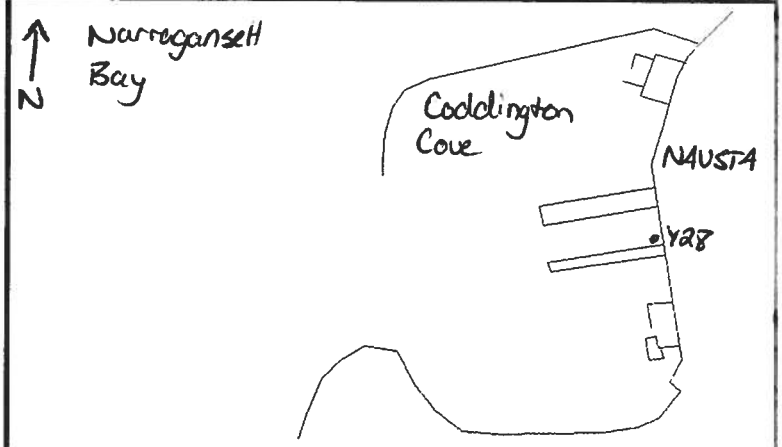
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430 Method: VibraCore Sample ID: DSY-SD-Y28-0012	0-12	Black 0-9	SILT
Time: 1433 Method: VibraCore Sample ID: DSY-SD-Y28-1224	12-24	Black 9-18	SILT - Trace F-sand
Time: 1436 Method: VibraCore Sample ID: DSY-SD-Y28-2448	24-48	Brown 18-36	SILT - Some F-C Sand Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD 2448
Duplicate ID No.: N1

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: Y30
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 5
Total Recovery: 1.7/4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1500 Method: VibraCore Sample ID: DSY-SD-Y30-0012	0-12	Black 0-10	Silt - some F-M sand & shell fragments sheen & petroleum like odor
Time: 1503 Method: VibraCore Sample ID: DSY-SD-Y30-1224	12-24	Black 10-20	F-M Sand - some silt sheen, petroleum like odor
Time: Method: Sample ID:			
Time: Method: Sample ID:			

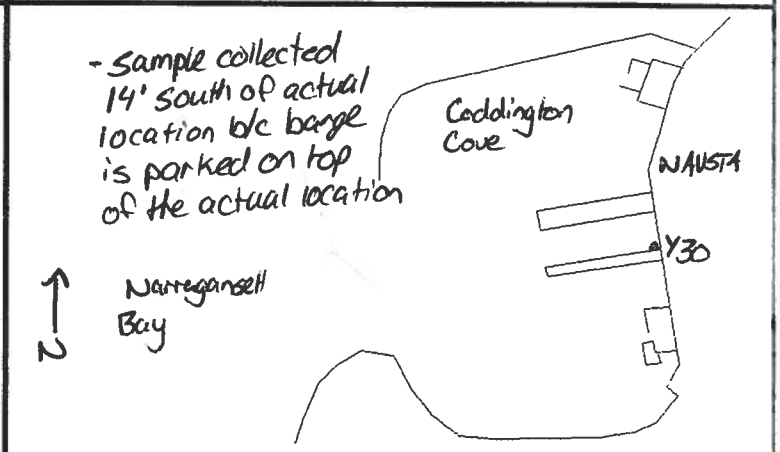
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Strong petroleum like odor upon opening core tube
- Sheen observed on top of water in core tube
- 5 attempts made at collecting core - last attempt was only 2' penetration and 1.5' recovery - it is assumed that a very soft silt layer is below this sandier layer and the sand is not allowing the softer silt into the tube

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA01
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth: 30

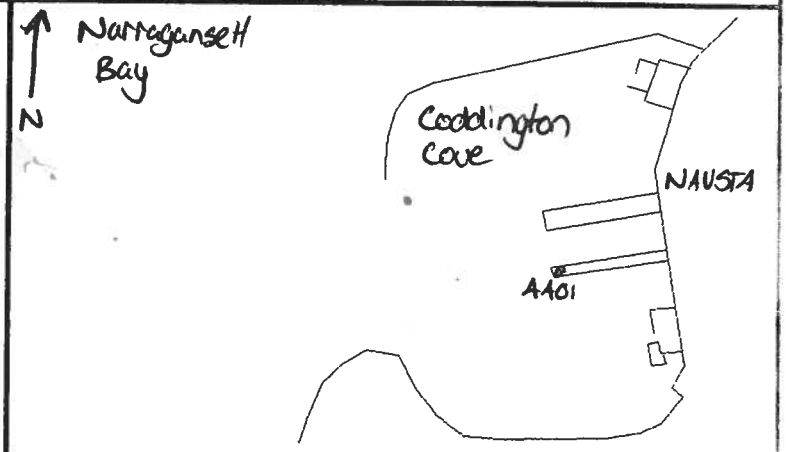
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1420 Method: Push Core Sample ID: DSY-SD-AA01-0012	0-12	Black 0-11	SILT - some shells
Time: 1423 Method: Push Core Sample ID: DSY-SD-AA01-1224	12-24	11-23	SILT - some shells
Time: 1426 Method: Push Core Sample ID: DSY-SD-AA01-2448	24-48	23-46	SILT - Few shells DUP33
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: ~~NA~~	
NA	DSY-SD-DUP33 101211	AA01-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: A105
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/12/11 Attempts: 1
Total Recovery: 3.81 4 Water Depth: 25

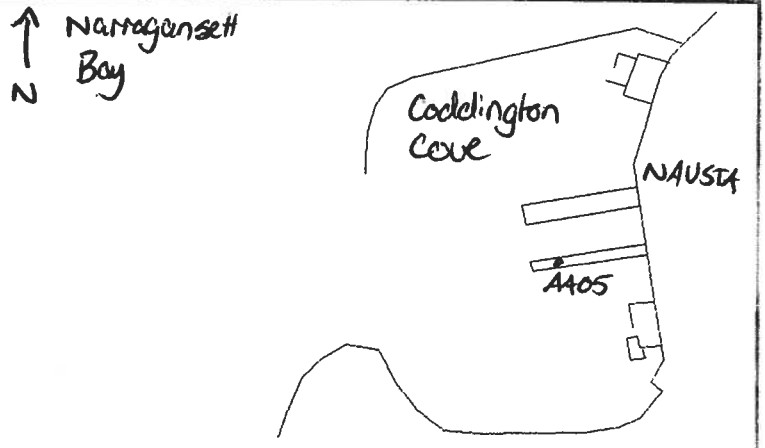
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1445 Method: Push Core Sample ID: DSY-SD-A105-0012	0-12	Black 0-11	SILT - many shells
Time: 1448 Method: Push Core Sample ID: DSY-SD-A105-1224	12-24	11-23	SILT - some shells
Time: 1451 Method: Push Core Sample ID: DSY-SD-A105-2448	24-48	23-46	SILT - some shells petroleum like odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: ~~DST~~ AA09
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[x] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 1
Total Recovery: 39/4 Water Depth: 29

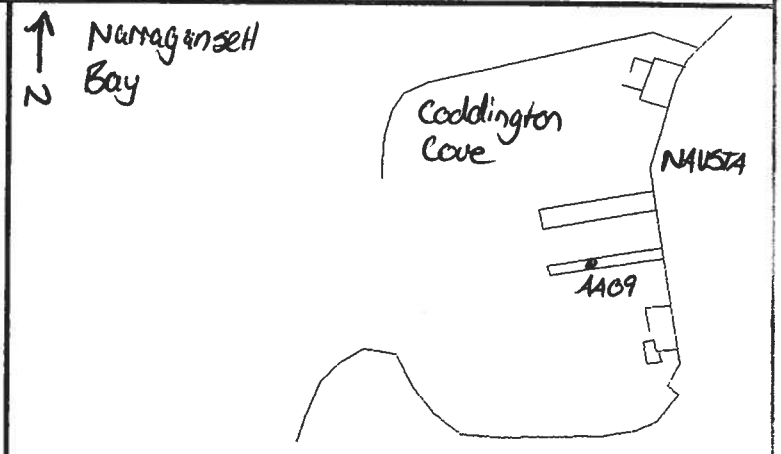
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1155 Method: Push Core Sample ID: DSY-SD-AA09-0012	0-12	Black	SILT - Some Shells
Time: 1158 Method: Push Core Sample ID: DSY-SD-AA09-1224	12-24		SILT - Some Shells
Time: 1201 Method: Push Core Sample ID: DSY-SD-AA09-2448	24-48	↓	SILT - Few Shells petroleum like odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

56

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA13
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 2
Total Recovery: 3.5ft 4 Water Depth:

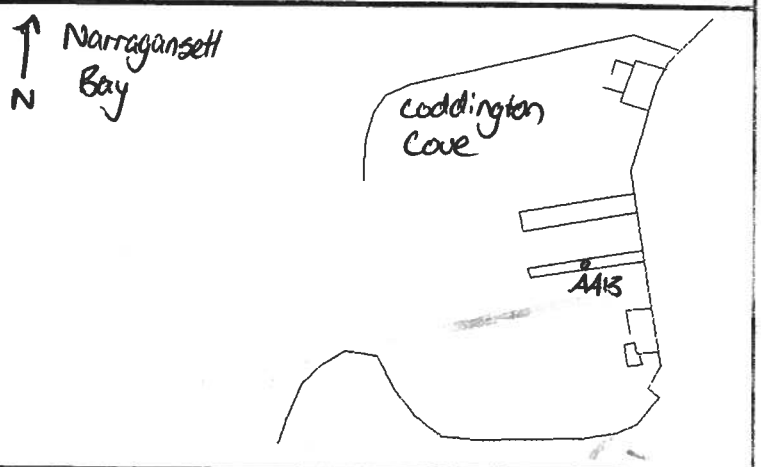
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220 Method: Push Core Sample ID: DSY-SD-AA13-0012	0-12	Black 0-16	SILT - some shells
Time: 1223 Method: Push Core Sample ID: DSY-SD-AA13-1224	12-24	16-20	SILT - some shells
Time: 1226 Method: Push Core Sample ID: DSY-SD-AA13-2448	24-48	20-40	SILT - few shells Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA17
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/3/11 Attempts: 3
Total Recovery: 3.7/4 Water Depth:

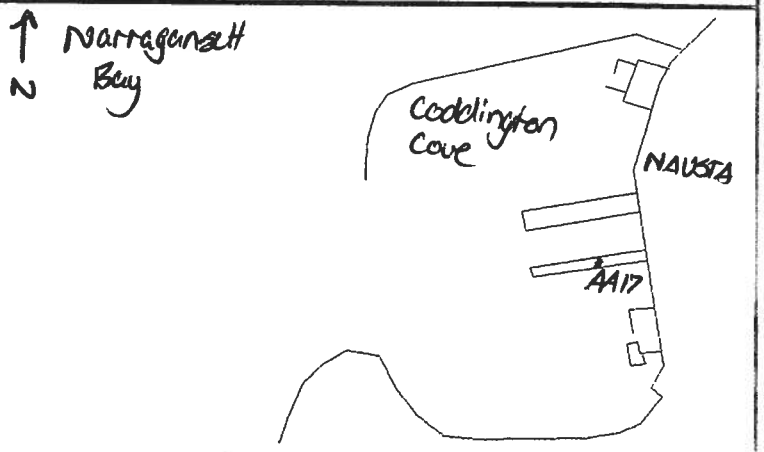
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245 Method: ~~Vibra~~ Push Core Sample ID: DSY-SD-AA17-0012	0-12	Black 0-11	SILT-Many Shells
Time: 1248 Method: PushCore Sample ID: DSY-SD-AA17-1224	12-24	11-22	SILT-some shells
Time: 1251 Method: PushCore Sample ID: DSY-SD-AA17-2448	24-48	22-44	SILT - Trace Shells slight petroleum like odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA21
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/31 11 Attempts: 2
Total Recovery: 3.8/4 Water Depth: 28

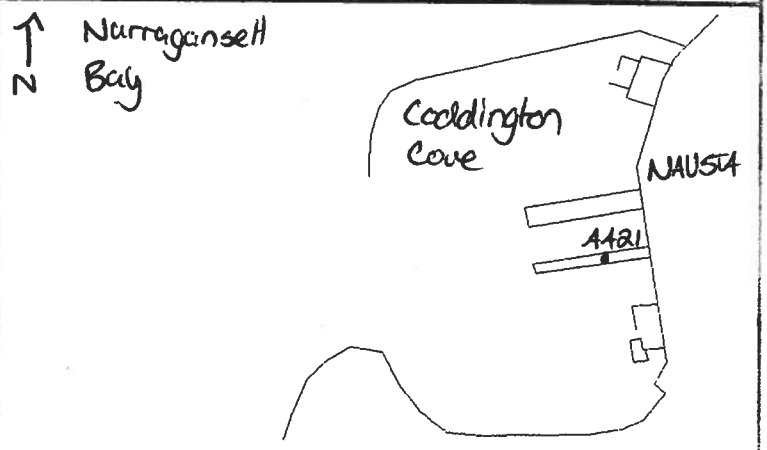
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305 Method: Push Core Sample ID: DSY-SD-AA21-0012	0-12	Black 0-11	SILT - many shells
Time: 1308 Method: Push Core Sample ID: DSY-SD-AA21-1224	12-24	11-23	SILT - some shells
Time: 1311 Method: Push Core Sample ID: DSY-SD-AA21-2448	24-48	23-46	SILT - trace shells DUP34
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: ~~NA~~
NA	DSY-SD-DUP34-101311 AA21-2448

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: ~~A123~~ A124
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 1
Total Recovery: 3.4/4 Water Depth: 25

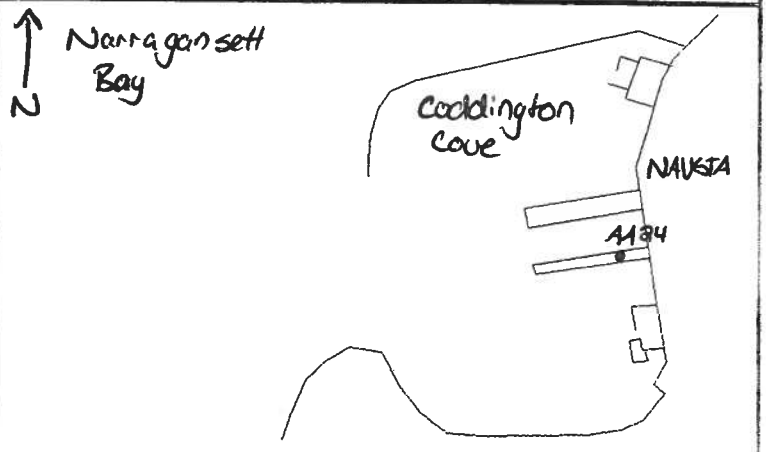
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1325 Method: Push Core Sample ID: DSY-SD-A124-0012	0-12	Black 0-10	SILT - Many Shells
Time: 1328 Method: Push Core Sample ID: DSY-SD-A124-1224	12-24	10-20	SILT - Some Shells
Time: 1331 Method: Push Core Sample ID: DSY-SD-A124-2448	24-48	20-40	SILT - trace shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 4
Total Recovery: 2.4/3 Water Depth: 22

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1400 Method: Push Core Sample ID: DSY-SD-AA26-0012	0-12	0-9	SILT - Many Shells
Time: 1403 Method: Push Core Sample ID: DSY-SD-AA26-1224	12-24	9-19	SILT - some Shells Petroleum like Odor
Time: 1406 Method: Push Core Sample ID: DSY-SD-AA26-2448	24-36	19-29	SILT - Trace Shells
Time: Method: Sample ID:			

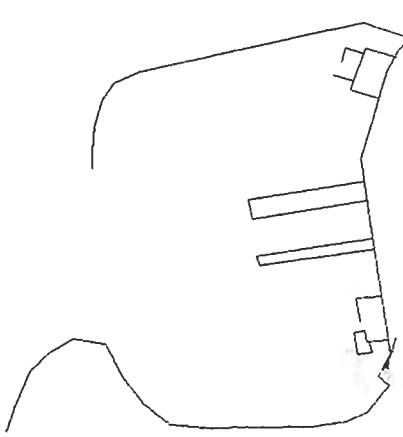
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

Refusal at 3' - hard bottom

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA28
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 3
Total Recovery: 1.1/1.4 Water Depth: 18

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430 Method: Push Core Sample ID: DSY-SD-AA28-0016	0-16	Black/ Grey	SILT - trace shells Bottom 3" F-M sand DUP 35
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

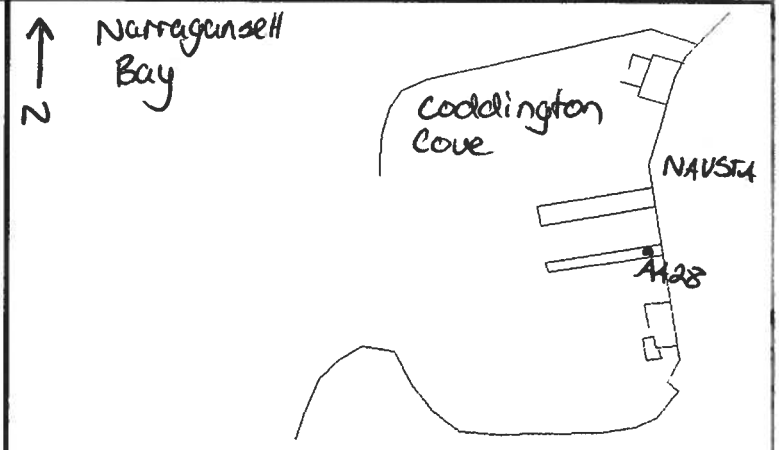
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		(YES) / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Refusal at 1.4'
- one sample collected b/c there was not enough volume for 2 samples

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	~~NA~~ DSY-SD-DUP35-101311 AA28-0016

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AA30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 10/13/11 Attempts: 2
Total Recovery: 1.8/2.2 Water Depth: 13

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1445 Method: Push Core Sample ID: DSY-SD-AA30-0012	0-12	Black 0-11	Top 1" - silt w/ shells F-M sand - trace shell frags
Time: 1448 Method: Push Core Sample ID: DSY-SD-AA30-1224 ~~1226~~	12-26	Black/Grey 11-22	↓ petroleum like odor
Time: Method: Sample ID:			
Time: Method: Sample ID:			

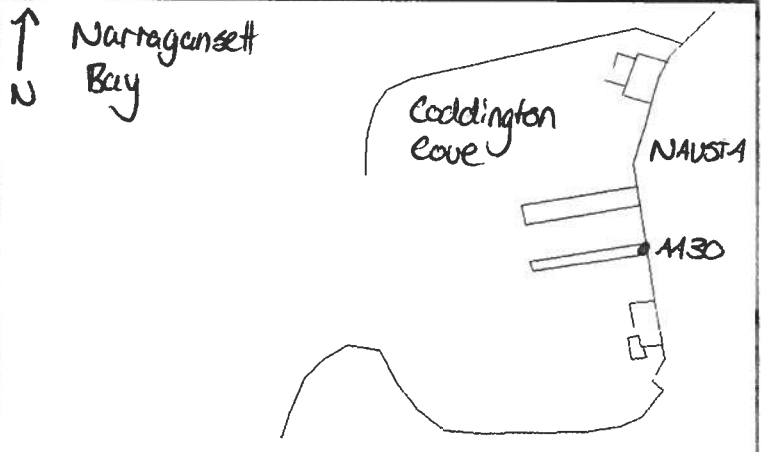
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

Refusal at 1.8 - sandy layer present in area

MAP:



Circle if Applicable:

MS/MSD NA
Duplicate ID No.: NA

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AB11
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 4
Total Recovery: 2.5 / 4 Water Depth: 36.2

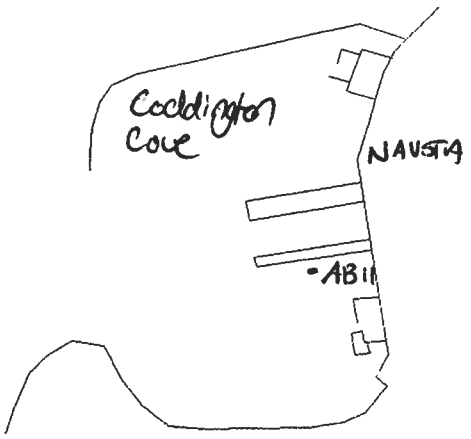
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105 Method: VibraCore Sample ID: DSY-SD-AB11-0012	0-12	Black ~0-7	SILT - some shell fragments Sheen
Time: 1108 Method: VibraCore Sample ID: DSY-SD-AB11-1224	12-24	Black ~7-14	SILT - some shell fragments Sheen
Time: 1111 Method: VibraCore Sample ID: DSY-SD-AB11-2448	24-48	Black ~14-28	SILT - some shell fragments Sheen - very coarse sandy material possibly sand blast
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AB15
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 2
Total Recovery: 5.71 4 Water Depth: 37.7

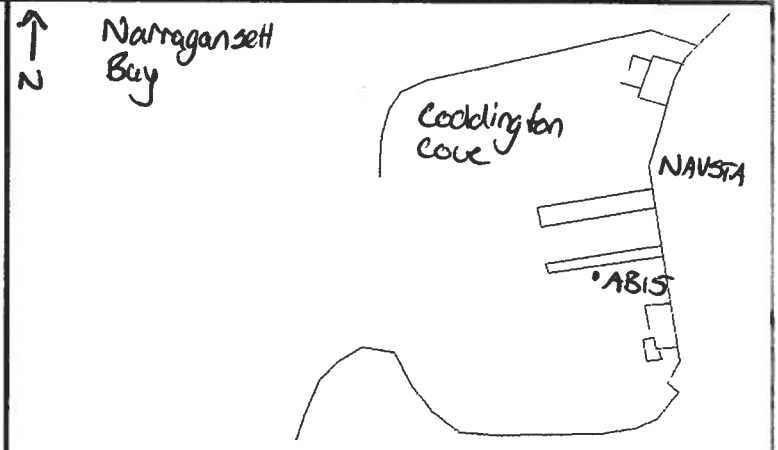
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020 Method: VibraCore Sample ID: DSY-SD-AB15-0012	0-12"	Black 0-11"	SILT - Some shell fragments Sheen - Petroleum like odor
Time: 1083 Method: VibraCore Sample ID: DSY-SD-AB15-1224	12-24"	Black 11-22"	SILT - Some shell fragments Sheen - Petroleum like odor
Time: 1026 Method: VibraCore Sample ID: DSY-SD-AB15-2448	24-48"	Black 22-44"	SILT - Some shell fragment Sheen - Petroleum odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AC24
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 38/4 Water Depth: 34.5

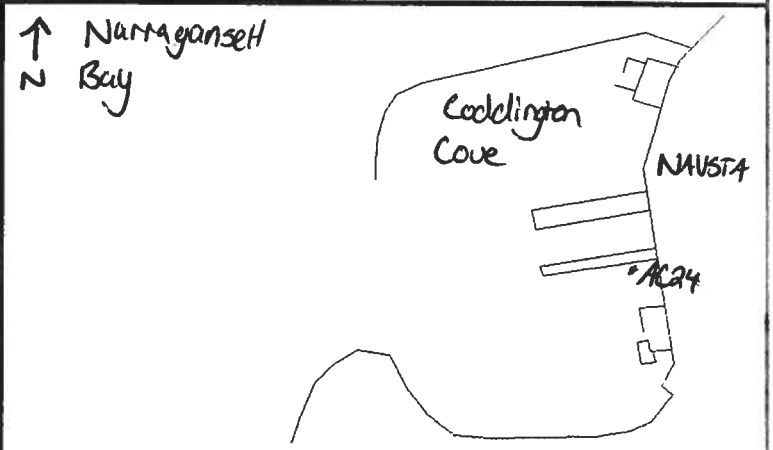
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1415 Method: VibraCore Sample ID: DSY-SD-AC24-0012	0-12	Black 0-11	SILT
Time: 1418 Method: VibraCore Sample ID: DSY-SD-AC24-1224	12-24	Black/Grey 11-22	SILT - Some shell fragments and trace sand
Time: 1421 Method: VibraCore Sample ID: DSY-SD-AC24-2448	24-48	Grey 22-44	SANDY SILT - F-M sand & some shell fragments Slight Petroleum Odor and Slight Sheen
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		~~YES~~ (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AC 26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 4/28/11 Attempts: 2
Total Recovery: 4/4 Water Depth: 39.4

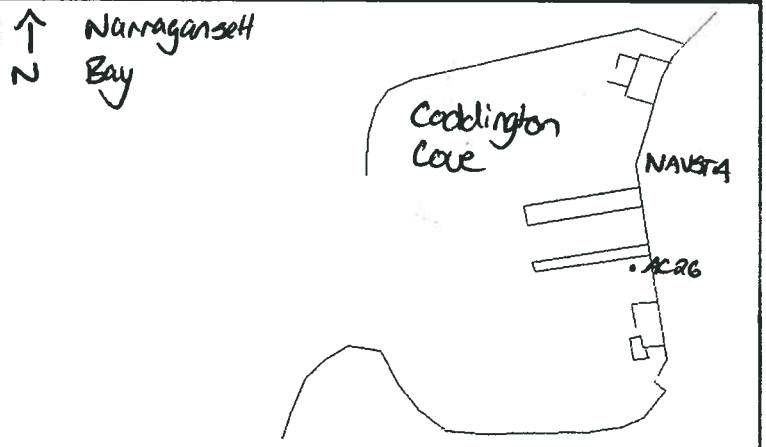
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0930 Method: VibraCore Sample ID: DSY-SD-AC26-0012	0-12"	Black 100%	SILT - trace F-Sand
Time: 0933 Method: VibraCore Sample ID: DSY-SD-AC26-1224	12-24"	Black/Grey 100%	SILT - Some F-Sand Slight Sheen
Time: 0936 Method: VibraCore Sample ID: DSY-SD-AC26-2448	24-48"	Black/grey 100%	F-grained sandy silt DUP 13
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DUP 13
AC26-0002448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AC28
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/28/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 38.2

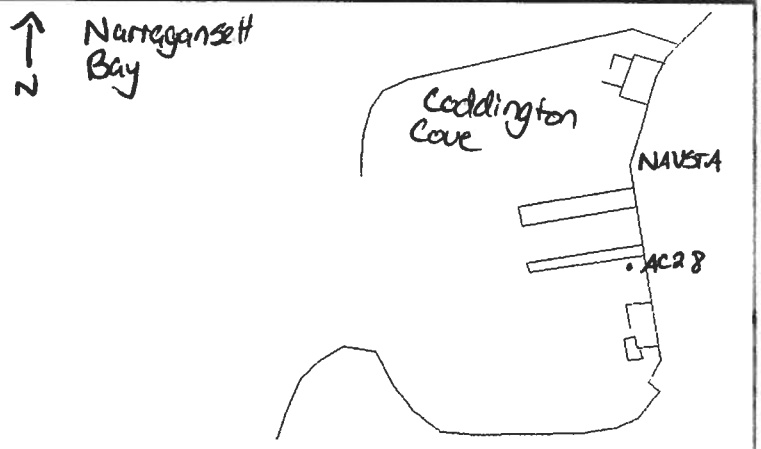
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105 Method: VibraCore Sample ID: DSY-SD-AC28-0012	0-12	Black 100%	SILT DUP14
Time: 1108 Method: VibraCore Sample ID: DSY-SD-AC28-1224	12-24	Black 100%	SILT - trace F-Sand Slight Petroleum like odor
Time: 1111 Method: VibraCore Sample ID: DSY-SD-AC28-2448	24-48	Black 100%	SILT - some F-Sand Petroleum like Odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	AC28-0012 DUP14

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AC30
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/28/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 31.3

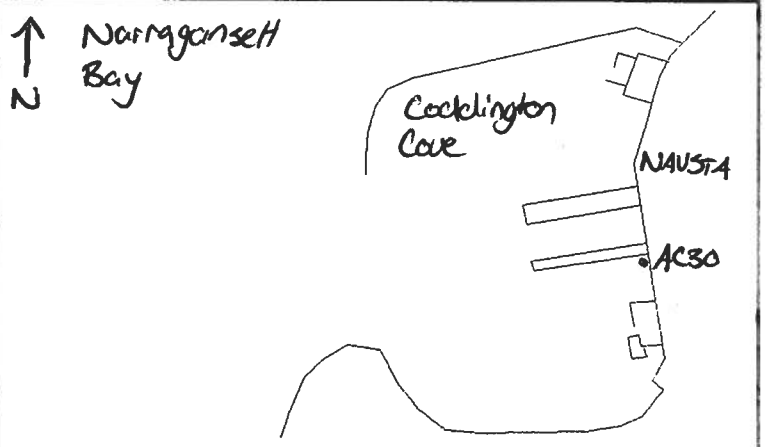
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1435 Method: VibraCore Sample ID: DSY-SD-AC30-0012	00-12"	0-9	SILT Lab QC
Time: 1438 Method: VibraCore Sample ID: DSY-SD-AC30-1224	12-24"	9-18	SILT w/ Trace F-Sand ↓
Time: 1441 Method: VibraCore Sample ID: DSY-SD-AC30-2448	24-48"	Black 18-36	↓ Petroleum like odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD 0012

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AD01
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/09/11 Attempts: 1
Total Recovery: 3.8/4 Water Depth:

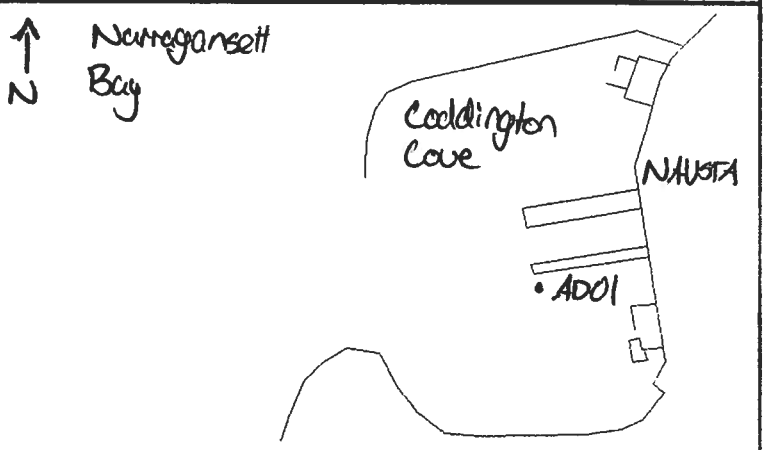
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305 Method: Vibracore Sample ID: DSY-SD-AD01-0012	0-12"	GREY/ 0-10 Black	0-5 - Silt 5-10 - Clayey Silt
Time: 1308 Method: VibreCore Sample ID: DSY-SD-AD01-1224	12-24"	GREY 10-20	Clayey Silt
Time: 1311 Method: VibreCore Sample ID: DSY-SD-AD01-2448	24-48"	GREY 20-40	Clayey Silt trace (F-M) sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: ADO5
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 1
Total Recovery: 3.8/4 Water Depth: 42

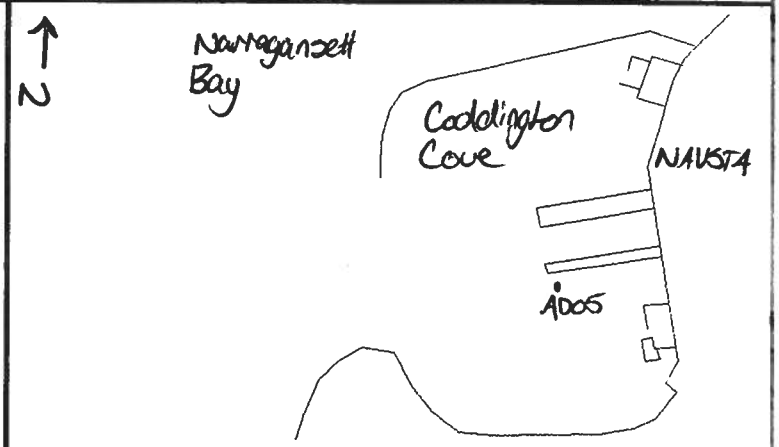
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0840 Method: VibraCore Sample ID: DSY-SD-AD05-0012	0-12	Black 0-10	SILT
Time: 0843 Method: VibraCore Sample ID: DSY-SD-AD05-1224	12-24	Black 10-20	SILT
Time: 0846 Method: VibraCore Sample ID: DSY-SD-AD05-2448	24-48	Black 20-40	top 15" SILT Bottom 6" Clay
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AD09
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 1
Total Recovery: 4/4 Water Depth: 41.0

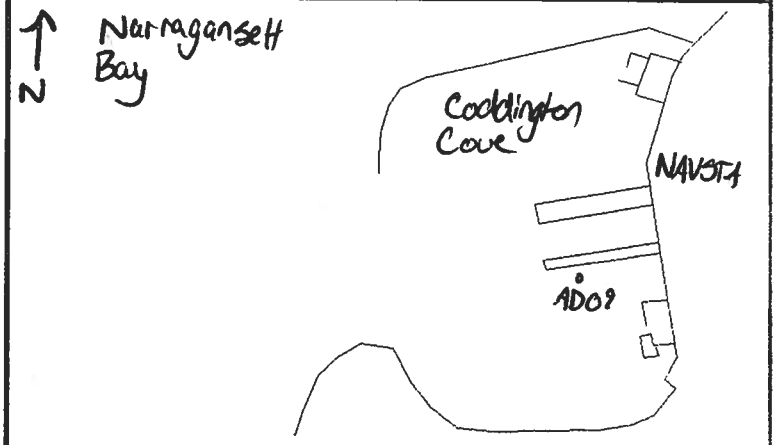
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~0818~~ 0820 Method: ViboCore Sample ID: DSY-SD-AD09-0012	0-12	Black 100%	SILT
Time: 0823 Method: ViboCore Sample ID: DSY-SD-AD09-1224	12-24	Black 100%	SILT
Time: 0826 Method: ViboCore Sample ID: DSY-SD-AD09-2448	24-48	Black 100%	SILT - trace clay Mostly clay on bottom
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AD13
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 1
Total Recovery: 4/4 Water Depth: 43.6

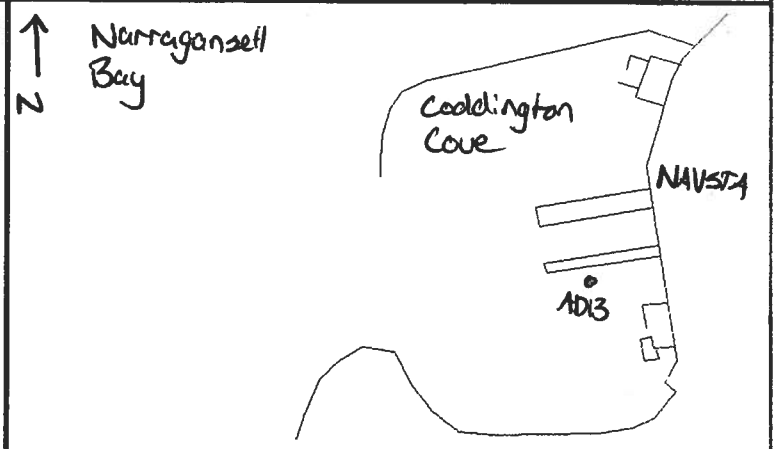
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0925 Method: VibraCore Sample ID: DSY-SD-AD13-0012	0-12	Grey/ Black 100%	SILT
Time: 0928 Method: VibraCore Sample ID: DSY-SD-AD13-1224	12-24	Grey 100%	Clayey Silt
Time: 0931 Method: VibraCore Sample ID: DSY-SD-AD13-2448	24-48	Grey 100%	Silty Clay DUP15
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	DUP15 → AD13-2448

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AD17
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/09/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth:

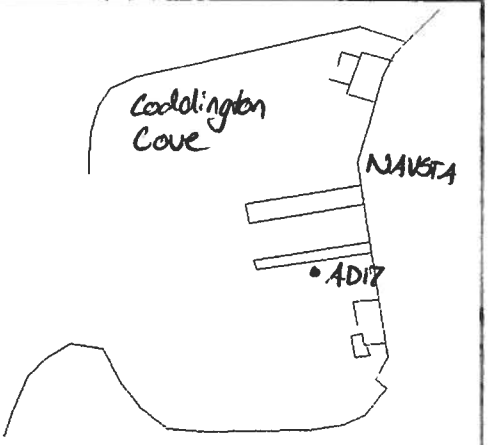
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0950 Method: VibraCore Sample ID: DSY-SD-AD17-0012	0-12	Black 0-11-	SILT
Time: 0953 Method: VibraCore Sample ID: DSY-SD-AD17-1224	12-24	Black 11-22	SILT w/ some shell fragments
Time: 0956 Method: VibraCore Sample ID: DSY-SD-AD17-2448	24-48	Black/ 22-44 Grey	Silt & Clay - trace shell fragments
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AD21
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/29/11 Attempts: 1
Total Recovery: 3.9 / 4 Water Depth: 40.4

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145 Method: VibraCore Sample ID: DSY-SD-AD21-0012	0-12"	Black 0-11	SILT
Time: 1148 Method: VibraCore Sample ID: DSY-SD-AD21-1224	12-24"	Black/Grey 11-22	SILT/CLAY trace F-M Sand
Time: 1151 Method: VibraCore Sample ID: DSY-SD-AD21-2448	24-48"	Grey 22-44	CLAY/SILT trace F-Sand LABQC
Time: Method: Sample ID:			

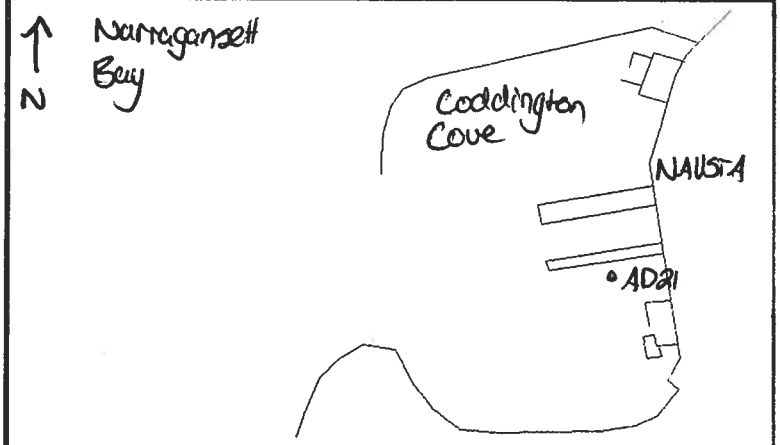
Lab QC

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 2448

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AE24
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 35.1

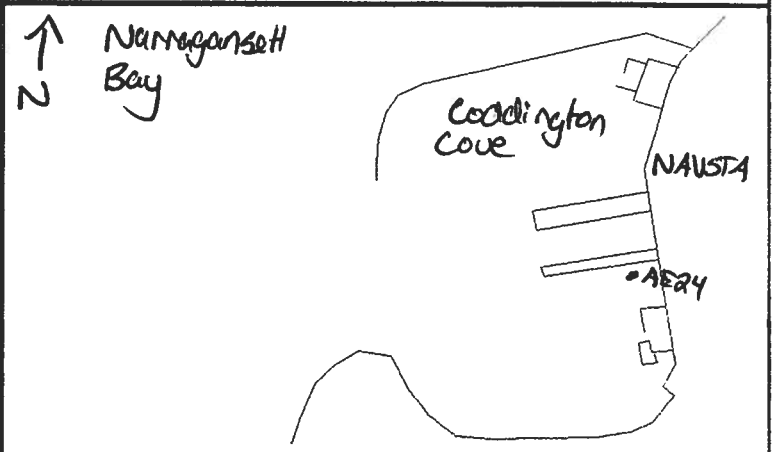
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430 Method: Vibracore Sample ID: DSY-SD-AE24-0012	0-12"	Black 100%	SILT - trace fine sand
Time: 1433 Method: Vibracore Sample ID: DSY-SD-AE24-1224	12-24"	Black/Grey 100%	SILT - some trace sand
Time: 1436 Method: Vibracore Sample ID: DSY-SD-AE24-2448	24-48"	Grey 100%	SILT - some trace sand some shell fragments
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AE26
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/08/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 40.1

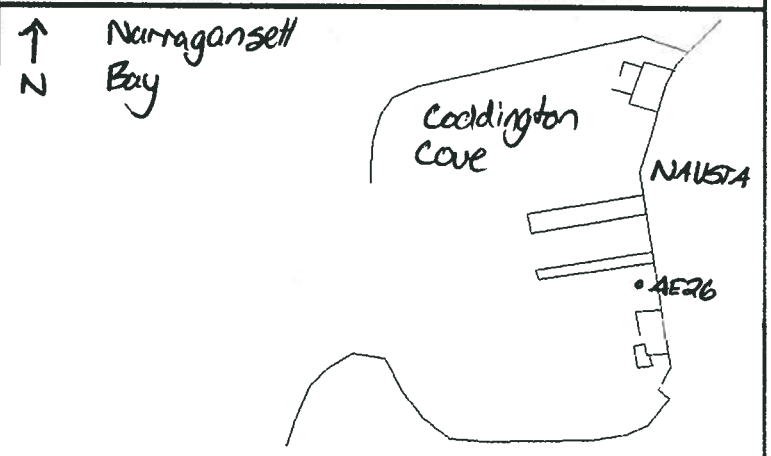
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015 Method: VibraCore Sample ID: DSY-SD-AE26-0012	0-12	Black 0-9	SILT - Trace F-sand
Time: 1018 Method: VibraCore Sample ID: DSY-SD-AE26-1224	12-24	Black/Grey 9-18	SILT - some F-sand
Time: 1021 Method: VibraCore Sample ID: DSY-SD-AE26-2448	24-48	Black/Grey 18-36	Fine grained Sandy Silt
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AE28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/28/11 Attempts: 1
Total Recovery: 3 / 4 Water Depth: 38.9

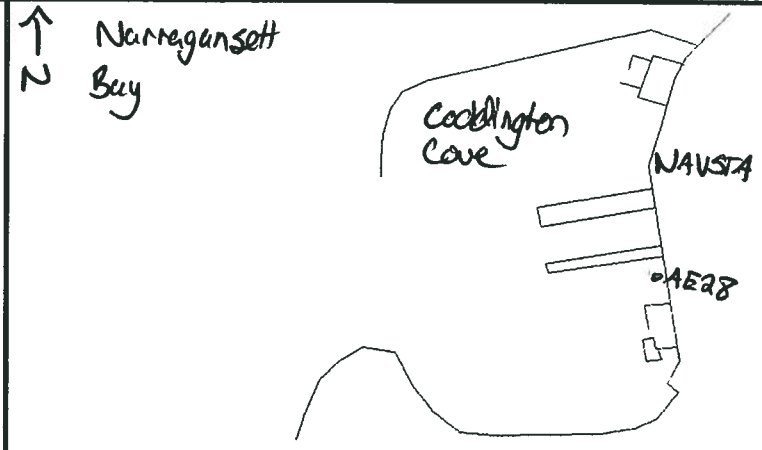
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1035 Method: Vibracore Sample ID: DSY-SD-AE28-0012	0-12"	0-9"	SILT
Time: 1038 Method: Vibracore Sample ID: DSY-SD-AE28-1224	12-24"	9-18"	SILT - Trace F-Sand
Time: 1041 Method: Vibracore Sample ID: DSY-SD-AE28-2448	24-48"	18-36"	50-50 F-M Sand & Silt Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD 2448
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AE30
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/28/11 Attempts: 5
Total Recovery: 1.7/ 2-4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350 Method: Vibra Core Sample ID: DSY-SD-AE30-0012	0-12	Black 0-10	0-2" - Silt 2+ F-M Sand w/some silt
Time: 1353 Method: Vibra Core Sample ID: DSY-SD-AE30-1224	12-24	Black/ Grey 10-20	top F-M Sand Bottom - F-C Sand, some clay and large gravel
Time: ~~1356~~ Method: Sample ID:			
Time: Method: Sample ID:			

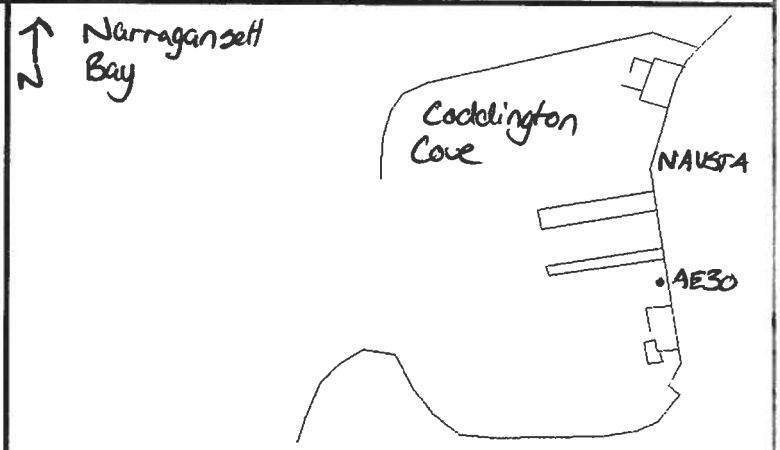
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Gravel/Sand/Clay layer at about 1.5' - this layer obstructed the core from capturing anything below 1.7' ~~although~~ recovery
- Core #5 was pushed to 2' into the sediment and the gravel was found right at the tip so some compaction occured above 2' that was accounted for in Core #4 which was sampled

MAP:



Circle if Applicable:

MS/MSD NA | Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AG 24
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/2/11 Attempts: 1
Total Recovery: 3/4 Water Depth: 36

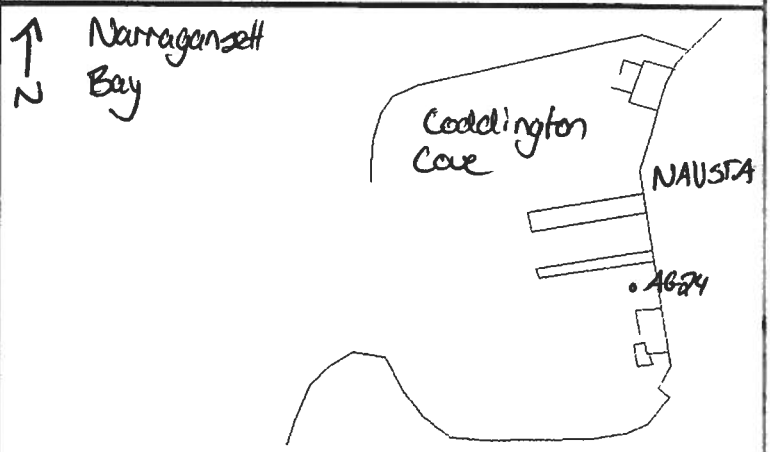
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145 Method: VibraCore Sample ID: DSY-SD-AG24-0012	0-12"	Black/Grey 0-9	SILT - w/ trace F-Sand
Time: 1148 Method: VibraCore Sample ID: DSY-SD-AG24-1224	12-24"	Black/Grey 9-18	SILT - w some F-Sand
Time: 1151 Method: VibraCore Sample ID: DSY-SD-AG24-~~2448~~ 2436	24-36"	Black/Grey 18-36	Silt - w/ some F-C sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AG26
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 3.8'4 Water Depth: 34.4

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1320 Method: VibraCore Sample ID: DSY-SD-AG26-0012	0-12	Black ~~0-11~~ 0-9	SILT
Time: 1323 Method: VibraCore Sample ID: DSY-SD-AG26-1224	12-24	Grey/ Black ~~11-22~~ 9-18	SILT - Trace F-Sand
Time: 1326 Method: VibraCore Sample ID: DSY-SD-AG26-2448	24-48	Grey/ Black ~~22-44~~ 18-36	SILT - Some C-F Sand
Time: Method: Sample ID:			

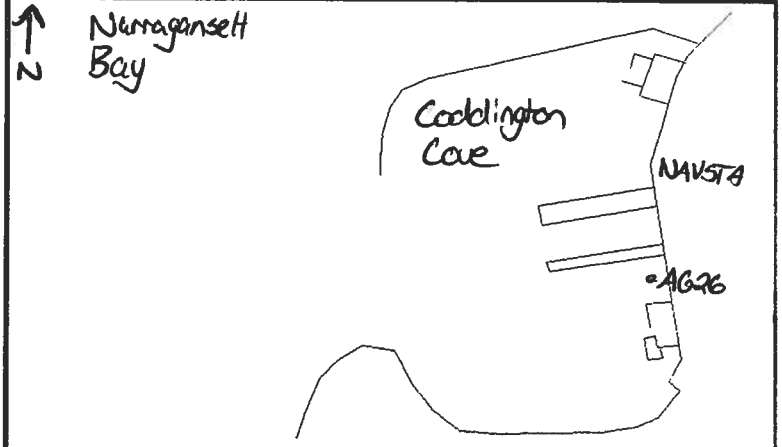
DUP 11

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
Toc	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: DUP11
AG26-0012

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AG28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 2.8 Water Depth: 36.0

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100 Method: Vibra Core Sample ID: DSY-SD-AG28-0012	0-12	Black 0-8	SILT
Time: 1103 Method: VibraCore Sample ID: DSY-SD-AG28-1224	12-24	Black/Grey 8-16	SILT w/ trace F Sand
Time: 1106 Method: Vibra Core Sample ID: DSY-SD-AG28-2448	24-48	Black/Grey 16-32	0-8" Silt w trace F-Sand 8-16" (F-M) Silty Sand Petroleum Like Odor
Time: Method: Sample ID:			

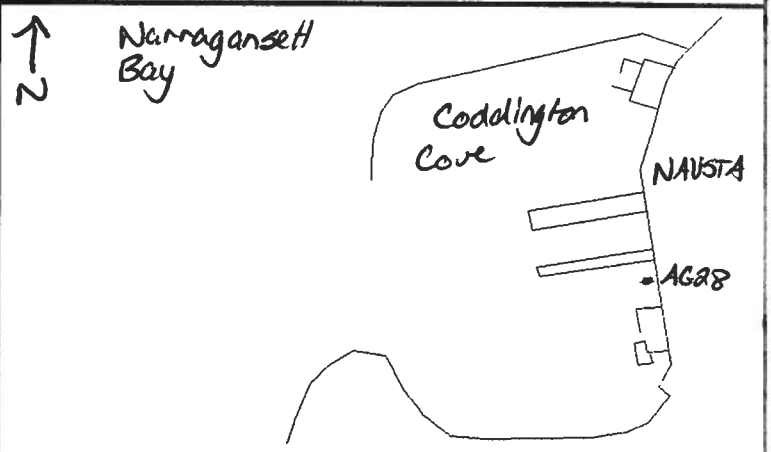
DUP 10

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		~~YES~~ / NO	
PAHs	4° C		~~YES~~ / NO	
Lead, ~~Copper, Zinc~~	4° C		~~YES~~ / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	AG-28-2448 DUP 10

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AG36
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: 1
Total Recovery: 2.7/4.0 Water Depth: 21.2

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1330 Method: VibraCore Sample ID: DSY-SD-AG30-0012	0-12"		0-2"-SILT 2+ F-M SAND w/ some silt
Time: 1333 Method: VibraCore Sample ID: DSY-SD-AG30-1224	12-24"		F-M SAND
Time: 1336 Method: VibraCore Sample ID: DSY-SD-AG30-2436	~~24-48"~~ 24-36		F-C SAND & Gravel - very bottom was a sand & gravel layer with large rock in bottom of core
Time: Method: Sample ID:			

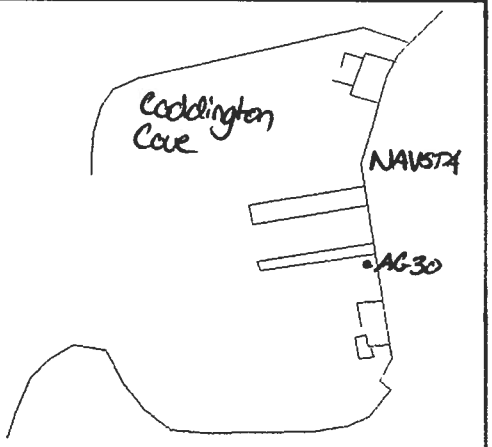
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Intervals sampled were 0-1, 1-2, 2-3, at 3' there is a sand & gravel layer that obstructed access to 3-4', no refusal but material could not get into core tube

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AI 24
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 3.5/4 Water Depth: 25.0

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200 Method: VibraCore Sample ID: DSY-SD-AI24-0012	0-12	Black 0-10	SILT - trace shell fragments
Time: 1203 Method: VibraCore Sample ID: DSY-SD-AI24-1224	12-24	Black/ Grey 10-20	SILT - w/ some F-sand
Time: 1206 Method: VibraCore Sample ID: DSY-SD-AI24-2448	24-48	Gray 20-40	SAND (F-M) - some shell fragments
Time: Method: Sample ID:			

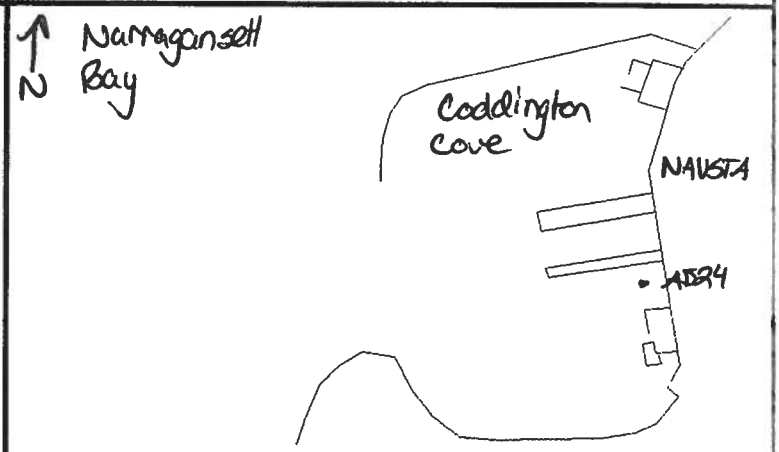
Lab QC

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

(MS/MSD) 0012

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AI-26
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/26/11 Attempts: 1
Total Recovery: 3.4/4 Water Depth: 33.6

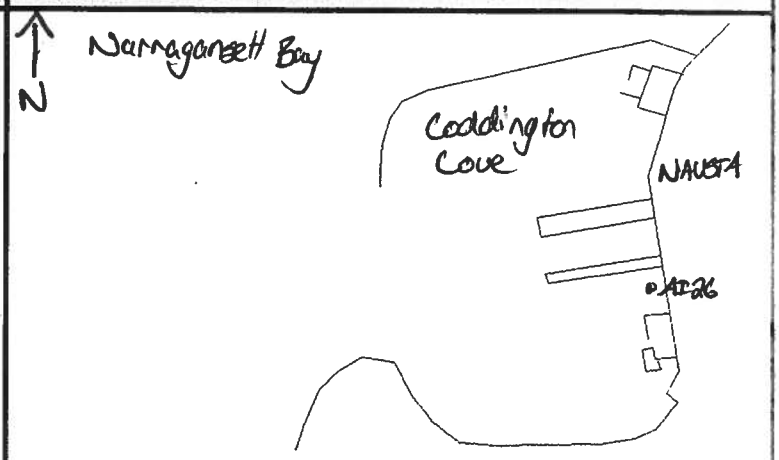
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305 Method: VibraCore Sample ID: DSY-SD-AI26-0012	0-12	Black 0-10	SILT
Time: 1308 Method: VibraCore Sample ID: DSY-SD-AI26-1224	12-24	Black/ Grey 10-20	SILT w/ trace F sand
Time: 1311 Method: VibraCore Sample ID: DSY-SD-AI26-2448	24-48	Black/ Grey 20-4	SILT w/ some (F-M) SAND
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AI 28
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 34.6

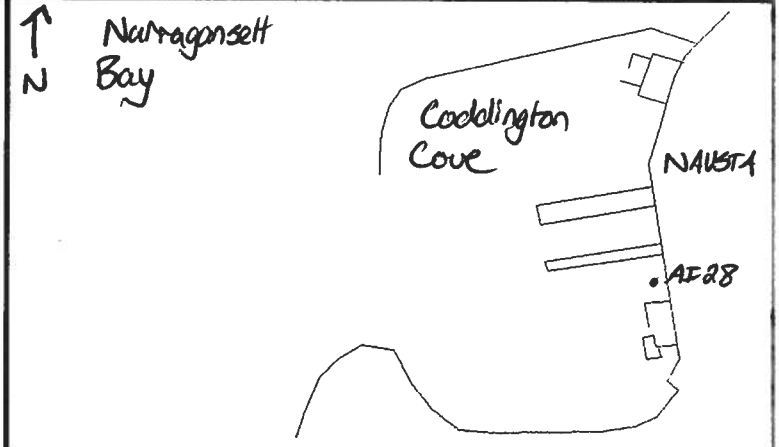
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130 Method: VibraCore Sample ID: DSY-SD-AI28-0012	0-12"	Black/ ~~Grey~~ 100%	SILT
Time: 1133 Method: VibreCore Sample ID: DSY-SD-AI28-1224	12-24"	~~Grey~~ Black 100%	
Time: 1136 Method: VibreCore Sample ID: DSY-SD-AI28-2448	24-48"	~~Grey~~ Black 100%	✓ -petroleum like odor
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AI30
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/24/11
Total Recovery: ~~4.1~~ 28/4.1
Attempts: 4
Water Depth: 87.9

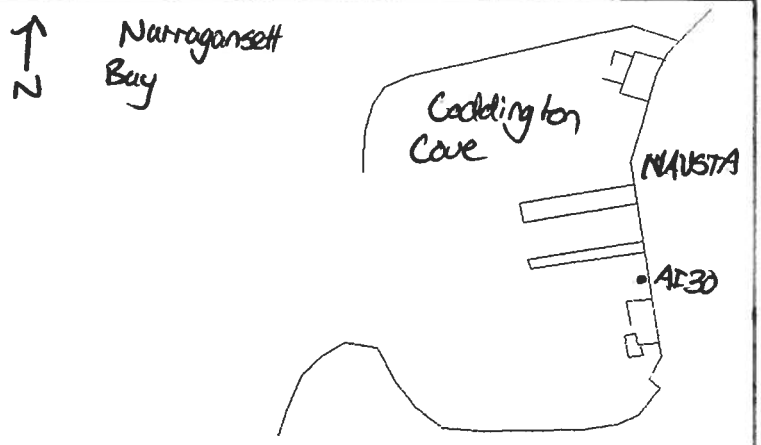
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1010 Method: VibraCore Sample ID: DSY-SD-AI30-0012	0-12	Black/ Grey 0-8	SAND (F-M) - some shell hash
Time: 1013 Method: VibraCore Sample ID: DSY-SD-AI30-1224	12-24	Black/ Grey 8-16	SAND (F-M) - some silt
Time: 1016 Method: VibraCore Sample ID: DSY-SD-AI30-2448	24-48	Black/ GRey 16-32	Silt - some F-SAND
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: NA (see below)
Sample Location: AK24
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 1
Total Recovery: 3.87 4 Water Depth:

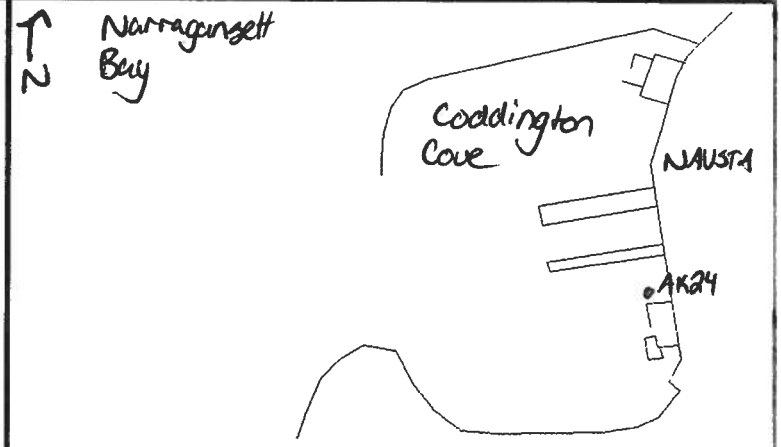
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020 Method: VibraCore Sample ID: DSY-SD-AK24-0012	0-12"	Black/ Grey 0-11	0-2" SILT -(F-M) SAND - trace silt
Time: 1023 Method: VibraCore Sample ID: DSY-SD-AK24-1224	12-24"	Grey 11-22	-(F-M) SAND - trace Silt
Time: 1026 Method: VibraCore Sample ID: DSY-SD-AK24-2448	24-48"	Grey 22-44	~~(F-M) SAND - trace silt~~ SANDY SILT - Fine Sand DUP 09
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD | Duplicate ID No.: AK24-2448 DUP09

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AK26
Sampled By: M. Herton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 1
Total Recovery: 3 ft 4 Water Depth:

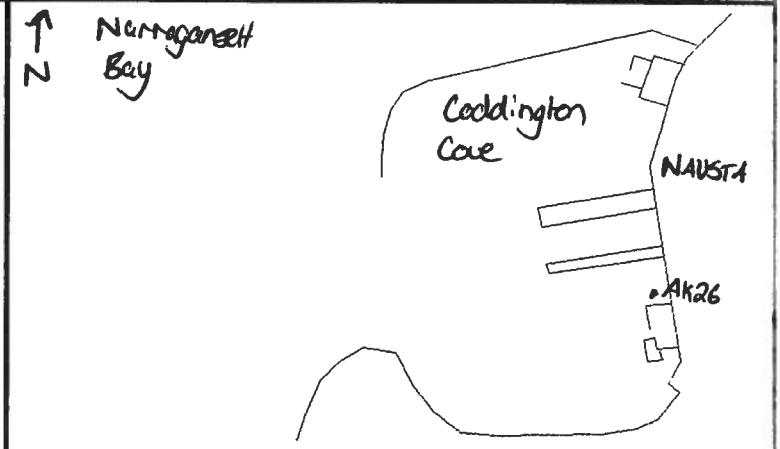
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1005 Method: VibroCore Sample ID: DSY-SD-AK26-0012	0-12"	Black/Grey 0-10	0-1" SILT w/ some shell fragments -(F-M) Sand - some shell fragments
Time: 1008 Method: ~~DSY-S~~ VibroCore Sample ID: DSY-SD-AK26-1224	12-24"	Grey 10-20	-(F-M) SAND - some shell fragments
Time: 1011 Method: VibroCor Sample ID: DSY-SD-AK26-2448	24-48"	Grey 20-40	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
~~Lead, Copper, Zinc~~ Lead	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
Tox	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AK28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 2
Total Recovery: 3/4 Water Depth: 19.9

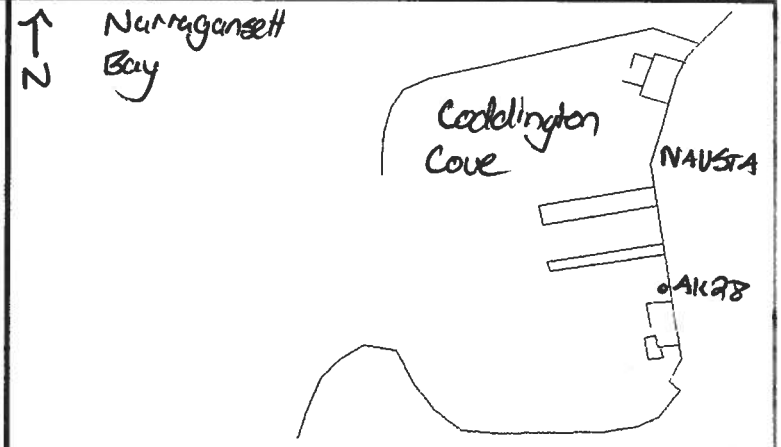
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045 Method: VibraCore Sample ID: DSY-SD-AK28-0012	0-12"	Black/ Grey 0-9"	0-1" SILT- Trace F-Sand -(F-M) SAND - Trace shell frags
Time: 1048 Method: VibraCore Sample ID: DSY-SD-AK28-1224	12-24"	Grey 9-18"	-(F-M) SAND
Time: 1051 Method: VibraCore Sample ID: DSY-SD-AK28-2448	24-48"	Grey 18-36"	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AK 30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 2
Total Recovery: 3.5' 4 Water Depth:

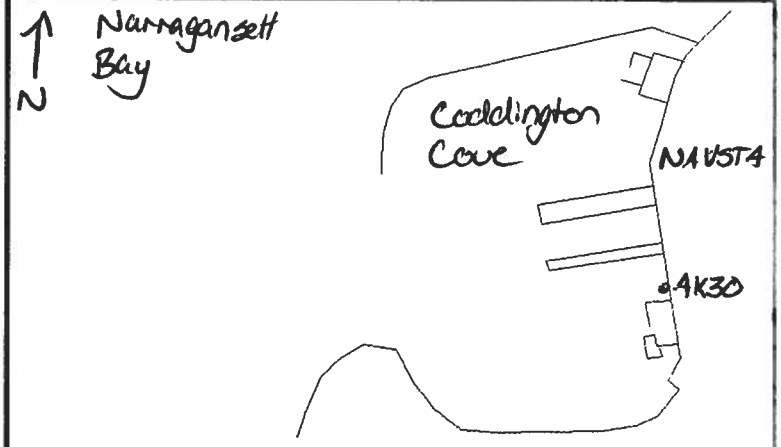
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100 Method: VibraCore Sample ID: DSY-SD-AK30-0012	0-12"	0-10	0-2" - SILT - some shell fragments - SILTY F-M SAND - trace shell fragments
Time: 1103 Method: VibraCore Sample ID: DSY-SD-AK30-1224	12-24"	10-20	- SILTY SAND (F-M)
Time: 1106 Method: VibraCore Sample ID: DSY-SD-AK30-2448	24-48"	20-40	(F-M) SAND Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

(MS/MSD Lab QC 2448) Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: A030
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth:

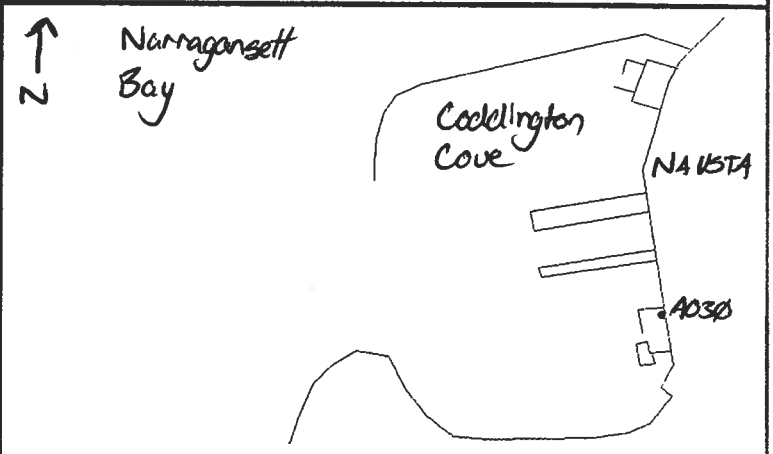
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0915 Method: VibraCore Sample ID: DSY-SD-A030-0012	0-12"	Black/ Grey 99%	0-2" SILT - some shell fragments - (F-M) SAND, some shell fragments
Time: 0918 Method: VibraCore Sample ID: DSY-SD-A030-1224	12-24"	Grey 99%	-(F-M) SAND- trace shell fragments
Time: 0921 Method: VibraCore Sample ID: DSY-SD-A030-2448	24-48"	Grey 99%	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AP20
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 27.5

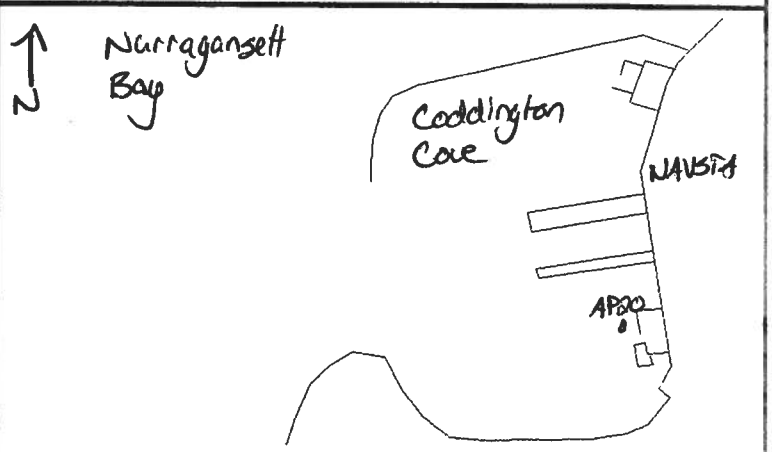
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1230 Method: VibraCore Sample ID: DSY-SD-AP20-0012	0-12	Black/ Grey 100%	SILT, trace F-sand & shell fragments
Time: 1233 Method: VibraCore Sample ID: DSY-SD-AP20-1224	12-24	Grey 100%	SILT, some fine sand
Time: 1236 Method: VibraCore Sample ID: DSY-SD-AP20-2448	24-48	Grey 100%	↓ Lab QC
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		~~YES~~ / NO	
Lead, ~~Copper, Zinc~~	4° C		~~YES~~ / NO	
TBT	4° C		~~YES~~ NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD 24-48

Duplicate ID No.: N1

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AT16
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 27.7

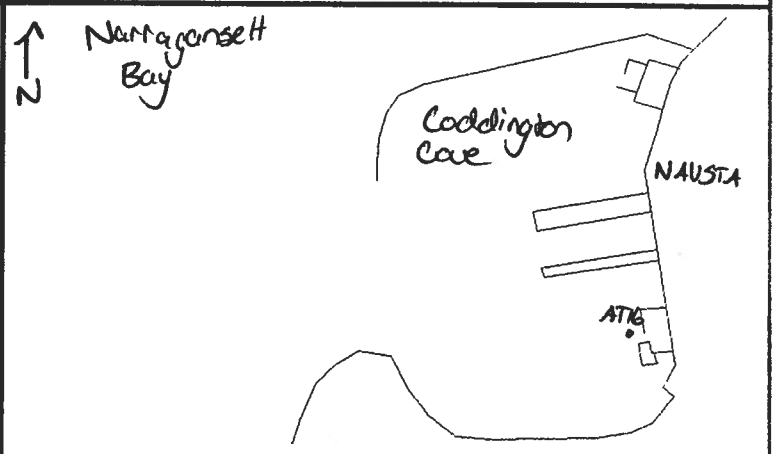
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215 Method: VibraCore Sample ID: DSY-SD-AT16-0012	0-12"	Grey / Black 100%	SILT, trace F-sand & Shell Frags
Time: 1218 Method: VibraCore Sample ID: DSY-SD-AT16-1224	12-24"	Grey 100%	SILT, some F-sand
Time: 1221 Method: VibraCore Sample ID: DSY-SD-AT16-2448	24-48"	Grey 100%	↓ DUP06
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		~~YES~~ / NO	
PAHs	4° C		~~YES~~ / NO	
Lead, ~~Copper, Zinc~~	4° C		~~YES~~ / NO	
TBT	4° C		~~YES~~ NO	
Asbestos	4° C		YES ~~NO~~	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	AT16 → DUP06 2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AT 20
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4/4 Water Depth: 26.7

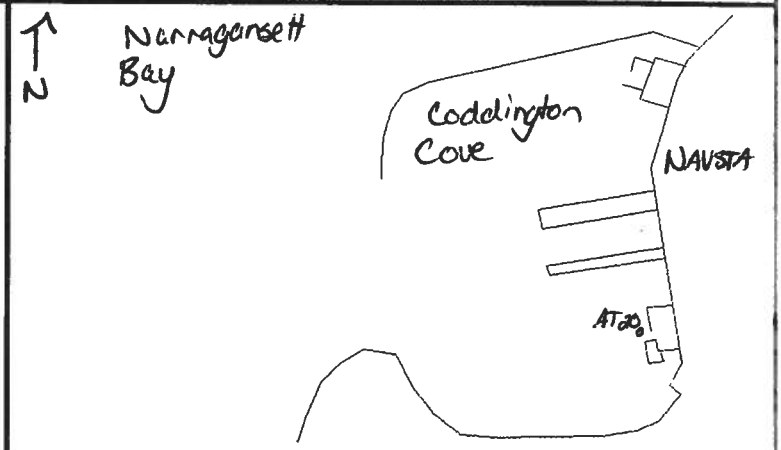
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200 Method: Vibra Core Sample ID: DSY-SD-AT20-0012	0-12"	Black/ Grey	SILT - Trace F-Sand & shell fragments
Time: 1203 Method: Vibre Core Sample ID: DSY-SD-AT20-1224	12-24"	Grey	SILT - some F-sand
Time: 1206 Method: Vibra Core Sample ID: DSY-SD-AT20-2448	24-48"	Grey	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AT24
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 3.9'/4 Water Depth:

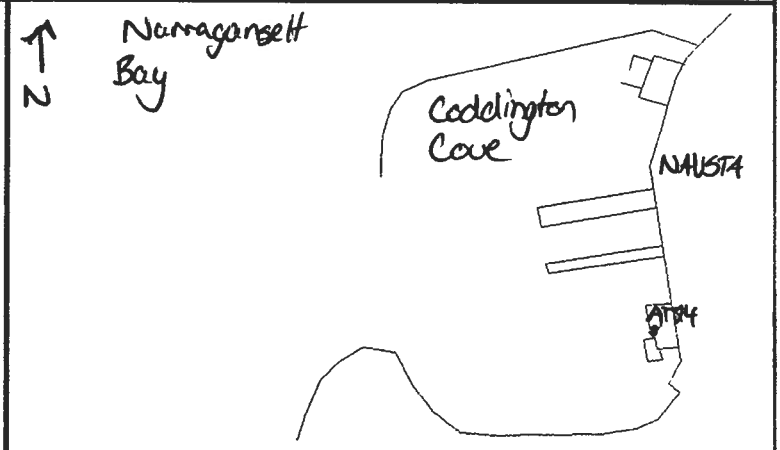
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1400 Method: Vibra Core Sample ID: DSY-SD-AT24-0012	0-12"	Grey Black 99%	SILT - Trace F-sand & Shell Frags DUP07
Time: 1403 Method: Vibra Core Sample ID: DSY-SD-AT24-1224	12-24"	Grey 99%	SILT - Some fine sand some shell frags
Time: 1406 Method: Vibra Core Sample ID: DSY-SD-AT24-2448	24-48"	Grey 99%	SILT - Some fine sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		~~YES~~ / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DUP07 AT24-0012

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AT30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 2
Total Recovery: 3/4 Water Depth: 12.1

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0855 Method: VibraCore Sample ID: DSY-SD-AT30-0012	0-12"	Black/Grey 0-9"	0-2" SILT w/ Shell fragments -(F-M) SAND - some shells
Time: 0858 Method: VibreCore Sample ID: DSY-SD-AT30-1224	12-24"	Grey 9-18"	-(F-M) SAND - trace shells
Time: 0901 Method: VibreCore Sample ID: DSY-SD-AT30-2448	24-48	Grey 18-36"	↓
Time: Method: Sample ID:			

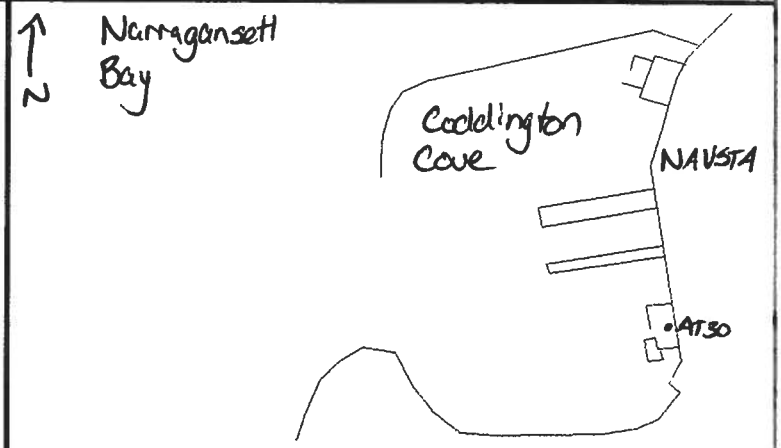
DUP08

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: AT30-1224 DUP08

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AxOC
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 3.9/4 Water Depth: 28

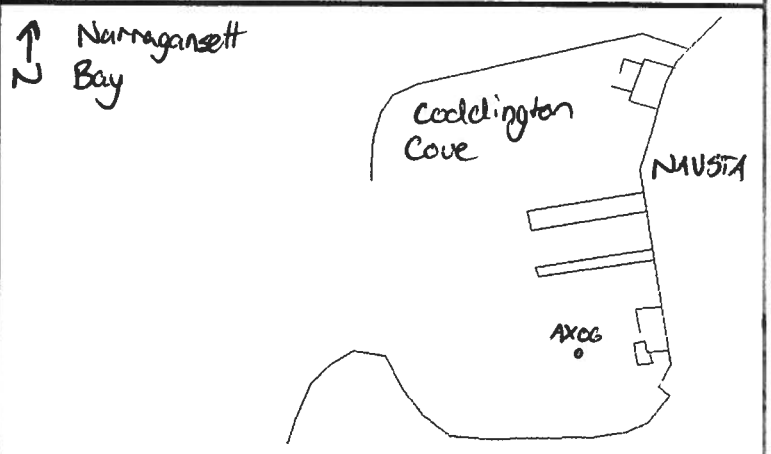
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045 Method: VibraCore Sample ID: DSY-SD-AX06-0012	0-12"	Black Grey 99%	SILT, some fine sand & trace shell fragments
Time: 1048 Method: VibraCore Sample ID: DSY-SD-AX06-1224	12-24"	Grey 99%	SANDY SILT - trace shell frags ↓
Time: 1051 Method: VibraCore Sample ID: DSY-SD-AX06-2448	24-48"	Grey 99%	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AX20
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 3.84 Water Depth:

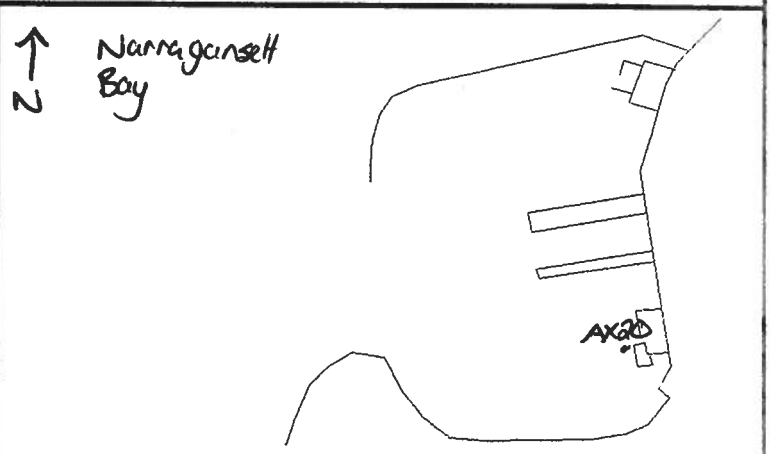
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1340 Method: VibraCore Sample ID: DSY-SD-AX20-0012	0-12"	Grey/ Black 99%	SILT - trace fine sand
Time: 1343 Method: VibraCore Sample ID: DSY-SD-AX20-1224	12-24"	Grey 99%	SILT-some fine sand
Time: 1346 Method: VibraCore Sample ID: DSY-SD-AX20-2448	24-48"	Grey 99%	SILT-some fine sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: AY30
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/23/11 Attempts: 3
Total Recovery: 35/4 Water Depth: 16.7

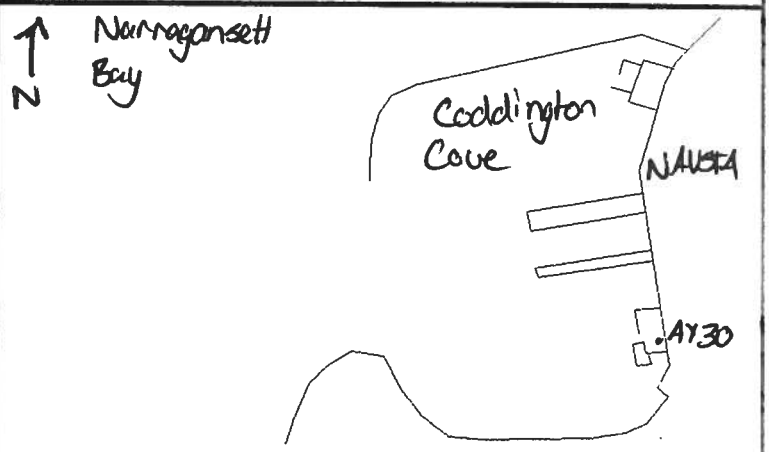
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825 Method: VibraCore Sample ID: DSY-SD-AY30-0012	0-12"	0-10"	SILT 0-2" (F-M) SAND - Trace Shell Fragments Lab QC
Time: 0828 Method: VibraCore Sample ID: DSY-SD-AY30-1224	12-24"	10-20"	(F-M) SAND
Time: 0831 Method: VibraCore Sample ID: DSY-SD-AY30-2448	24-48"	20 40"	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES NO	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD 0-12"

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BB02
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4/4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0940 Method: VibraCore Sample ID: DSY-SD-BB02-0012	0-12"	Grey Black 100%	Silt w/ some (F) sand trace shells
Time: 0943 Method: VibraCore Sample ID: DSY-SD-BB02-~~2244~~ 1224	12-24"	Grey Black 100%	Silty (F) Sand
Time: 0946 Method: VibraCore Sample ID: DSY-SD-BB02-2448	24-48"	Grey 100%	↓
Time: Method: Sample ID:			

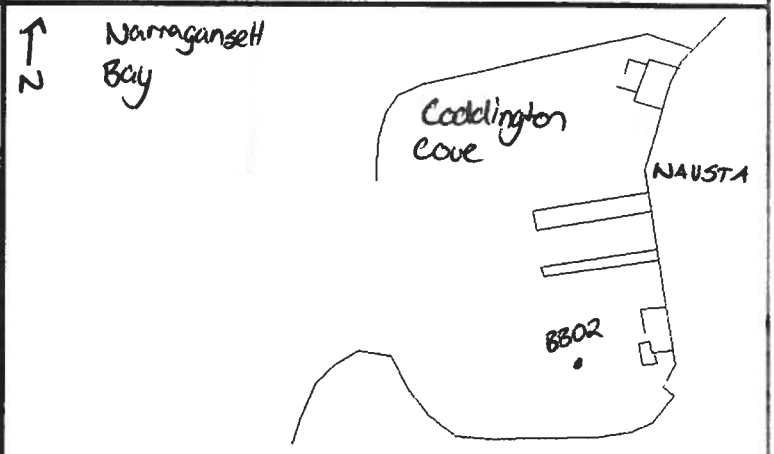
DUP 04

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-2" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DUP 04 BB02-2448

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BF06
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4/4 Water Depth: 27.5

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000 Method: VibraCore Sample ID: DSY-SD-BF06-0012	0-12"	Grey Black 100%	SILT w/ some fine sand & trace shell fragments
Time: 1003 Method: VibraCore Sample ID: DSY-SD-BF06-1224	12-24"	Grey 100%	Sandy silt with F sand, trace shell fragments
Time: 1006 Method: VibraCore Sample ID: DSY-SD-BF06-2448	24-48"	Grey 100%	↓
Time: Method: Sample ID:			

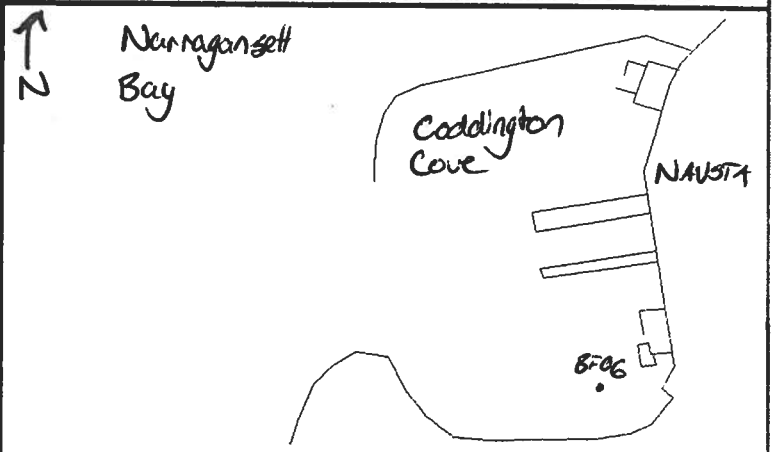
Lab QC

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES NO	
PAHs	4° C		YES / NO	
Lead, ~~Copper, Zinc~~	4° C		YES / NO	
TBT	4° C		YES NO	
Asbestos	4° C		YES NO	
TOC	4°C		Yes	0-12 only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD 24-48"
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BB06
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4/4 Water Depth: 27.4

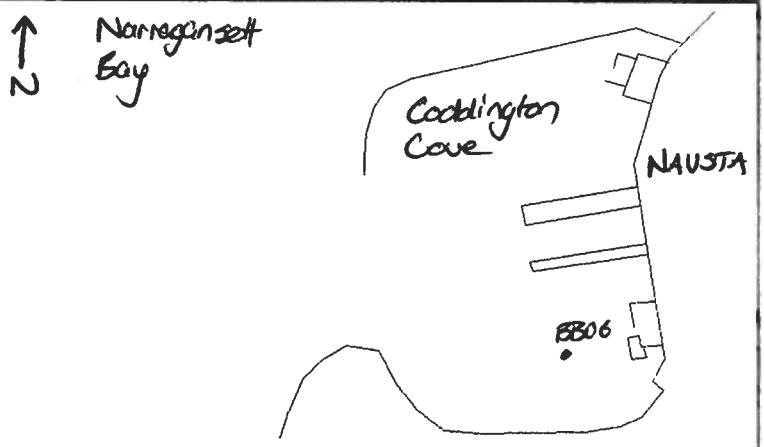
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1120 Method: Vibra Core Sample ID: DSY-SD-BB06-0012	0-12"	Black/ Grey 100%	Silt with some fine sand, trace shell fragments
Time: 1123 Method: Vibra Core Sample ID: DSY-SD-BB06-1224	12-24"	Grey 100%	Silt with much fine sand
Time: 1126 Method: Vibra Core Sample ID: DSY-SD-BB06-2448	24-48"	Grey 100%	↓
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BB10
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth: 26.8

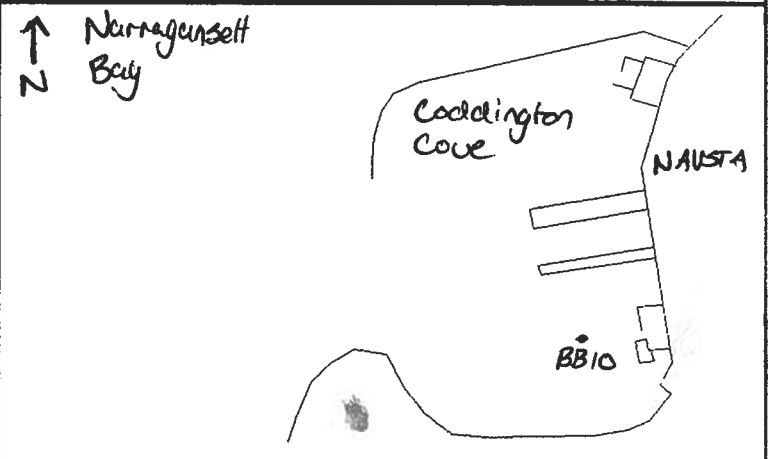
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105 Method: VibraCore Sample ID: DSY-SD-BB10-0012	0-12"	Black/ Grey 100%	Silt w/ some fine sand, trace shell fragments
Time: 1108 Method: VibraCore Sample ID: DSY-SD-BB10-1224	12-24"	Grey 100%	SANDY SILT (Fine Sand
Time: 1111 Method: VibraCore Sample ID: DSY-SD-BB10-2448	24-48	Grey 100%	SANDY SILT (Fine Sand) DUP05
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, ~~Copper, Zinc~~	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: DUP05 BB10-2448
NA	

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BB26
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 1
Total Recovery: 3.85/4 Water Depth:

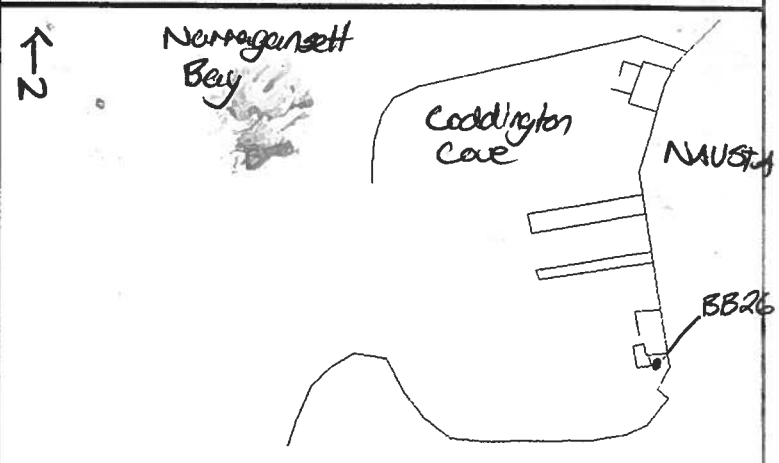
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0855 Method: VibraCore Sample ID: DSY-SD-BB26-0012	0-12"	Black 100%	Black silt w/ trace (f) sand and some shell hash
Time: 0857 Method: VibraCore Sample ID: DSY-SD-BB26-1224	12-24"	Black 100%	"
Time: 0900 Method: VibraCore Sample ID: DSY-SD-BB26-2448	24-48" (24-46")	Black 97-99%	"
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
TOC	4°C		Yes	0-12 only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: ~~DSY-SD-BB26-0012~~ NO

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BC28
Sampled By: MH
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 1
Total Recovery: 4/4 Water Depth:

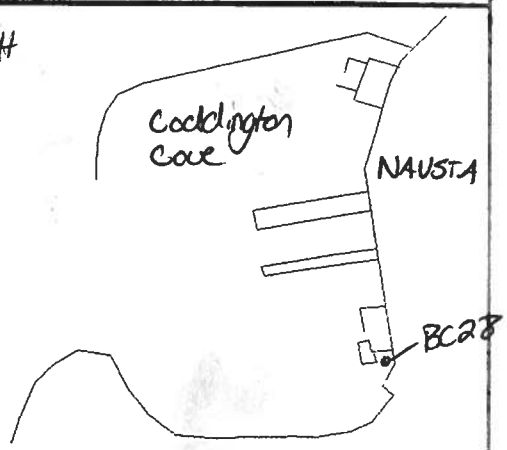
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0926 Method: VibraCore Sample ID: DSY-SD-BC28-0012	0-12"	Black	Silt w/ trace F sand & some shell hash
Time: 0923 Method: VibraCore Sample ID: DSY-SD-BC28-1224	12-24	Grey/Black	Silt w/ some fine sand and trace shell hash
Time: 0926 Method: VibraCore Sample ID: DSY-SD-BC28-2448	24-48	Grey	SAND (F-M)
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: N.A

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BC30
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 4
Total Recovery: 2.4 / Water Depth:

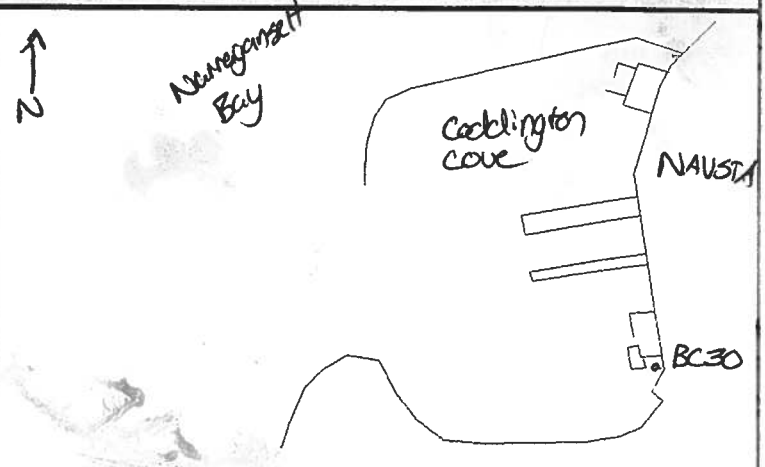
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015 Method: Vibre Core Sample ID: DSY-SD-BC30-0012	0-12	Black 7"	Silt trace (F Sand) some shell hash
Time: 1018 Method: Vibre Core Sample ID: DSY-SD-BC30-1224	12-24	Black Grey 7"	Silt some (+) sand trace shell hash - vegetation layer at bottom Sheen
Time: 1021 Method: Vibre Core Sample ID: DSY-SD-BC30-2448	24-48	Grey Black 14	Silty Sand (F) Sheen
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BD26
Sampled By: MH KC
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050 Method: Vibracore Sample ID: DSY-SD-BD26-0012	~~0-1~~ 0-12	Black 100%	Silt with trace fine sand & shell fragments
Time: 1053 Method: VibraCore Sample ID: DSY-SD-BD26-1224	~~1-2~~ 12-24	Black/Grey	Silt w/ some fine sand & trace shell fragments
Time: 1056 Method: VibraCore Sample ID: DSY-SD-BD26-2448	~~2-4~~ 24-48	Grey Black	- top 8" silt w/ some fine sand - Bottom (F-M) SAND
Time: Method: Sample ID:			

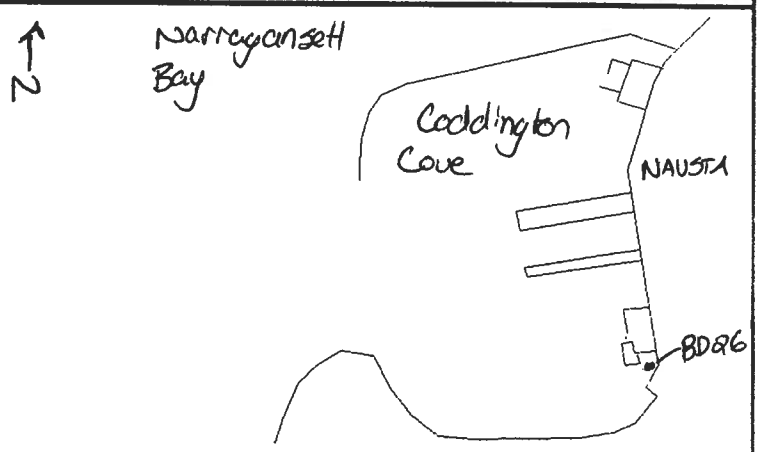
DUP01

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES NO	
PAHs	4° C		YES NO	
Lead, Copper, Zinc	4° C		YES NO	
TBT	4° C		YES NO	
Asbestos	4° C		YES NO	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: Yes
NA	BD26-0-12

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BE28
Sampled By: M. Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 1
Total Recovery: 3.1 / 4 Water Depth: 17.2

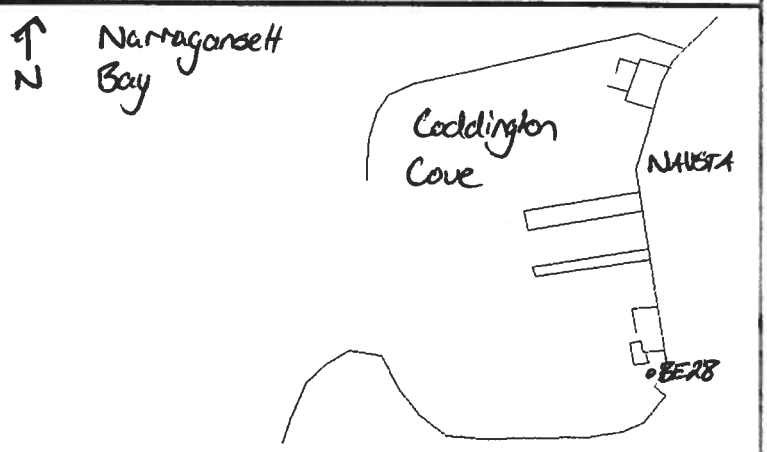
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1450 Method: VibraCore Sample ID: DSY-SD-BE28-0012	0-12"	Black	SILT, trace fine sand
Time: 1453 Method: VibreCore Sample ID: DSY-SD-BE28-1224	12-24"	Black / Grey	SILT on top F-M Sand
Time: 1456 Method: VibreCore Sample ID: DSY-SD-BE28-2448	24-48"	Grey	F-M Sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BE 30
Sampled By: MH KC
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 4
Total Recovery: 2.8' 3.5 Water Depth:

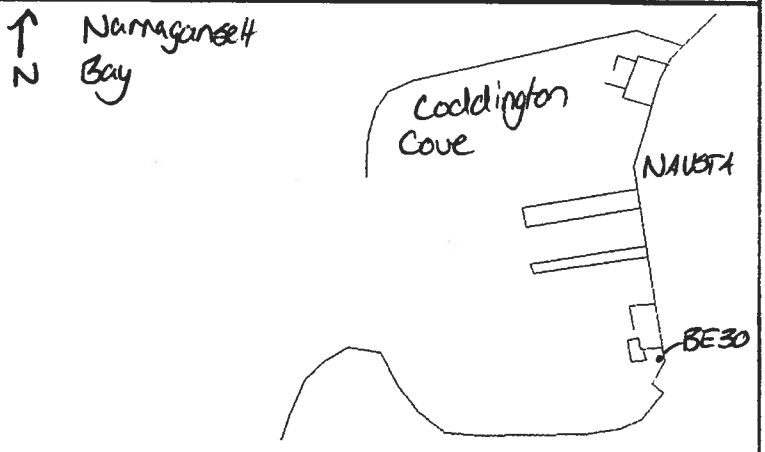
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1445 Method: VibraCore Sample ID: DSY-SD-BE30-0012	0-12	Black 0-7.5"	SILT w/ some fine sand and shell hash
Time: 1448 Method: VibraCore Sample ID: DSY-SD-BE30-1224	12-24	Black/Grey 7.5-15"	(F-M) Sand w some silt
Time: 1451 Method: VibraCore Sample ID: DSY-SD-BE30-2448	24-48	Grey 15-30"	(F-M) SAND - trace coarse sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) NO	
Lead, Copper, Zinc	4° C		(YES) NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: N4
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BF23
Sampled By: M Horton
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/22/11 Attempts: 2
Total Recovery: 3'/4' Water Depth: 18.2

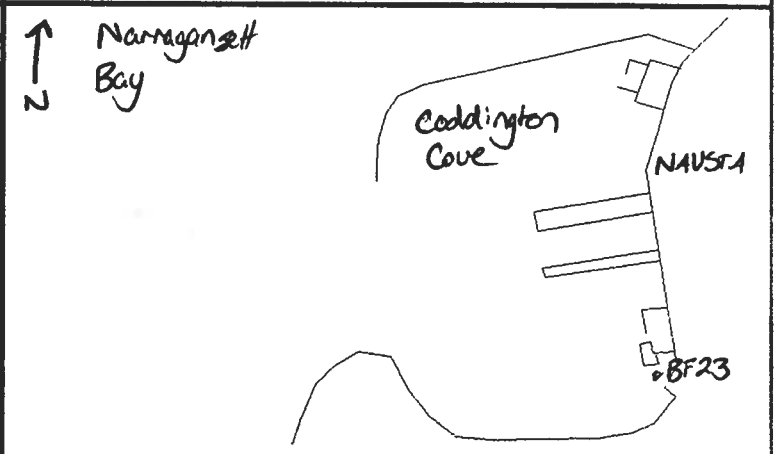
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1420 Method: Vibra Core Sample ID: DSY-SD-BF23-0012	0-12"	Black/ Grey 0-~~8~~ 9"	SILT-some (F-M) sand and shell fragments
Time: 1423 Method: VibraCore Sample ID: DSY-SD-BF23-1224	12-24"	Grey ~~8-16~~ 9-18"	(F-M) SAND
Time: 1426 Method: VibraCore Sample ID: DSY-SD-BF23-2448	24-48"	Grey 18-36"	(F-M) Sand-trace coarse sand
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		YES	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BG26
Sampled By: M. Horton
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[x] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 3
Total Recovery: 3 0/4 Water Depth:

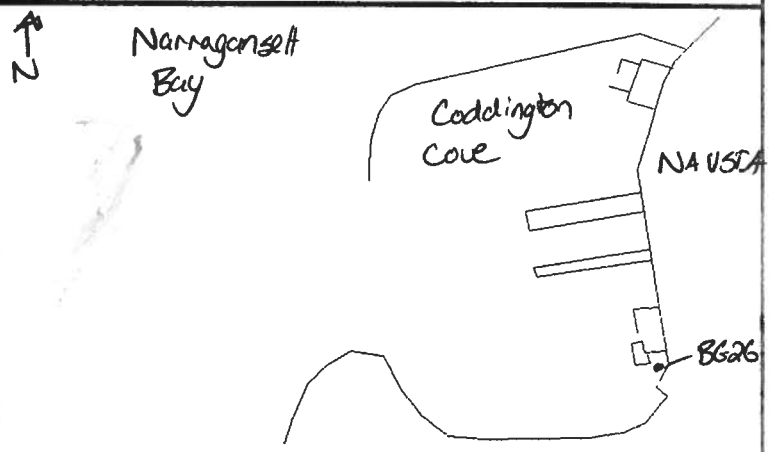
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215 Method: VibraCore Sample ID: DSY-SD-BG26-0012	0-12	Black 0-9	-Silt - trace(F) sand and shells
Time: 1218 Method: VibraCore Sample ID: DSY-SD-BG26-1224	12-24	Grey Black 9-18	-Sand w/ some silt trace shells
Time: 1221 Method: VibraCore Sample ID: DSY-SD-BG26-2448	24-48	Grey 18-36	-(F-M) SAND - trace shells
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BG28
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 1
Total Recovery: 4 / 4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1320 Method: VibraCore Sample ID: DSY-SD-BG28-0012	0-12	GRay 100%	SAND (F-M) some silt (top) trace shells
Time: 1323 Method: VibraCore Sample ID: DSY-SD-BG28-1224	12-24	Grey 100%	SAND (F-M)
Time: 1326 Method: VibraCore Sample ID: DSY-SD-BG28-2448	24-48	Grey 100%	SAND (F-M) trace coarse sand
Time: Method: Sample ID:			

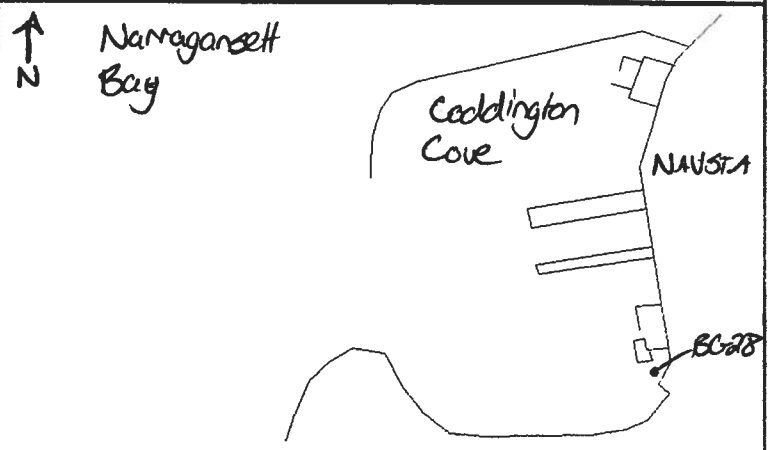
Lab QC

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD
0-12"

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BI 26
Sampled By: MH KC
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 2
Total Recovery: 3/4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1405 Method: Vibra Core Sample ID: DSY-SD-BI26-0012	0-12	0-9	SILT w/ some fine sand and shell hash
Time: 1408 Method: VibraCore Sample ID: DSY-SD-BI26-1224	12-24	9-18	(F-M) SAND : some silt
Time: 1411 Method: VibraCore Sample ID: DSY-SD-BI26-2448	24-48	18-36	(F-M) SAND - some coarse sand
Time: Method: Sample ID:			

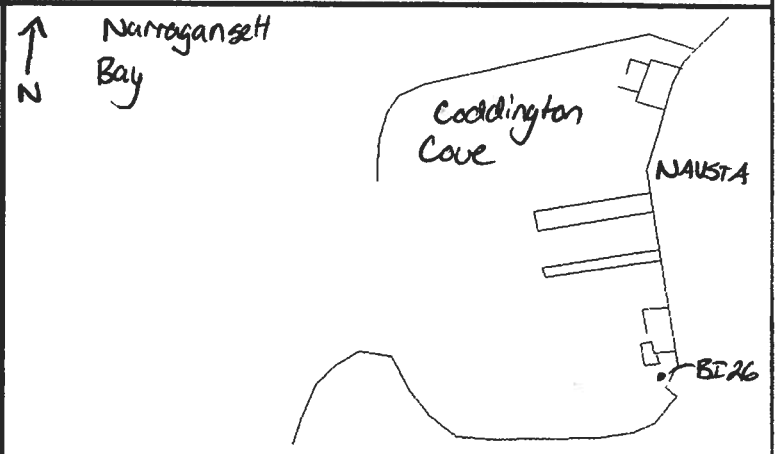
DUP03

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) / NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) / NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: YES BI26 12-24

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: BJ23
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/21/11 Attempts: 1
Total Recovery: 36/4 Water Depth:

SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1255 Method: VibraCore Sample ID: DSY-SD-BJ23-0012	0-12	Grey 10.5"	Silty F-M sand, trace shell fragments
Time: 1258 Method: VibraCore Sample ID: DSY-SD-BJ23-1224	12-24	Grey 10.5"	(F-M) SAND
Time: 1301 Method: VibraCore Sample ID: DSY-SD-BJ-2448	24-48	Grey 21"	(F-C) SAND with some shell frag ments DUP02
Time: Method: Sample ID:			

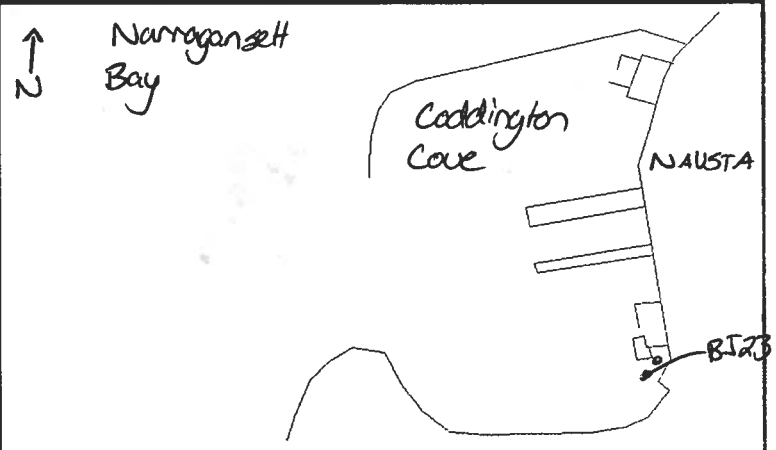
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		(YES) NO	
PAHs	4° C		(YES) / NO	
Lead, Copper, Zinc	4° C		(YES) / NO	
TBT	4° C		(YES) NO	
Asbestos	4° C		YES / (NO)	
TOC	4°C		Yes	0-12" only

OBSERVATIONS / NOTES:

- Mistake in SAP it is on WS#18 as BJ 22

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: Yes
NA	BJ23-24-48

Signature(s):

A3 FIELD LOGS SHEETS GEOPHYSICAL CORES

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP01
Sampled By: C. Ferullo
C.O.C. No.: ___

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

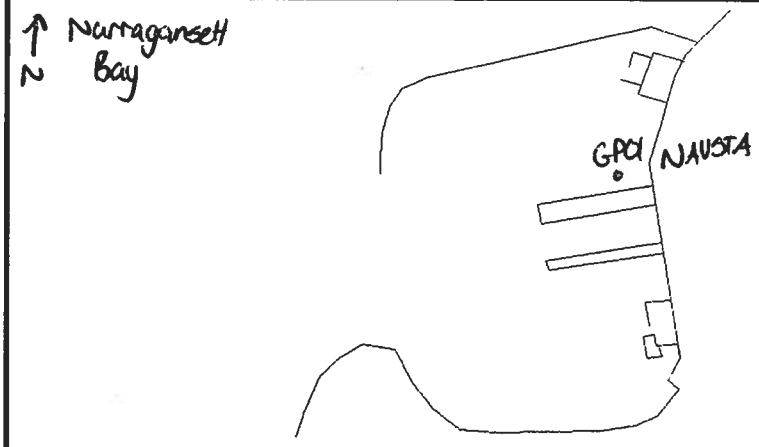
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1530 Method: Gravity Core Sample ID: DSY-SD-GP01-0012	0-12	—	—
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):
Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP02
Sampled By: C. Ferdik
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

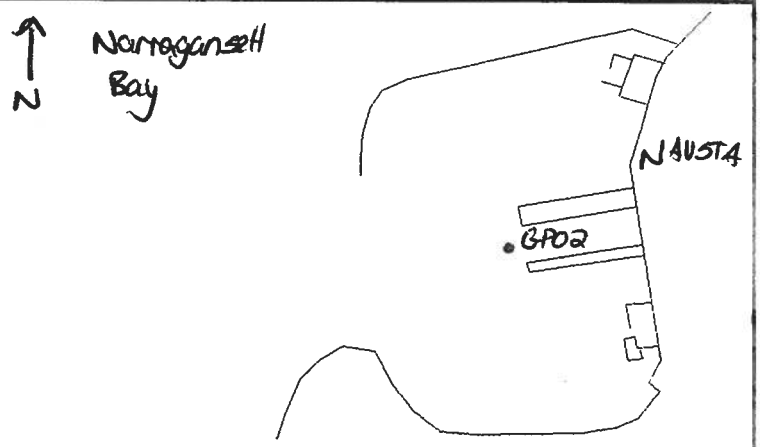
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1440 Method: Gravity Core Sample ID: DSY-SD-GP02-0012	0-12"	—	Lab QC
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.: NA

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP03
Sampled By: C. Ferdik
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

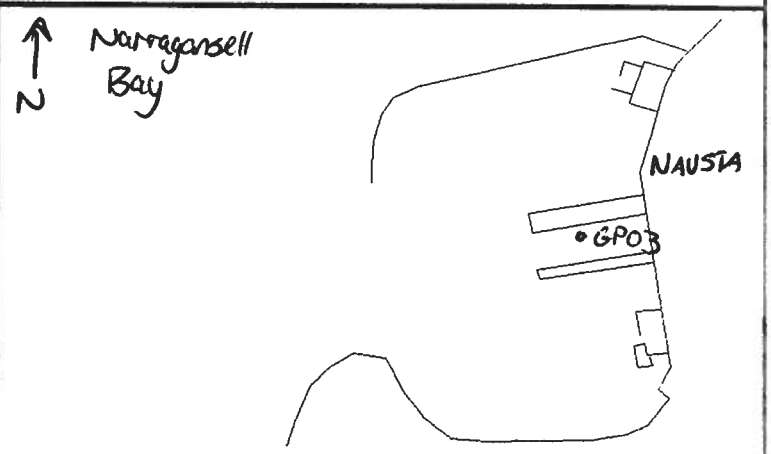
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1400 Method: Gravity Core Sample ID: DSY-SD-GP03-0012	0-12	—	DUP12
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SD-DUP12-092711
GP03

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP04
Sampled By: C. Ferolik
C.O.C. No.: ___

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

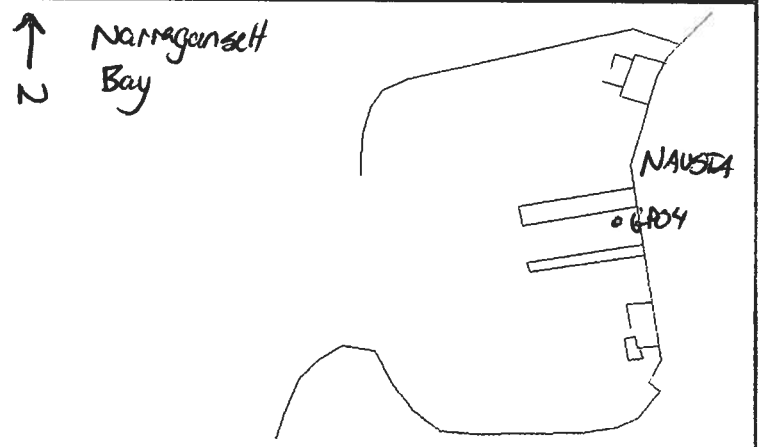
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1340 Method: Gravity Core Sample ID: DSV-SD-GP04-0012	0-12"	—	
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP05
Sampled By: C. Ferdik
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: 1
Total Recovery: 1 Water Depth: _____

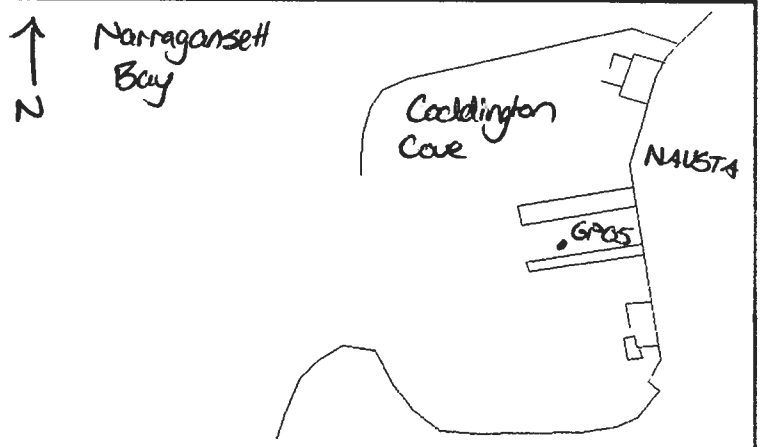
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1300 Method: Gravity Core Sample ID: DSY-SD-GP05-0006	0-12"		
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size			Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP06
Sampled By: C. Ferdik
C.O.C. No.: ___

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: 1 Water Depth: —

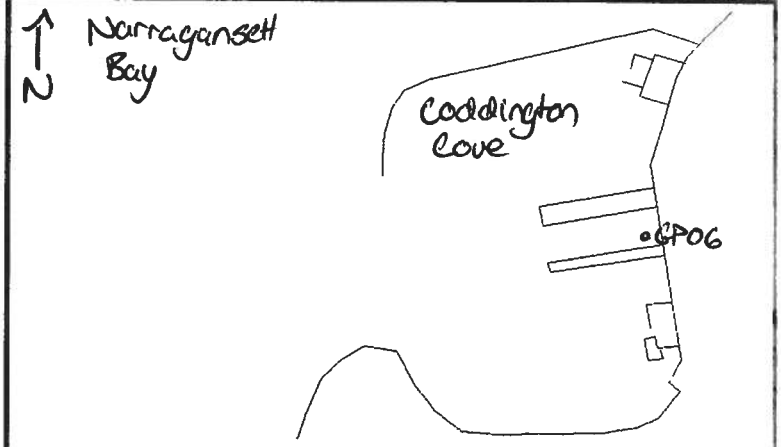
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220 Method: Gravity Core Sample ID: DSY-SD-GP06-0012	0-12"	—	—
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP07
Sampled By: C. Ferdik
C.O.C. No.: ____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ____
[ ] QA Sample Type: ____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

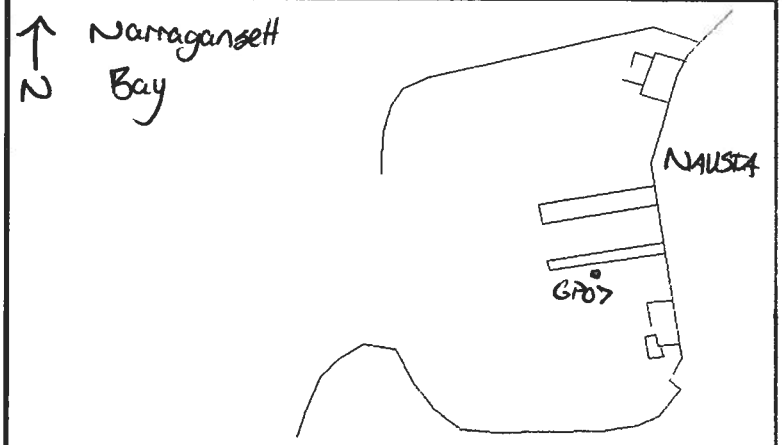
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130 Method: Gravity Core Sample ID: DSY-SD-GP07-0012	0-12"	—	—
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size	4°C		Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: NA

Signature(s): Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP08
Sampled By: C. Ferdik
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — 1 Water Depth: —

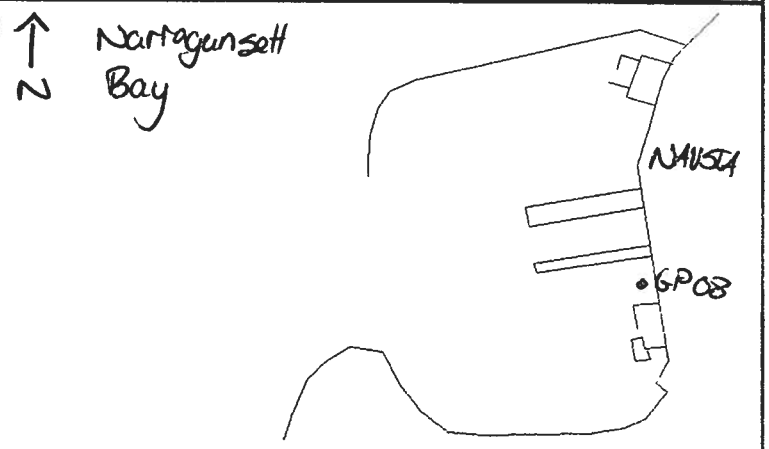
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050 Method: Gravity Core Sample ID: DSY-SD-GP08-0012	0-12"		
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size			Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD N4

Duplicate ID No.: N4

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: ~~DSY-SD GP08~~ GP09
Sampled By: C. Ferdik
C.O.C. No.: _____

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: _____
[ ] QA Sample Type: _____

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: —
Total Recovery: — Water Depth: —

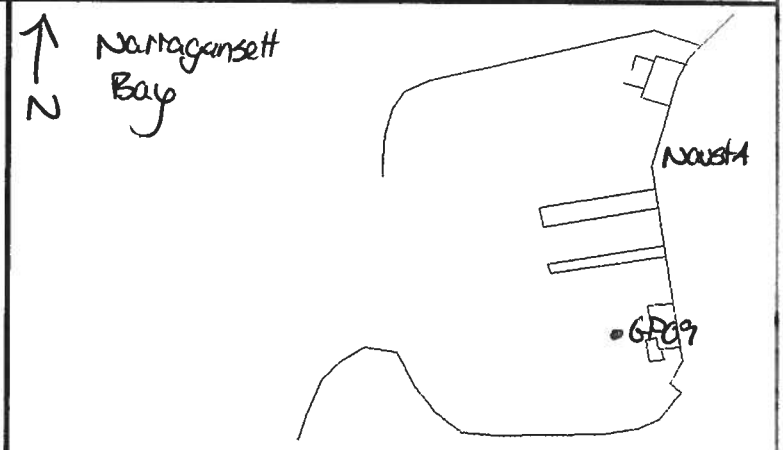
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000 Method: Gravity Core Sample ID: DSY-SD-GP09-0012	0-12"		
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size			Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard Offshore
Project No.: 112G02747

Sample ID No.: NA (see below)
Sample Location: GP10
Sampled By: C. Ferdik
C.O.C. No.: ___

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Core Date: 9/27/11 Attempts: ~
Total Recovery: ~1 Water Depth: ~

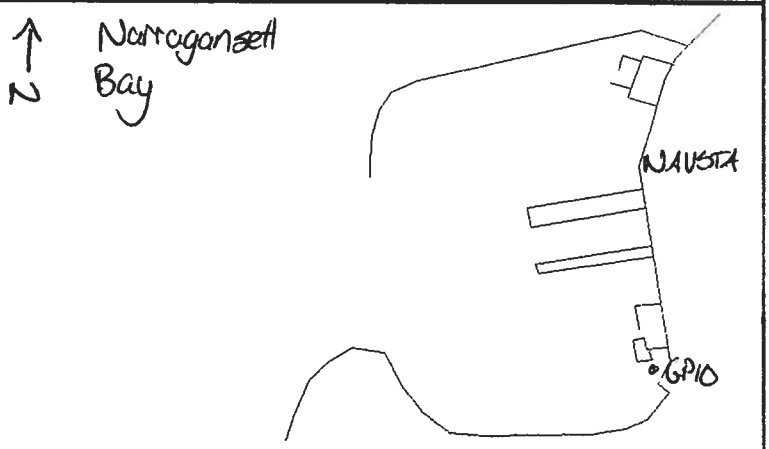
SAMPLES	Depth Interval	Color / Recovery	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0900 Method: Gravity Core Sample ID: DSY-SD-GP10-0012	0-12"	~	~
Time: Method: Sample ID:			
Time: Method: Sample ID:			
Time: Method: Sample ID:			

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C		YES / NO	
PAHs	4° C		YES / NO	
Lead, Copper, Zinc	4° C		YES / NO	
TBT	4° C		YES / NO	
Asbestos	4° C		YES / NO	
Grain Size			YES	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD
NA

Duplicate ID No.: NA

Signature(s):

DERECKTOR SHIPYARD OFFSHORE SUPPLEMENTAL SEDIMENT INVESTIGATION
RADIOISOTOPE CORE SAMPLE SELECTION

CORE LOCATION	CORE COLLECTION DATE	CORE PROCESSING DATE	TOTAL LENGTH (ft)	BEDDING		SAMPLE INTERVALS (in)	SAMPLE JUSTIFICATION	SAMPLE TIME
GP01	9/27/2011	10/11/2011	3.6	0-0.2	dark silt layer	1-2	top layer (center)	1100
				0.2-0.85	grey F-Sand	3-4	top of second layer	1103
				0.85-1.2	SAA	8-9	bottom of second layer	1106
				1.2+	smeared, could not see bedding	11-12	top of third layer	1109
						13-14	bottom of third layer	1111
						15-16	top of fourth layer	1114
						22-23	middle of bottom layer	1117
						27-28	bottom	1120
GP02	9/27/2011	10/11/2011	1.7	NO OBSERVABLE BEDDING		1-2	top	1130
						7-8	middle	1133
						11-12	middle	1136
						17-18	bottom	1139
GP03	9/27/2011	10/11/2011	2.1	0-1.7	dark silt layer	1-2	top	1200
				1.7+	F-Sand	9-10	middle of silt	1203
						17-18	bottom of silt	1206
						21-22	middle of sand layer	1209
GP04	9/27/2011	10/11/2011	1.9	NO OBSERVABLE BEDDING		1-2	top	1300
						7-8	middle	1303
						14-15	middle	1306
						21-22	bottom	1309
GP05	9/27/2011	10/14/2011	2.3	NO OBSERVABLE BEDDIN		1-2	top	0730
						8-9	middle	0733
						15-16	middle	0736
						23-24	bottom	0739
GP06	9/27/2011	10/14/2011	2.3	NO OBSERVABLE BEDDING		1-2	top	0900
						8-9	middle	0903
						15-16	middle	0906
						23-24	bottom	0909

DERECKTOR SHIPYARD OFFSHORE SUPPLEMENTAL SEDIMENT INVESTIGATION
RADIOISOTOPE CORE SAMPLE SELECTION

CORE LOCATION	CORE COLLECTION DATE	CORE PROCESSING DATE	TOTAL LENGTH (ft)	BEDDING		SAMPLE INTERVALS (in)	SAMPLE JUSTIFICATION	SAMPLE TIME
GP07	9/27/2011	10/14/2011	2.3	NO OBSERVABLE BEDDING		1-2	top	0920
						8-9	middle	0923
						15-16	middle	0926
						23-24	bottom	0929
GP08	9/27/2011	10/14/2011	2.2	0-1.6	silt	1-2	top of top layer	0940
				1.6-1.9	sandy silt	6-7	middle of top layer	0943
				1.9-2.2	sandy silt	11-12	middle of top layer	0946
						16-17	bottom of top layer	0949
						20-21	center of second layer	0952
						23-24	center of third layer	0955
GP09	9/27/2011	10/14/2011	2.6	NO OBSERVABLE BEDDING		1-2	top	1015
						5-6	middle	1018
						15-16	middle	1021
						20-21	middle	1024
						26-27	bottom	1027
GP10	9/27/2011	10/14/2011	2.4	0-0.2	silt	1-2	silt layer	1040
				0.2+	F-Sand	3-4	top of sand	1043
						8-9	middle of sand layer	1046
						11-12	middle of sand layer	1049
						16-17	middle of sand layer	1052
						21-22	middle of sand layer	1055
						26-27	bottom of sand layer	1058

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE ____ OF ____

CLIENT	JOB NUMBER
US NAVY	112G02747
SUBJECT: Derickson SY sediment Radioisotope sampling	
BASED ON	DRAWING NUMBER
BY: M. Horton / CHECKED BY / APPROVED BY	DATE: 10/11/11 & 10/14/11

CORE LOCATION	TOTAL LENGTH	SAMPLE INTERVALS & TIMES	
10/11/11 GP01	3.6' - 0-2" Dark Silt layer 0.2-0.85 Grey F-sand 0.85-1.2 SAA 1.2+ Smeared could Not see bedding	1-2 Top layer	1100
		3-4 top of second layer	1103
		8-9 bot. of second layer	1106
		11-12 top of third layer	1109
		13-14 bot. third layer	1112
		15-16 top of Fourth layer	1114
		22-23 middle of bottom	1117
		27-28 bottom	1120
10/11/11 GP02	1.7 - No observable layers	1-2 top	1130
		7-8 middle	1133
		11-12 middle	1136
		17-18 bottom	1139
10/11/11 GP03	2.1' - 0-1.7 No observable layers - silty stuff 1.7+ F sand	1-2 top	1200
		9-10 middle of silt	1203
		17-18 bot. of silt	1206
		21-22 sand layer	1209
10/11/11 GP04	1.9 - NO observable layers	1-2 top	1300
		7-8 middle	1303
		14-15 middle	1306
		~~22~~ 21-22 bottom	1309
10/14/11 GP05	2.3 - No observable layers	1-2 Top	0736
		8-9 middle	0733
		15-16 middle	0736
		23-24 bottom	0739
10/14/11 GP06	2.3 - No observable layers	1-2 top	0900
		8-9 middle	0903
		15-16 middle	0906
		23-24 bottom	0909

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

GP07 — 2.3' - No observable bedding

1-2	top	0920
8-9	middle	0923
15-16	middle	0926
23-24	bottom	0929

GP08 — 2.2 - 0-1.6 - Silt
1.6-1.9 - Sandy Silt
1.9-2.2 - Sandy Silt

1-2	top of top layer	0940
11-12	middle of top layer	0943
16-17	bottom of top layer	0946
20-21	center of 2nd layer	0949
23-24	center of 3rd layer	095
6-7	middle of top layer	095

GP09 — ~~2.8~~ 2.6 - No observable layers

1-2	top	1015
5-6	middle	1018
15-16	middle	1021
20-21	middle	1024
26 27	bottom	1027

GP10 — 2.4 - 0-0.2 - silt layer
0.2 + sand layer

1-2	silt layer	1040
3-4	top of sand	1043
8-9	middle	1046
11-12	↓	~~1052~~ 1049
16-17	↓	~~1055~~ 105
21-22	↓	~~1058~~ 105
26-27	bottom	~~1101~~ 105

A4 FIELD LOGS SHEETS SURFACE WATER

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP01-090111
Sample Location: GP01
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0920								
Depth: 35	colorless	NA						
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

- Total Depth 38'
- WP 82
- NO field screening conducted because SW samples only collected and analyzed for TSS to assist in interpretation of APCP Data

MAP:

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP02-090111
Sample Location: GP02
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1120								
Depth: 40	Colorless	NA						→
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

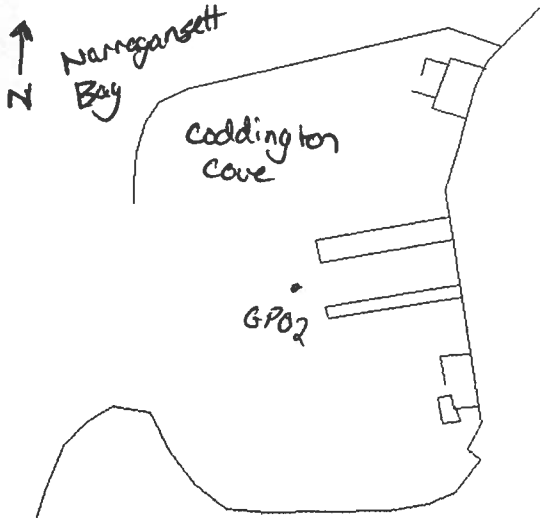
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

Total Depth 43'

"No field screening conducted because SW samples were only collected to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP03-090111
Sample Location: GP03
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1200	Colorless	NA						
Depth: 36								
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

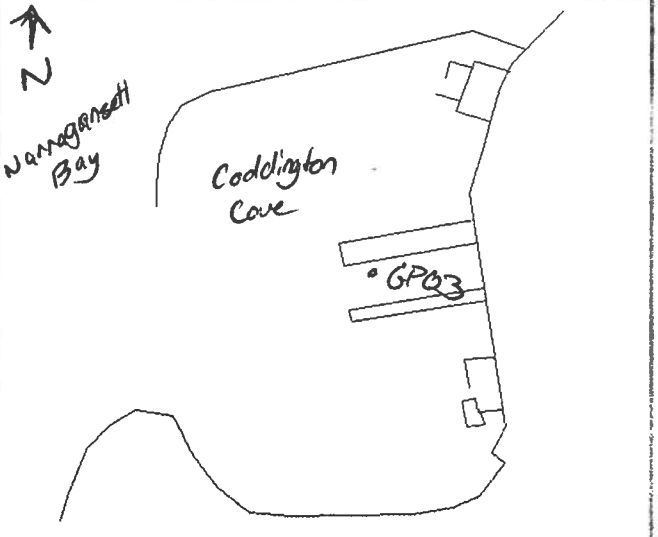
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

Total Depth 34'

- No wave info from this location
- No field screening conducted because SW samples were only collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

MH

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP04-090111
Sample Location: GP04
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1150	Colorless	NA →						
Depth: 36								
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (NO)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (NO)
SVOC's	4° C	2 - 1L Ambers	Yes / (NO)
Pesticides	4° C	2 - 1L Ambers	Yes / (NO)
PCB's	4° C	2 - 950mL glass jar	Yes / (NO)
Cyanide	NaOH	1 - 250mL poly	Yes / (NO)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (NO)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

Total Depth 39

- No field screening conducted because SW samples were only collected for TSS analysis to assist in interpretation of ADCP data

MAP:

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW GP05-090111
Sample Location: GP05
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1210								
Depth: 39	colorless	NA						
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

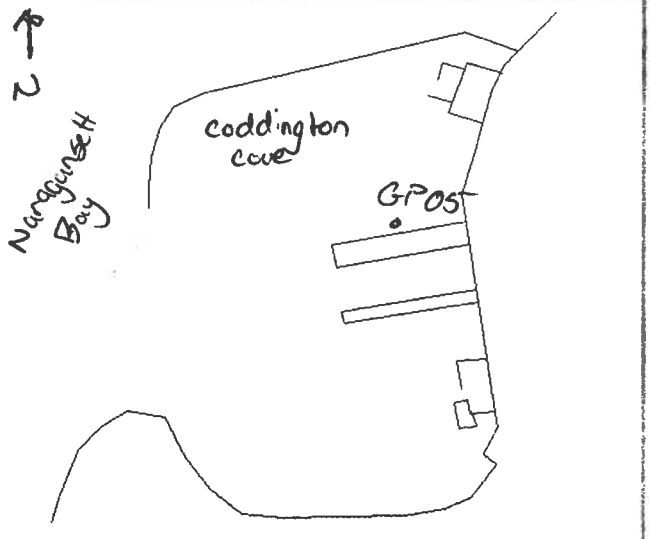
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

Total Depth 42'

- NO field screening conducted because SW is only being collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP06-090111
Sample Location: GP06
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11 Time: 1105 Depth: 35 Method: Kemmerer	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						

SAMPLE COLLECTION INFORMATION:

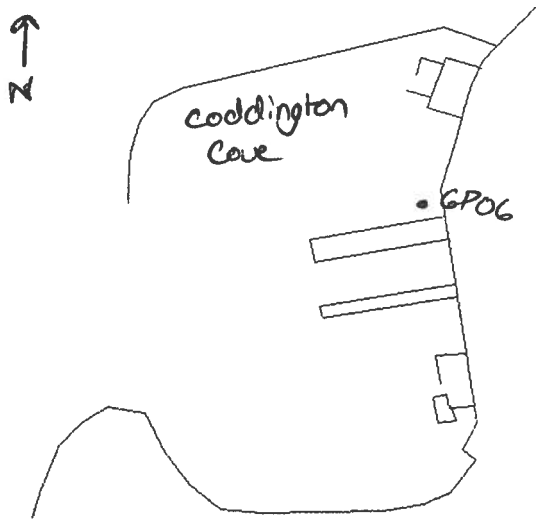
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

Total Depth 38'

- NO field screening conducted because SW samples were only collected for TSS analysis to assist in interpretation of ADCP Data

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP07-0901
Sample Location: GP07
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1135	Colorless	NA						
Depth: 37								
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

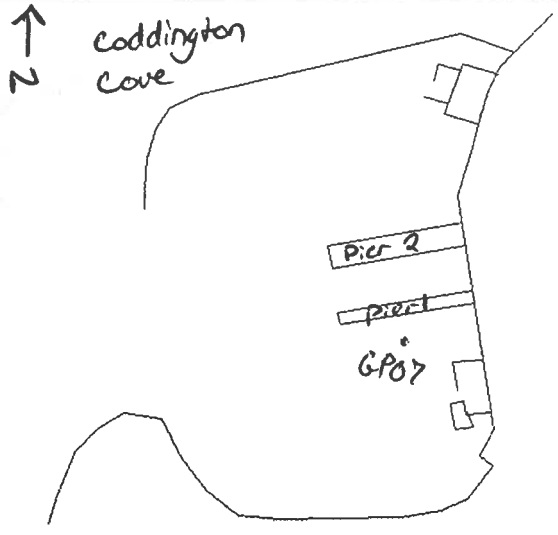
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

Total Depth 40'

- No field screening conducted because SW samples were only collected to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP08-090111
Sample Location: GP08
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1040								
Depth: 35	Colorless	NA						→
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

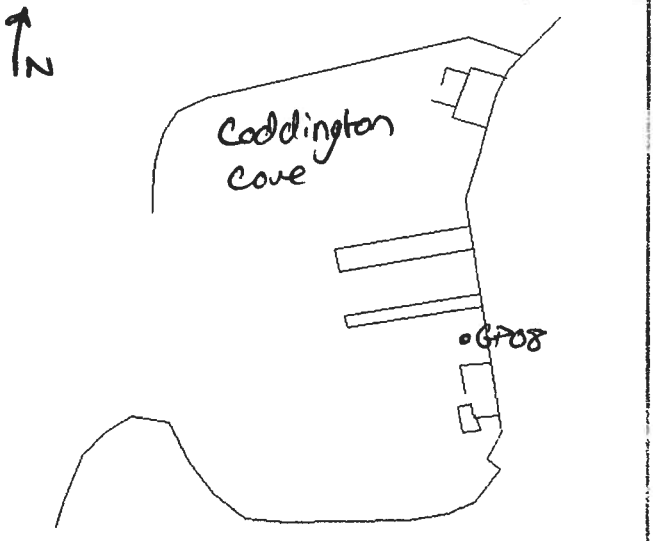
Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

Total Depth 38

*NO field screening conducted because SW samples were only collected to assist in interpretation of ADCP Data

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP09-09011
Sample Location: GP09
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11
Time: 1020
Depth: 26
Method: Kemmerer

Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Colorless	NA						

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

Total Depth 29'

- No field screening conducted because SW samples were only collected to assist in interpretation of ADCP Data

MAP:

Circle if Applicable:

(MS/MSD) ✓

Duplicate ID No.: NA

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP10-090111
Sample Location: GP10
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/1/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1000								
Depth: 16	Colorless	—	—	—	—	—	—	→
Method: Kemmerer								

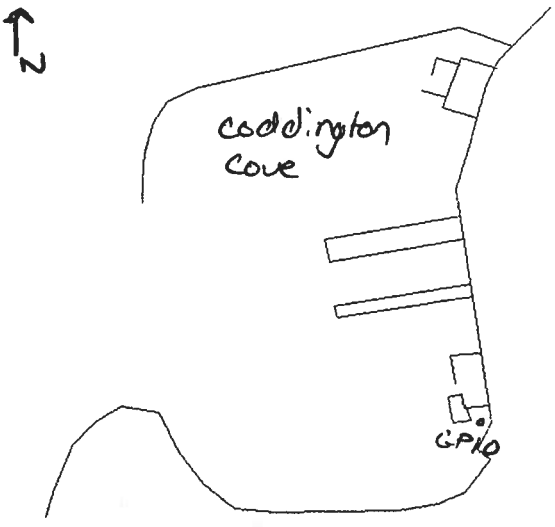
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

- Way Point 80
- Total Depth 19.6'
- No field screening conducted because SW samples were only collected and analyzed for TSS to assist in interpretation of ADCP Data

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	DSY-SW-DUP01-090111

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP01-090611
Sample Location: GP01
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1020								
Depth: 35	Colorless	NA						
Method: Kemmerer								

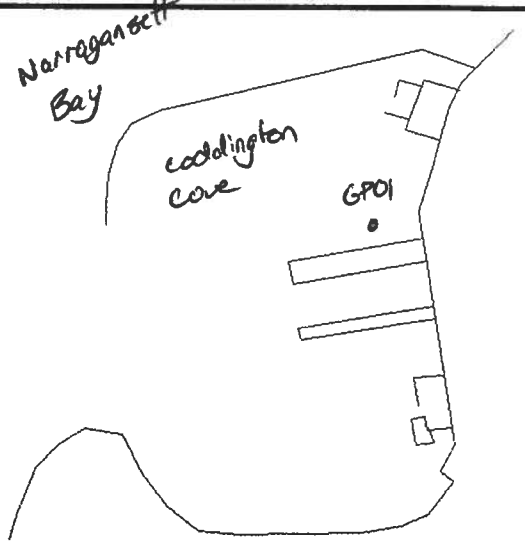
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

- No field screening conducted, surface water samples were collected and analyzed for TSS only to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP02-090611
Sample Location: GP02
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1015								
Depth: 40	Colorless	NA						→
Method: Kemmerer								

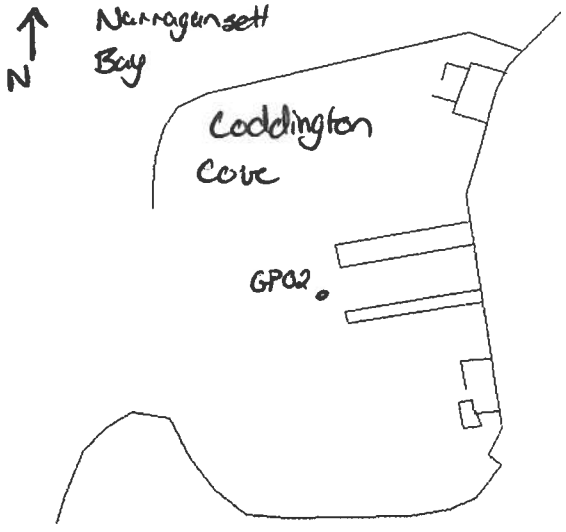
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

- No field screening conducted, SW samples only collected for TSS analysis to assist in interpretation of ADCP Data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP03-090611
Sample Location: GP03
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1025								
Depth: 36	Colorless	NA						
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

- No field screening conducted, SW sample only collected for TSS analysis to assist in interpretation of ADCP data

MAP:

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP04-090611
Sample Location: GP04
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1010								
Depth: 36	Colorless	NA						→
Method: Remotesr								

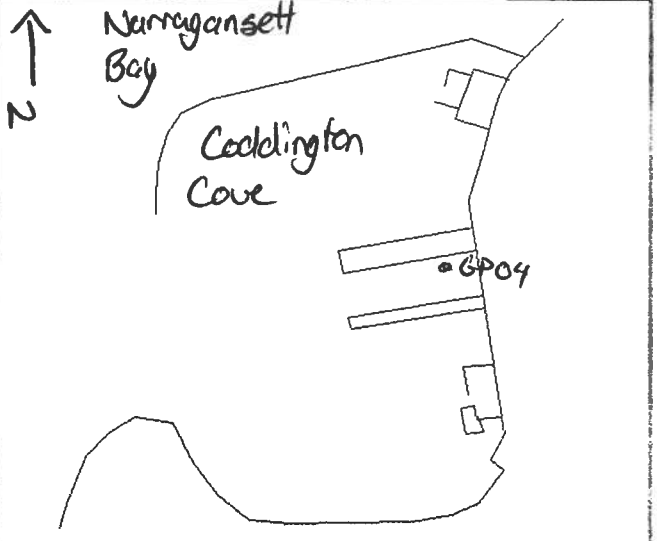
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

- NO field screening conducted, SW samples only collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP05-09061
Sample Location: GP05
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Date: 9/6/11								
Time: 1000								
Depth: 39	Colorless	NA						
Method: Kemmerer								

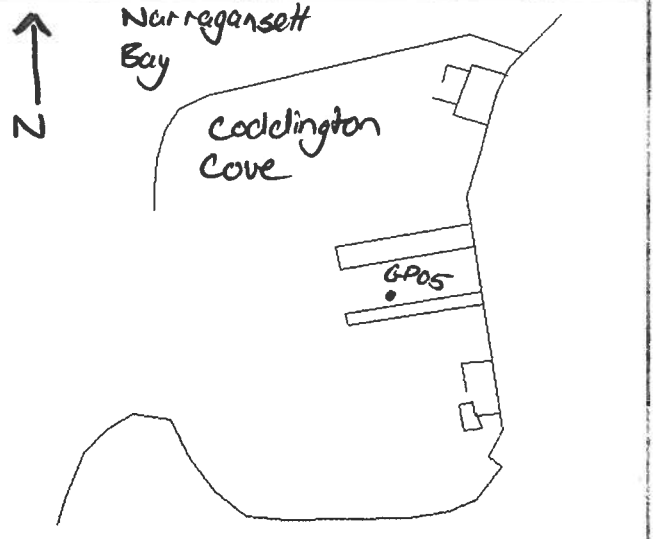
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / NA

OBSERVATIONS / NOTES:

-No field screening conducted, SW samples were only collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP06-090611
Sample Location: GP06
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1005								
Depth: 35	Colorless	NA						
Method: Kemmerer								

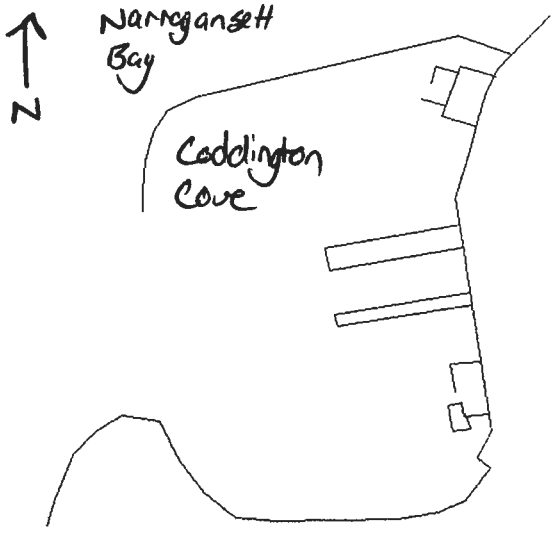
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) No

OBSERVATIONS / NOTES:

- No field screening conducted, SW samples collected only for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP07-090611
Sample Location: GP07
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 6955								
Depth: 37	Colorless	NA						→
Method: Kemmerer								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

- No field screening conducted, SW samples collected for TSS analysis only to assist in interpretation of ADCP data

MAP:

Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP08-090611
Sample Location: GP08
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11 Time: 0950 Depth: 35 Method: Hemmerer	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						>

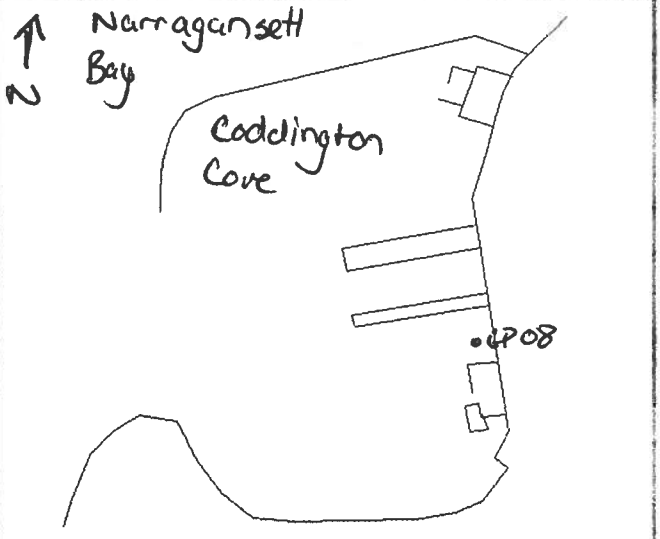
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

-NO field screening conducted, SW samples only collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP09-090611
Sample Location: GP09
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0945	Colorless	NA						→
Depth: 26								
Method: Hemmerer								

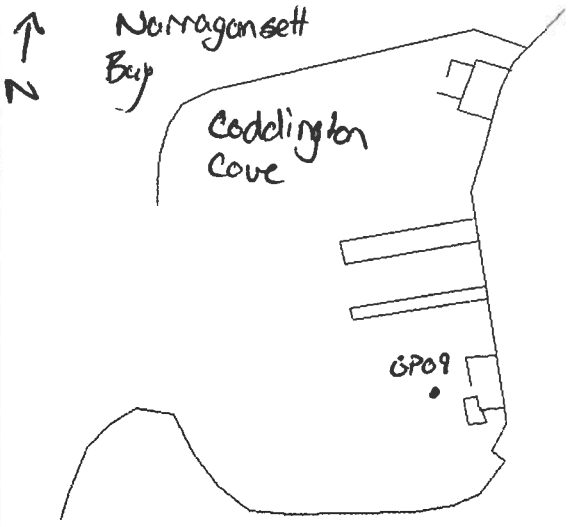
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

-No field screening conducted. SW samples only collected for TSS analysis to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	DSY-SW-DUP02-090611

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP10-090611
Sample Location: GP10
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/6/11 Time: 0940 Depth: 16 Method: Hammerer	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						→

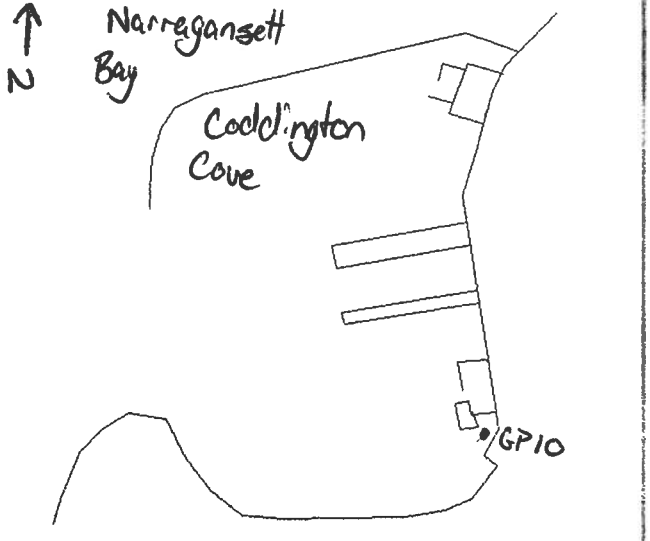
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

- NO field screening conducted, SW samples collected for TSS analysis only to assist in interpretation of ADCP data

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP01-091711
Sample Location: GP01
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 9/17/11 Time: 1255 Depth: 35 Method: Bomb Sampler	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	colorless	NA						

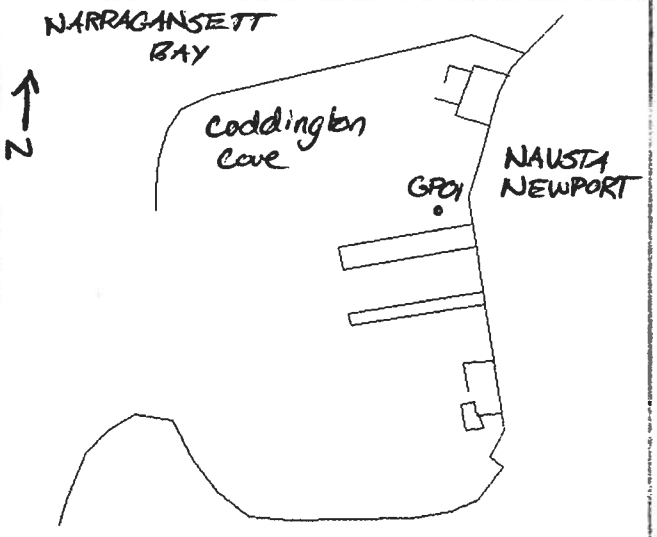
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

-

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP02-091711
Sample Location: GP02
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

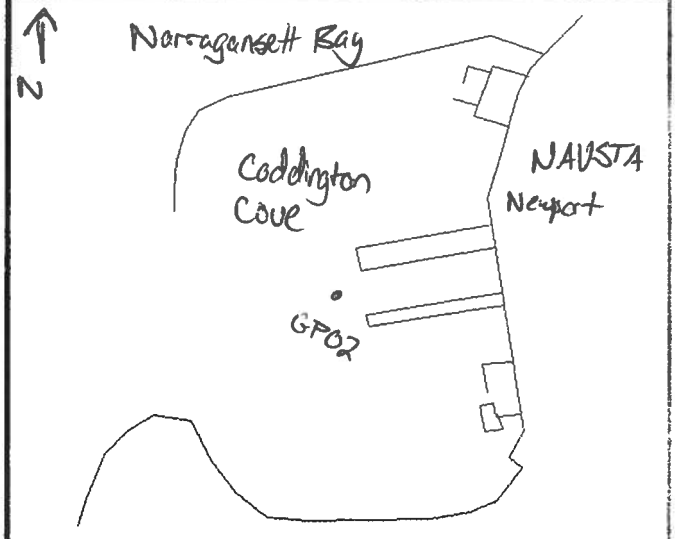
Date: 9/17/11 Time: 0825 Depth: 40 Method: Bomb Sampler	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP03-09171
Sample Location: GP03
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

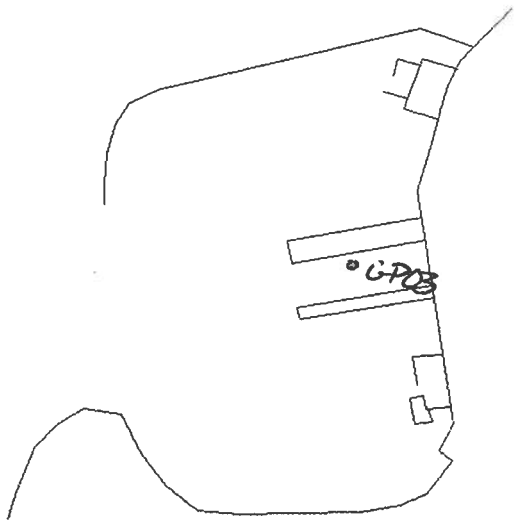
	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Date: 9/17/11								
Time: 0915								
Depth: 36	Colorless	NA						
Method: Bomb Sampler								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP04-091711
Sample Location: GP04
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

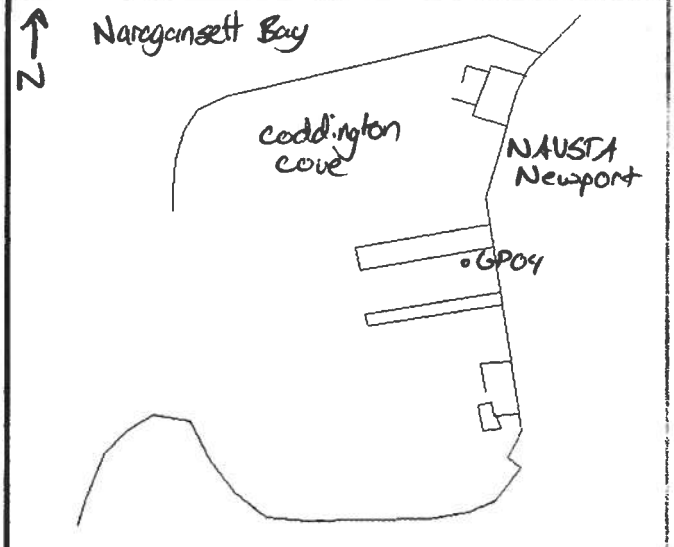
Date: 9/17/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0950								
Depth: 36	colorless	NA						→
Method: Bomb								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / (No)
VOA's - SIM	HCl	2 - 40mL vials	Yes / (No)
SVOC's	4° C	2 - 1L Ambers	Yes / (No)
Pesticides	4° C	2 - 1L Ambers	Yes / (No)
PCB's	4° C	2 - 950mL glass jar	Yes / (No)
Cyanide	NaOH	1 - 250mL poly	Yes / (No)
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / (No)
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: DSY-SW-DUP03-091711

Signature(s):

MH

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: SW OSY-GP05-091711
Sample Location: GP05
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

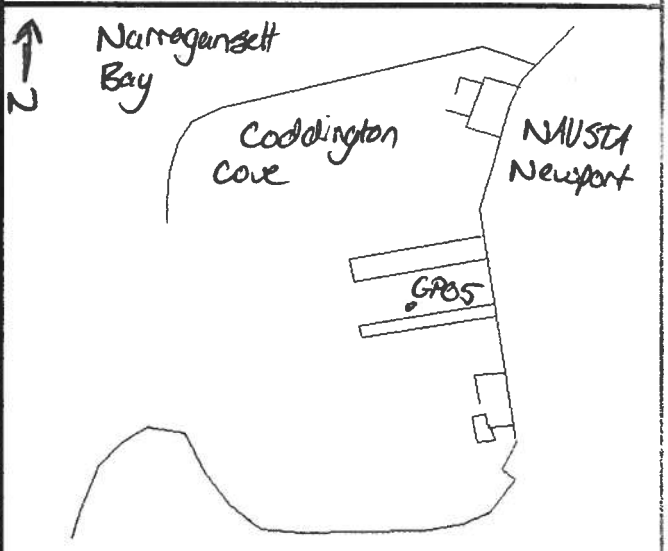
Date: 9/17/11 Time: 1200 Depth: 39 Method:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP06-091711
Sample Location: GP06
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

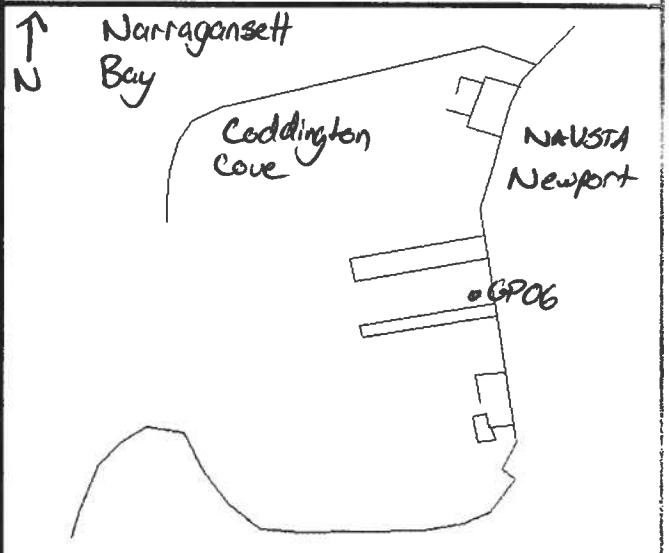
Date: 9/17/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1030	colorless	NA						
Depth: 35								
Method: Bomb Sampler								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / ~~No~~
VOA's - SIM	HCl	2 - 40mL vials	Yes / ~~No~~
SVOC's	4° C	2 - 1L Ambers	Yes / ~~No~~
Pesticides	4° C	2 - 1L Ambers	Yes / ~~No~~
PCB's	4° C	2 - 950mL glass jar	Yes / ~~No~~
Cyanide	NaOH	1 - 250mL poly	Yes / ~~No~~
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / ~~No~~
TSS	4° C	1 - 500 mL poly	(Yes) / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Sample ID No.: DSY-SW-GP07-091711
Sample Location: GP07
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

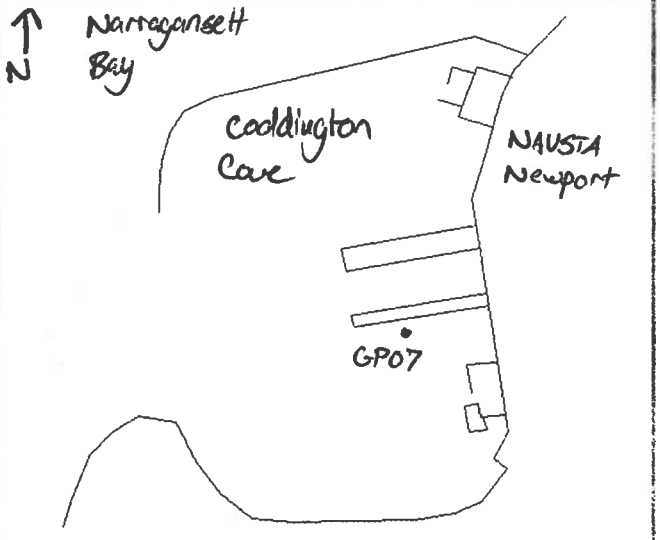
Date: 9/17/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1320								
Depth: 37	Colorless	NA						
Method: Bottle Sampler								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP08-091711
Sample Location: GP08
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

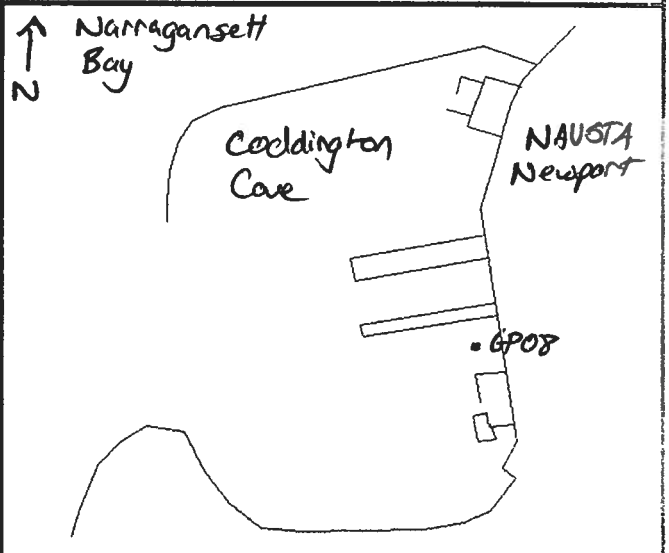
Date: 9/17/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1400								
Depth: 35	Colorless	NA						
Method: Bomb Sampler								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s):

MJH

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP09-091711
Sample Location: GP09
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

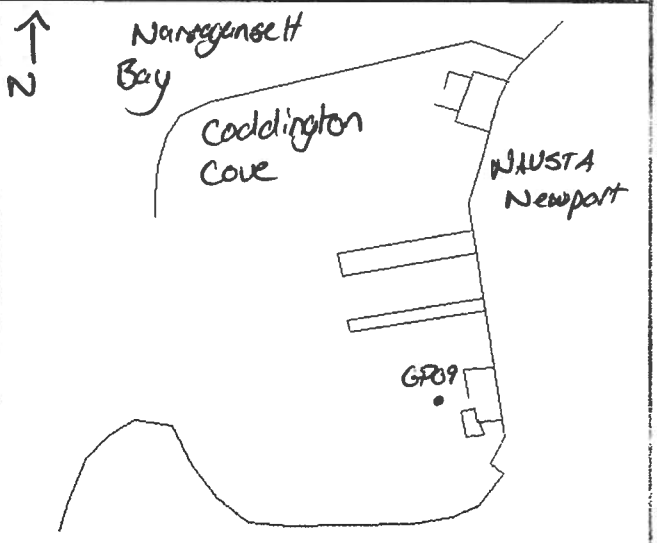
	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Date: 9/17/11								
Time: 1435								
Depth: 26	Colorless	NA						
Method: Bomb Sampler								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: Derecktor Shipyard, NAVSTA Newport
Project No.: 112G02747

Sample ID No.: DSY-SW-GP10-091711
Sample Location: GP10
Sampled By: M. Horton
C.O.C. No.:

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Harbor
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

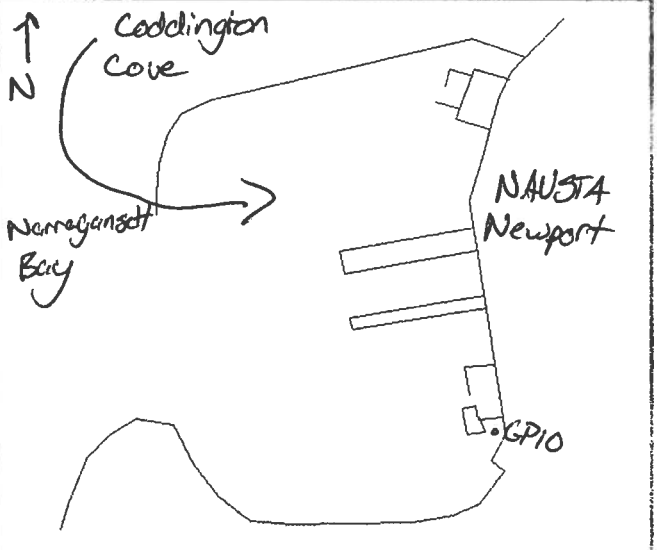
Date: 9/17/11 Time: 1455 Depth: 16 Method: Bomb Sampler	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
	Colorless	NA						

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOA's	HCl	3 - 40mL vials	Yes / No
VOA's - SIM	HCl	2 - 40mL vials	Yes / No
SVOC's	4° C	2 - 1L Ambers	Yes / No
Pesticides	4° C	2 - 1L Ambers	Yes / No
PCB's	4° C	2 - 950mL glass jar	Yes / No
Cyanide	NaOH	1 - 250mL poly	Yes / No
Metals (filtered & unfiltered)	HNO3	2 - 500mL poly	Yes / No
TSS	4° C	1 - 500 mL poly	Yes / No

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD NA

Duplicate ID No.: NA

Signature(s):

A5 COCS

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 10	
ARI Client Company: TetraTech NUS	Phone: (978) 474-8400	Date: 9/22/11	Ice Present?
Client Contact: Steve Parker		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, DERECKTOR SHIPYARD			
Client Project #: 112G02747	Samplers: Michael Horton / MH		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-BB26-0012	9/21/11	0855	SED	1	X								
DSY-SD-BB26-1224		0857		1	X								
DSY-SD-BB26-2448		0900		1	X								
DSY-SD-BC28-0012		0920		1	X								
DSY-SD-BC28-1224		0923		1	X								
DSY-SD-BC28-2448		0926		1	X								
DSY-SD-BC30-0012		1015		1	X								
DSY-SD-BC30-1224		1018		1	X								
DSY-SD-BC30-2448		1021		1	X								
DSY-SD-BUP01-092111	↓	—	↓	1	X								BD26-0012

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Michael Horton MH	(Signature) FedEx	(Signature)	(Signature)
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 10	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/22/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derecktor Shipyard			
Client Project #:	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-BD26-0012	9/21/11	1050	SED	1	X								
DSY-SD-BD26-1224		1053		1	X								
DSY-SD-BD26-2448		1056		1	X								
DSY-SD-BG26-0012		1215		1	X								
DSY-SD-BG26-1224		1218		1	X								
DSY-SD-BG26-2448		1221		1	X								
DSY-SD-BJ23-0012		1255		1	X								
DSY-SD-BJ23-1224		1258		1	X								
DSY-SD-BJ23-2448		1301		1	X								
DSY-SD-DUP02-092111		—		1	X								BJ23-2448

Comments/Special Instructions	Relinquished by: (Signature) Michael Horton	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: SEE PAGE ONE	Phone:
Client Contact:	
Client Project Name: CTO WE 61, Dereckton Ship Yard	
Client Project #:	Samplers: Michael Horton

Page: 3 of 10

Date: 9/22/11 | Ice Present?

No. of Coolers: | Cooler Temps:

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-BG28-0012	9/21/11	1320	SED	2	X	
DSY-SD-BG28-1224		1323		1	X	
DSY-SD-BG28-2448		1326		1	X	
DSY-SD-BI26-0012		1405		1	X	
DSY-SD-BI26-1224		1408		1	X	
DSY-SD-BI26-2448		1411		1	X	
DSY-SD-DUP03-092111		—		1	X	BI26-1224
DSY-SD-BE30-0012		1445		1	X	
DSY-SD-BE30-1224		1448		1	X	
DSY-SD-BE30-2448		1451		1	X	

Comments/Special Instructions: DSY-SD-BG28-0012 designated for Lab QC

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature) Michael Horton	(Signature) Fed Ex	(Signature)	(Signature)
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Company:	Company:	Company:	Company:
Date & Time: 9/23/11 1420 MJH	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 4 of 10	
ARI Client Company:	Phone:	Date: 9/22/11	Ice Present?
Client Contact: SEE ONE PAGE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61 Derecktor Shipyard			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-BE28-0012	9/22/11	1450	SED	1	X	
DSY-SD-BE28-1224		1453		1	X	
DSY-SD-BE28-2448		1456		1	X	
DSY-SD-BF23-0012		1420		1	X	
DSY-SD-BF23-1224		1423		1	X	
DSY-SD-BF23-2448		1426		1	X	
DSY-SD-BB02-0012		0940		1	X	
DSY-SD-BB02-1224		0943		1	X	
DSY-SD-BB02-2448		0946		1	X	
DSY-SD-BF06-0012		1000		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Michael Horton	FedEx		
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MJH	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 5 of 10	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/22/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Dereck for Shipyard			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
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206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-DUP04-092211	9/22/11	—	SED	1	X	~~BB02-2448~~ ~~BF06-0012~~
DSY-SD-BF06-1224	"	1003	"	1	X	
DSY-SD-BF06-2448	"	1006	"	2	X	
DSY-SD-AX06-0012	"	1045	"	1	X	
DSY-SD-AX06-1224	"	1048	"	1	X	
DSY-SD-AX06-2448	"	1051	"	1	X	
DSY-SD-BB10-0012	"	1105	"	1	X	
DSY-SD-BB10-1224	"	1108	"	1	X	
DSY-SD-BB10-2448	"	1111	"	1	X	
DSY-SD-~~BB~~ MH DUP05-092211	↓	—	↓	1	X	BB10-2448

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
DSY-SD-BF06-2448 designated as lab QC	Michael Horton	Fed Ex		
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 6 of 10	
ARI Client Company:	Phone:	Date: 9/22/11	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Dercktor Shipyard			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
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206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-BB06-0012	9/22/11	1120	SED	1	X	
DSY-SD-BB06-1224	9/22/11	1123		1	X	
DSY-SD-BB06-2448		1126		1	X	
DSY-SD-AT20-0012		1200		1	X	
DSY-SD-AT20-1224		1203		1	X	
DSY-SD-AT20-2448		1206		1	X	
DSY-SD-AT16-0012		1215		1	X	
DSY-SD-AT16-1224		1218		1	X	
DSY-SD-AT16-2448		1221		1	X	
DSY-SD-DUP06-092211		—		1	X	AT16-2448

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Michael Horton	FedEx		
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 7 of 8	
ARI Client Company:	Phone:	Date: 9/22/11	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61, Derrick for Shipyard			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AP20-0012	9/22/11	1230	SED	1	X								
DSY-SD-AP20-1224		1233		1	X								
DSY-SD-AP20-2448		1236		2	X								
DSY-SD-AX20-0012		1340		1	X								
DSY-SD-AX20-1224		1343		1	X								
DSY-SD-AX20-2448		1346		1	X								
DSY-SD-AT24-0012		1400		1	X								
DSY-SD-AT24-1224		1403		1	X								
DSY-SD-AT24-2448		1406		1	X								
DSY-SD-DUP07-092211	↓	←	↓	1	X								AT24-0012

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
DSY-SD-AP20-2448 is designated for Lab QC	Michael Horton			
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 8 of ~~9~~ 10	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/22/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTOWE 61, Dercktor Shipyard			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-~~RTSD~~-RB01-092111	9/21/11	1700	AQ	2	X								
DSY-SD-RB02-092211	9/22/11	1645	AQ	2	X								
DSY-SD-AY30-0012	9/23/11	0825	SED	2	X								
DSY-SD-AY30-1224		0828		1	X								
DSY-SD-AY30-2448		0831		1	X								
DSY-SD-AT30-0012		0855		1	X								
DSY-SD-AT30-1224		0858		1	X								
DSY-SD-AT30-2448		0901		1	X								
DSY-SD-DUP08-092311		—		1	X								AT30-1224
DSY-SD-AO30-0012		0915		1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
DSY-SD-AY30-0012 is designated as Lab QC	(Signature) Michael Horton	(Signature)	(Signature)	(Signature)
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420	Date & Time:	Date & Time:	Date & Time:

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 9 of 10	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/23/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61 Detrick for Shipyard			
Client Project #:	Samplers: Michael Horton MH		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-A030-1224	9/23/11	0918	SED	1	X								
DSY-SD-A030-2448		0921		1	X								
DSY-SD-AK26-0012		1005		1	X								
DSY-SD-AK26-1224		1008		1	X								
DSY-SD-AK26-2448		1011		1	X								
DSY-SD-AK24-0012		1020		1	X								
DSY-SD-AK24-2448		1026		1	X								
DSY-SD-AK24-1224		1023		1	X								
DSY-SD-AK28-0012		1045		1	X								
DSY-SD-AK28-1224	↓	1048	↓	1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Michael Horton MH	FedEx		
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 10 of 10	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/23/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61, Dercktor shipyard			
Client Project #:	Samplers:		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-DUP09-092311	9/23/11	—	SED	1	X								AK24-2448
DSY-SD-AK28-2448	9/23/11	1051		1	X								
DSY-SD-AK30-0012		1100		1	X								
DSY-SD-AK30-1224		1103		1	X								
DSY-SD-AK30-2448		1106		2	X								
DSY-SD-AI28-0012		1130		1	X								
DSY-SD-AI28-1224		1133		1	X								
DSY-SD-AI28-2448		1136		1	X								
DSY-SD-RB03-092311		1330	AQ	2	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
DSY-SD-AK30-2448 designated as lab QC	Michael Horton	FedEx		
	Printed Name:	Printed Name:	Printed Name:	Printed Name:
	Company:	Company:	Company:	Company:
	Date & Time: 9/23/11 1420 MH	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 3	
ARI Client Company: Tetra Tech NUS	Phone: (978) 474-8434	Date: 9/26/11	Ice Present?
Client Contact: Steve Parker		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61. Dereckton Shipyard			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-AI30-0012	9/26/11	1010	SED	1	X	
DSY-SD-AI30-1224		1013		1	X	
DSY-SD-AI30-2448		1016		1	X	
DSY-SD-AG28-0012		1100		1	X	
DSY-SD-AG28-1224		1103		1	X	
DSY-SD-AG28-2448		1106		1	X	
DSY-SD-DUP10-092611		—		1	X	
DSY-SD-AG24-0012		1145		1	X	
DSY-SD-AG24-1224		1148		1	X	
DSY-SD-AG24-2448		1151		1	X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
DUP10 is AG28-2448	(Signature)	(Signature) Fed Ex	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TENUS	Company:	Company:	Company:
	Date & Time: 9/26/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: SEE PAGE ONE	Phone:
Client Contact:	
Client Project Name: CTOWE61, Dereck for Shipyard	
Client Project #:	Samplers: Michael Horton

Page: 2 of 3

Date: 9/26/11 | Ice Present?

No. of Coolers: | Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-AI24-0012	9/26/11	1200	SED	2	X	
DSY-SD-AI24-1224		1203		1	X	
DSY-SD-AI24-2448		1206		1	X	
DSY-SD-AI26-0012		1305		1	X	
DSY-SD-AI26-1224		1308		1	X	
DSY-SD-AI26-2448		1311		1	X	
DSY-SD-AG26-0012		1320		1	X	
DSY-SD-AG26-1224		1323		1	X	
DSY-SD-AG26-2448		1326		1	X	
DSY-SD-DUP11-092611		—		1	X	

Comments/Special Instructions
DSY-SD-AI24-0012 is designated for LabQC
DUP 11 is AG26-0012

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)		FedEx		
Printed Name:	Michael Horton			
Company:	TENIUS			
Date & Time:	9/26/11 1700			

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 3	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/26/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derecktor Shipyard			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AC24-0012	9/26/11	1415	SED	1	X								
DSY-SD-AC24-1224		1418		1	X								
DSY-SD-AC24-2448		1421		1	X								
DSY-SD-AE24-0012		1430		1	X								
DSY-SD-AE24-1224		1433		1	X								
DSY-SD-AE24-2448		1436		1	X								
DSY-SD-RB04-092611		1625	AQ	2	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TENUS	Company:	Company:	Company:
	Date & Time: 9/26/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 5	
ARI Client Company: Tetra Tech NUS	Phone: (978)474-8400	Date: 9/29/11	Ice Present?
Client Contact: Steve Parker		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61 Derecktor Shipyard			
Client Project #: 112G02747	Samplers: Michael Horton / [illegible]		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AC26-0012	9/28/11	0930	SED	1	X								
DSY-SD-AC26-1224		0933		1	X								
DSY-SD-AC26-2448		0936		1	X								
DSY-SD-DUP13-092811		—		1	X								AC26-2448
DSY-SD-AE28-0012		1035		1	X								
DSY-SD-AE28-1224		1038		1	X								
DSY-SD-AE28-2448		1041		2	X								Lab QC
DSY-SD-AE26-0012		1015		1	X								
DSY-SD-AE26-1224		1018		1	X								
DSY-SD-AE26-2448		1021		1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
DSY-SD-AE28-2448 is designated as Lab QC	(Signature) [signature]	(Signature) FedEx	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: Tetra Tech NUS	Company:	Company:	Company:
DUP13 -> AC26-2448	Date & Time: 9/29/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 5	
ARI Client Company: SEE PAGE ONE	Phone:	Date:	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61, Dereckter Shipyard			
Client Project #: 112G02717	Samplers: Michael Horton/[illegible]		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AC28-0012	9/28/11	1105	SED	1	X								
DSY-SD-AC28-1224		1108		1	X								
DSY-SD-AC28-2448		1111		1	X								
DSY-SD-DUP14-092811		—		1	X								AC28-0012
DSY-SD-AE30-0012		1350		1	X								
DSY-SD-AE30-1224		1353		1	X								
DSY-SD-AC30-0012		1435		X2	X								
DSY-SD-AC30-1224		1438		1	X								
DSY-SD-AC30-2448		1441		1	X								
DSY-SD-AD05-0012	9/29/11	0840		1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
DSY-SD-AC30-0012 is designated as lab QC	(Signature) [signature]	(Signature) FedEx	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech	Company:	Company:	Company:
	Date & Time: 9/29/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ARL

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13124

Send Results to:	Send Invoice to:
Name Steve Parker	Name
Company TENUS	Company
Address 250 Andover St	Address
City Wilmington	City
State, Zip MA 01887	State, Zip
Phone (978) 474-8434	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: 112602717	**Sampler's (Signature):** MH

Analysis Requirements: TAT

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/29/11 0813	DSY-SD-AD05-1224	SED			
	0846	~~DSY-SD~~ DSY-SD-AD05-2448				
	0925	DSY-SD-AD13-0012				
	0928	DSY-SD-AD13-1224				
	0931	DSY-SD-AD13-2448				
	0950	DSY-SD-AD17-0012				
	0953	DSY-SD-AD17-1224				
	0956	DSY-SD-AD17-2448				
	—	DSY-SD-DUP15-092911		AD13-2448		
	1020	DSY-SD-AB15-0012				
	1023	DSY-SD-AB15-1224				
	1026	DSY-SD-AB15-2448				

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature) MH Michael Harbin	9/29/11 1700	FedEx
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 3 of 4

Cooler No. ____ of ____

Date Shipped 9/29/11

Shipped By MH

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

ARI

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SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13125

Send Results to:	Send Invoice to:	Lab Use Only:
Name STEVE PARKER	Name	VOA Headspace Y N NA
Company TENUS	Company	Field Filtered Y N NA
Address	Address	Correct Containers Y N NA
City SA	City	Discrepancies Y N NA
State, Zip	State, Zip	Cust. Seals Intact Y N NA
Phone	Phone	Containers Intact Y N NA
Fax	Fax	Airbill #:
E-mail	E-mail	CAR #:
Project No./Name: 112G027417	**Sampler's (Signature):** Michael Horton	

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TST	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/29/11 1105	DSY-SD-AB11-0012	SED	1			
	1108	DSY-SD-AB11-1224		1			
	1111	DSY-SD-AB11-2448		1			
	1145	DSY-SD-AD21-0012		1	~~Lab QC~~		
	1148	DSY-SD-AD21-1224		1			
	1151	DSY-SD-AD21-2448		2	Lab QC		
	1305	DSY-SD-AD01-0012		1			
	1308	DSY-SD-AD01-1224		1			
	1311	DSY-SD-AD01-2448		1			
	0820	DSY-SD-AD09-0012		1			
	0823	DSY-SD-AD09-1224		1			
	0826	DSY-SD-AD09-2448		1			

	Date/Time		
Sample Kit Prep'd by: (Signature)	9/29/11 1700	Received By: (Signature) FedEx	REMARKS:
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time	*Temperature*	

Details:

Page ~~3~~ 4 of ~~3~~ 5

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

~~EMPIRICAL~~ ARI LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13126

Send Results to:	Send Invoice to:	Analysis Requirements:	Lab Use Only:
Name Steve Parker	Name		VOA Headspace Y N NA
Company TENUS	Company		Field Filtered Y N NA
Address SEE PAGE ONE	Address		Correct Containers Y N NA
City	City		Discrepancies Y N NA
State, Zip	State, Zip		Cust. Seals Intact Y N NA
Phone	Phone		Containers Intact Y N NA
Fax	Fax		Airbill #:
E-mail	E-mail		CAR #:
Project No./Name: 112602747	**Sampler's (Signature):**	TBT	

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TBT	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/28/11 1350	DSY SD AG30 0012	SED	1			
	1337	DSY SD AG30 1224		1			
	1324	DSY SD AG30 2448		1			
	9/29/11 1530	DSY SD RB06 092911	AQ	2			
	9/28/11 1515	DSY SD RB05 092811	AQ	2			

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
Michael Horton	9/29/11 1700	FedEx
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 5 of 5

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

ARI **~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD**

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13127

Send Results to:	Send Invoice to:	Analysis Requirements:	Lab Use Only:
Name Steve Parker	Name	TBT	VOA Headspace Y N NA
Company TENUS	Company		Field Filtered Y N NA
Address 250 Andover St #200	Address		Correct Containers Y N NA
City Wilmington	City		Discrepancies Y N NA
State, Zip MA 01887	State, Zip		Cust. Seals Intact Y N NA
Phone (978) 474-8439	Phone		Containers Intact Y N NA
Fax (978) 474 x499	Fax		Airbill #:
E-mail	E-mail		CAR #:
Project No./Name: CTO WE61, Dereckter SY	**Sampler's (Signature):**		

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TBT	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/20/11 0755	DSY-SD-509-0012	SED	X			
	0758	DSY SD 509-1224		X			
	0801	DSY SD 509-2448		X			
	—	DSY-SD-DUP16-093011		X	509-2448		
	0940	DSY SD-089-0012		X			
	0943	DSY SD-089-1224		X			
	0946	DSY SD-089-2448		X			
	0920	DSY-SD-017-0012		X			
	0923	DSY SD-017-1224		X			
	0926	DSY SD-017-2448		X	Lab QC		
	0905	DSY-SD-013-0012		X			
	0908	DSY-SD-013-1224		X			

Sample Kit Prep'd by: (Signature) Michael Hinton	Date/Time 9/30/11 1700	Received By: (Signature) Fed Ex	REMARKS: DSY-SD-RB05 is included in this shipment and should be analyzed for TBT but was listed on previous COC (shipment date 9/29/11)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time	*Temperature*	

Details:

Page 1 of 4

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13128

Send Results to:	Send Invoice to:
Name	Name
Company	Company
Address SEE	Address
City PAGE	City
State, Zip	State, Zip
Phone ONE	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTOWEG1 / DSY	**Sampler's (Signature):**

Analysis Requirements: TBT

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/30/11 0911	DSY SD 013 24118	SED			
	—	DSY SD DUP17 093011		013-0012		
	1050	DSY SD S13 0012				
	1053	DSY SD S13 1224				
	1056	DSY SD S13 24118	MH	Lab QC		
	1030	DSY SD W13 0012				
	1033	DSY SD W13 1224	MH			
	1036	DSY SD W13 24118				
	—	DSY SD DUP18 093011		W13-1224		
	1015	DSY SD W09 0012				
	1018	DSY SD W09 1224				
	1021	DSY SD W09 24118				

Sample Kit Prep'd by: (Signature) Michael Horton	Date/Time 9/30/11 1700	Received By: (Signature) Fed Ex
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 2 of 4

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13129

Send Results to:	Send Invoice to:
Name STEVE PARKER	Name
Company TETRA TECH NUS	Company
Address 250 ANDOVER ST	Address
City WILMINGTON	City
State, Zip MA 01887	State, Zip
Phone (978) 658-7711	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Derrick for Shipyard	**Sampler's (Signature):**

Analysis Requirements: TST

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TST	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	9/30/11 1200	DSY-SD-W17-0012	SED	X			
	1203	DSY-SD-W17-12211		X			
	1206	DSY-SD-W17-2448		X			
	1220	DSY-SD-W21-0012		X			
	1223	DSY-SD-W21-1224		X			
	1226	DSY-SD-W21-2448		X			
	—	DSY-SD-DUP19-093011		X	W21→0012		
	1350	DSY-SD-S21-0012		X			
	1353	DSY-SD-S21-1224		X			
	1356	DSY-SD-S21-2448		X			
	—	DSY-SD-DUP20-093011		X	S21-2448		
	1335	DSY-SD-S21-0012		X			

Sample Kit Prep'd by: (Signature) M.J. Hart M. Paul Horton	Date/Time 9/30/11 1700	Received By: (Signature) FedEx
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 3 of 4

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13130

Send Results to:	Send Invoice to:
Name	Name
Company	Company
Address	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61 / Detrick for SY	**Sampler's (Signature):**

Analysis Requirements: TGT

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: _____

CAR #: _____

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TGT	Comments	No. of Bottles	*Lab Use Only* Containers/Pres.
	9/30/11 1338	DSY-SD-021-1224	SED	X			
	1341	DSY-SD-021-2448		X	Lab QC		
	1320	DSY-SD-517-0012		X			
	1323	DSY-SD-517-1224		X			
	1326	DSY-SD-517-2448		X			
	1430	DSY-SD-RB07-093011	AQ	X			

Sample Kit Prep'd by: (Signature) Michael Horton	Date/Time 9/29/11 1700	Received By: (Signature) FedEx
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 4 of 4

Cooler No. ____ of ____

Date Shipped _____

Shipped By _____

Turnaround _____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

ARI ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13131

Send Results to:	Send Invoice to:	Lab Use Only:
Name Steve Parker	Name	VOA Headspace Y N NA
Company TENUS	Company	Field Filtered Y N NA
Address 250 Andover St	Address	Correct Containers Y N NA
City Wilmington	City	Discrepancies Y N NA
State, Zip MA 01887	State, Zip	Cust. Seals Intact Y N NA
Phone (978)471 8434	Phone	Containers Intact Y N NA
Fax (978)471 8499	Fax	Airbill #:
E-mail	E-mail	CAR #:
Project No./Name: 112G02717	**Sampler's (Signature):**	

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TBT												Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/3/11 0950	DSY SD-K09-0012	SED	1														
	0953	DSY SD-K09-1224		1														
	0956	DSY-SD-K09-2448		1														
	—	DSY SD DUP21-100311		1												K09-0012		
	1010	DSY-SD-~~00~~ K05-0012		1														
	1013	DSY-SD-K05-1221		1														
	1016	DSY SD K05-2448		1														
	1100	DSY SD K13-0012		1														
	1103	DSY SD K13-1224		1														
	1106	DSY-SD-K13-2448		2												Lab QC		
	1130	DSY SD K17 0012		1														
	1133	DSY-SD-K17-1224		1														

Sample Kit Prep'd by: (Signature) Michael Horton	Date/Time 10/3/11 1700	Received By: (Signature) FedEx	REMARKS:
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time	*Temperature*	

Details:

Page _____ of _____

Cooler No. ____ of _____

Date Shipped _____

Shipped By _____

Turnaround _____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

ARI ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13132

Send Results to:	Send Invoice to:
Name Steve Parker	Name
Company TetraTech	Company
Address SEE PM OFFICE	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61 112602747	**Sampler's (Signature):**

Analysis Requirements: TBT

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	TBT	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/3/11 1136	DSY SD K17 2448	SED	1			
	1215	DSY SD Y03 0012		1			
	1215	DSY SD Y03 1221		1			
	1221	DSY SD Y03 2448		1			
	—	DSY SD DUP22 100311		1	Y03-2448		
	1245	DSY SD K21 0012		1			
	1248	DSY SD K21 1221		1			
	1251	DSY SD K21 2448		1			
	1345	DSY SD Y25 0012		1			
	1348	DSY SD Y25 1221		1			
	1351	DSY SD Y25 2448		1			
	—	DSY SD DUP23 100311		1	Y25-2448		

Sample Kit Prep'd by: (Signature) MDJ-WF Michael Horton	Date/Time 10/3/11 1700	Received By: (Signature) Fed Ex
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page ____ of ____

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page:	of
ARI Client Company:	Phone:	Date:	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name:			
Client Project #: 112602747	Samplers: Michael Horton/MHT		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-Y26-0012	10/3/11	1405	SED	1	X								
DSY-SD-Y26-1224		1408		1	X								
DSY-SD-Y26-2448		1411		1	X								
DSY-SD-Y28-0012		1430		1	X								
DSY-SD-Y28-1224		1433		1	X								
DSY-SD-Y28-2448		1436		2	X								Lab QC
DSY-SD-Y30-0012		1500		1	X								
DSY-SD-Y30-1224		1503		1	X								
DSY-SD-RBSB-100311		1630	AQ	2	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
DSY-SD-Y30-0012 & DSY-SD-Y30-1224 - potential high contamination	(Signature) MHT	(Signature)	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/3/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: TetraTech NUS	Phone: (978)474-8400
Client Contact: Steve Parker	
Client Project Name: CTO WE61, Dereckton Ship Yard	
Client Project #: 112G02747	Samplers: Michael Horton

Page: 1 of 3

Date: ~~10/4/11~~ 10/4/11 | Ice Present?

No. of Coolers: | Cooler Temps:

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-J24-0012	10/4/11	1045	SED	1	X								
DSY-SD-J24-1224		1048		1	X								
DSY-SD-J26-0012		1115		1	X								
DSY-SD-J26-1224		1118		1	X								
DSY SD-J26-2448		1121		1	X								
DSY-SD-DUP21 100411		—		1	X								
DSY-SD-J28-0012		1205		1	X								
DSY-SD-J28-1224		1208		1	X								
DSY-SD-J28-2448		1211		1	X								
DSY-SD-J30-0012		1235		1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
J24 samples potentially highly contaminated	(Signature) Michael Horton	(Signature) FedEx	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TENUS	Company:	Company:	Company:
	Date & Time: 10/4/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 3	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 10/4/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derrick for SY			
Client Project #:	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-J30-1224	10/4/11	1238	SED	1	X								
DSY-SD-J30-2448		1241		1	X								
DSY-SD-L30-0012		1315		2	X								Lab QC
DSY-SD-L30-1224		1318		1	X								
DSY-SD-L30-2448		1321		1	X								
DSY-SD-L28-0012		1335		1	X								
DSY-SD-L28-1224		1338		1	X								
DSY-SD-L28-2448		1341		1	X								
DSY-SD-DUP25-100411		—		1	X								
DSY-SD-L26-0012		1430		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TENUS	Company:	Company:	Company:
	Date & Time: 10/4/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company:	Phone:
Client Contact: SEE PAGE ONE	
Client Project Name: CTO WE61, Derecktor Shipyard	
Client Project #: 112G02747	Samplers: MJ-HT / Michael Horton

Page: 3 of 3

Date: 10/4/11 | Ice Present?

No. of Coolers: | Cooler Temps:

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-L26-1224	10/4/11	1433	SED	1	X								
DSY-SD-L26-2448		1436		1	X								
DSY-SD-L24-0012		1450		1	X								
DSY-SD-L24-1224		1453		1	X								
DSY-SD-L24-2448		1456	↓	1	X								
DSY-SD-RB09-100411		1610	AQ	2	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TENUS	Company:	Company:	Company:
	Date & Time: 10/4/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 5	
ARI Client Company: TetraTech NUS	Phone: (978) 474-8400	Date: ~~10/5/11~~ 10/6/11	Ice Present?
Client Contact: Steve Parker		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61			
Client Project #: 112G02747	Samplers: Michael Horton		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-N24-0012	10/5/11	0830	SED	1	X								
DSY-SD-N24-1224		0833		1	X								
DSY-SD-N24-2448		0836		1	X								
DSY-SD-DUP26-100511		—		1	X								
DSY-SD-N26-0012		0850		1	X								
DSY-SD-N26-1224		0853		1	X								
DSY-SD-N26-2448		0856		1	X								
DSY-SD-N28-0012		0945		1	X								
DSY-SD-N28-1224		0948		1	X								
DSY-SD-N28-2448	↓	0951	↓	2	X								Lab QC

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/6/11 1530	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 5	
ARI Client Company:	Phone:	Date: 10/6/11	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Dereck Ltor Shipyard			
Client Project #: 112G02747	Samplers: Michael Horton		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-N30-0012	10/5/11	1000	SED	1	X								
DSY SD N30-1224		1003		1	X								
DSY-SD-N30-2448		1006		1	X								
DSY-SD-Q25-0012		1015		1	X								
DSY-SD-Q25-1224		1018		1	X								
DSY-SD-Q25-2448		1021		1	X								
DSY-SD-~~Q8~~W26-0012		1035		1	X								
DSY-SD-W26-1224		1038		1	X								
DSY-SD-W26-2448		1041		1	X								
DSY-SD-DUP27-100511	↓	—	↓	1	X								W26-2448

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/6/11 1530	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 5 of 5	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 10/6/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derecktor 54			
Client Project #: 112G02747	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-RB11-100611	10/6/11	1430	AQ	2	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/6/11 1530	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: TetraTech NUS	Phone: (978) 474-8434
Client Contact: STEVE PARKER	
Client Project Name: CTO WE61, Derecktor SY	
Client Project #: 112G02747	Samplers: Michael Horton

Page: 1 of 3	
Date: 10/7/11	Ice Present?
No. of Coolers:	Cooler Temps:

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-C25-0012	10/7/11	0800	SED	1	X								
DSY-SD-C25-1224		0803		1	X								
DSY-SD-C25-2448		0806		1	X								
DSY-SD-DUP29-100711		—		1	X								C25-1224
DSY-SD-C21-0012		0840		1	X								
DSY-SD-C21-1224		0843		1	X								
DSY-SD-C21-2448		0846		1	X								
DSY-SD-18-0012		1000		1	X								
DSY-SD-18-1224		1003		1	X								
DSY-SD-18-2448	↓	1006	↓	1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/7/11 1400	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 3	
ARI Client Company:	Phone:	Date: 10/7/11	Ice Present?
Client Contact: SEE ONE PAGE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61 - Dereck for SY			
Client Project #: 112802717	Samplers: Michael Horton		

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Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-C09-0012	10/7/11	1020	SED	1	X								
DSY-SD-C09-1224		1023		1	X								
DSY-SD-C09-2448		1026		1	X								
DSY-SD-DUP30-100711		—		1	X								C09-2448
DSY-SD-C13-0012		1100		1	X								
DSY-SD-C13-1224		1103		1	X								
DSY-SD-C13-2448		1106		MS X2	X								Lab QC
DSY-SD-C29-0012		1125		1	X								
DSY-SD-C29-1224		1128		1	X								
DSY-SD-C29-2448		1131		1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Michael Horton	(Signature)	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/7/11 1400	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 3	
ARI Client Company:	Phone:	Date: 10/7/11	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE 61 Dereck for SY			
Client Project #: 112G02747	Samplers: Michael Horton		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-C17-0012	10/7/11	1150	SED	1	X								
DSY-SD-C17-1224		1153		1	X								
DSY-SD-C17-2448		1156		1	X								
DSY-SD-RB12-100711		1245	AQ	2	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/7/11 1400	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: TetraTech NUS	Phone: (978) 474-8400
Client Contact: Steve Parker	
Client Project Name: CTO WE61, Derecktor SY	
Client Project #: 112602747	Samplers: Michael Horton

Page: 1 of 6	
Date: 9/13/11	Ice Present?
No. of Coolers:	Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-G01-0012	10/12/11	0920	SED	1	X	
DSY-SD-G01-1224		0923		1	X	
DSY-SD-G01-2448		0926		1	X	
DSY-SD-G05-0012		1205		1	X	
DSY-SD-G05-1224		1208		1	X	
DSY-SD-G05-2448		1211		1	X	
DSY-SD-DUP31-101211		—		1	X	G05-2448
DSY-SD-G09-0012		1240		1	X	
DSY-SD-G09-1224		1243		1	X	
DSY-SD-G09-2448		1246		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1730	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 6	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/13/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derecktor Shipyard			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-G13-0012	10/12/11	1310	SED	1	X								
DSY-SD-G13-1224		1313		1	X								
DSY-SD-G13-2448		1316		1	X								
DSY-SD-G17-0012		1325		1	X								
DSY-SD-G17-1224		1328		1	X								
DSY-SD-G17-2448		1331		1	X								
DSY-SD-DUP32-101211		—		1	X								G17-2448
DSY-SD-G21-0012		1345		1	X								
DSY-SD-G21-1224		1348		1	X								
DSY-SD-G21-2448	↓	1351	↓	2	X								Lab QC

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
DSY-SD-G21-2448 is designated as lab QC	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1730	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 6	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 10/13/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61 Derecktor SY			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT	Notes/Comments
DSY-SD-G25-0012	10/12/11	1405	SED	1	X	
DSY-SD-G25-1224		1408		1	X	
DSY-SD-G25-2448		1411		1	X	
DSY-SD-AA01-0012		1420		1	X	
DSY-SD-AA01-1224		1423		1	X	
DSY-SD-AA01-2448		1426		1	X	
DSY-SD-DUP33-101211		—		1	X	AA01-2448
DSY-SD-AA05-0012		1445		1	X	
DSY-SD-AA05-1224		1448		1	X	
DSY-SD-AA05-2448		1451		1	X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1730	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 4 of 6	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 9/13/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTOWEG1 Derecktor Sy			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-RB13-101211	10/12/11	1600	AQ	2	X								
DSY-SD-AA09-0012	10/13/11	1155	SED	1	X								
DSY-SD-AA09-1224		1158		1	X								
DSY-SD-AA09-2448		1201		1	X								
DSY-SD-AA13-0012		1220		1	X								
DSY-SD-AA13-1224		1223		1	X								
DSY-SD-AA13-2448		1226		2	X								Lab QC
DSY-SD-AA17-0012		1245		1	X								
DSY-SD-AA17-1224		1248		1	X								
DSY-SD-AA17-2448		1251		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1700	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 5 of 6	
ARI Client Company: SEE PAGE ONE	Phone:	Date: 10/13/11	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:
Client Project Name: CTO WE61, Derrick for SY			
Client Project #: 112G02747	Samplers: Michael Horton		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AA21-0012	10/13/11	1305	SED	1	X								
DSY-SD-AA21-1224		1308		1	X								
DSY-SD-AA21-2448		1312		1	X								
DSY-SD-DUP34-101311		—		1	X								AA21-2448
DSY-SD-AA24-0012		1325		1	X								
DSY-SD-AA24-1224		1328		1	X								
DSY-SD-AA24-2448		1331		1	X								
DSY-SD-AA26-0012		1400		1	X								
DSY-SD-AA26-1224		1403		1	X								
DSY-SD-AA26-2448	↓	1406	↓	1	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Michael Horton	(Signature)	(Signature)	(Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1730	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 6 of 6	
ARI Client Company:	Phone:	Date: 10/13/11	Ice Present?
Client Contact: SEE PAGE ONE		No. of Coolers:	Cooler Temps:
Client Project Name: CTOWEG1, Dereckton SY			
Client Project #: 112602747	Samplers: Michael Horton MJH		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TBT								Notes/Comments
DSY-SD-AA28-0016	10/13/11	1430	SED	1	X								
DSY-SD-DUP35-101311		—		1	X								AA28-0016
DSY-SD-AA30-0012		1445		1	X								
DSY-SD-AA30-1224		1448		1	X								
DSY-SD-G30-0018		1455	↓	1	X								
DSY-SD-RB14-101311	↓	1630	AQ	2	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:
	Company: TetraTech NUS	Company:	Company:	Company:
	Date & Time: 10/13/11 1730	Date & Time:	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Page: 1 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #: (978) 474-8400
Project/Site Name: CTO WE 61 Fax #: (978) 474-8499
Address: 250 Andover St. Suite 200, Wilmington MA 01887
Collected by: Michael Horton Send Results To: Steve Parker

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Po-210	<-- Preservative Type (6)	Comments
DSY-SD-GP01-0102	10/11/11	1100			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP01-0304		1103						1	X		
DSY-SD-GP01-0809		1106						1	X		
DSY-SD-GP01-1112		1109						1	X		
DSY-SD-GP01-1314		1111						1	X		
DSY-SD-GP01-1516		1114						1	X		
DSY-SD-GP01-2223		1117						1	X		
DSY-SD-GP01-2728		1120						1	X		
DSY-SD-GP02-0102		1130						1	X		
DSY-SD-GP02-0708		1133						1	X		

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone: Eastern, Central, Mountain, Pacific, Other ____

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	10/17/11	1000	FedEx		
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 2 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:

Project/Site Name: CTOWE 61 Fax #:

Address:

Collected by: [signature] Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PO-210	<-- Preservative Type (6)
DSY-SD-GP02-1112	10/11/11	1136			SED			1	X	
DSY-SD-GP02-1718		1139						1	X	
DSY-SD-GP03-0102		1200						1	X	
DSY-SD-GP03-0910		1203						1	X	
DSY-SD-GP03-1718		1206						1	X	
DSY-SD-GP03-2122		1209						1	X	
DSY-SD-GP04-0102		1300						1	X	
DSY-SD-GP04-0708		1303						1	X	
DSY-SD-GP04-1415		1306						1	X	
DSY-SD-GP04-2122		1309						1	X	

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	10/17/11	1000	FedEx		
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: **HA** = Hydrochloric Acid, **N1** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact?
YES *NO*
Cooler Temp:
C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 3 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:

Project/Site Name: CTO WE 61 Fax #:

Address:

Collected by: [illegible] Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Po-210	<-- Preservative Type (6)	Comments
DSY-SD-GP05-0102	10/14/11	0730			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP05-0809		0733						1	X		
DSY-SD-GP05-1516		0736						1	X		
DSY-SD-GP05-2324		0739						1	X		
DSY-SD-GP06-0102		0900						1	X		
DSY-SD-GP06-0809		0903						1	X		
DSY-SD-GP06-1516		0906						1	X		
DSY-SD-GP06-2324		0909						1	X		
DSY-SD-GP07-0102		0920						1	X		
DSY-SD-GP07-0809		0923						1	X		

TAT Requested: Normal: Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [illegible]	10/17/11	1000	1 FedEx		
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #: -

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 4 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:

Project/Site Name: CTO WE 61 Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PB-210										<-- Preservative Type (6)	Comments
DSY SD GP07-1616	10/14/11	0926			SED			1	X											Note: extra sample is required for sample specific QC
DSY SD GP07-2324		0929						1	X											
DSY SD GP08-0102		0940						1	X											
DSY SD GP08-1112		0943						1	X											
DSY SD GP08-1617		0946						1	X											
DSY SD GP08-2021		0949						1	X											
DSY SD GP08-2324		0952						1	X											
DSY SD GP08-0607		0955						1	X											
DSY SD GP09-0102		1015						1	X											
DSY SD GP09-0506		1018						1	X											

TAT Requested: Normal: Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		10/17/11	1000	FedEx		
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 5 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #:
Project/Site Name: CTOWE 61 Fax #:
Address: SEE PAGE ONE
Collected by: Send Results To:

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PO-210										<-- Preservative Type (6)	Comments
DSY-SD-GP09-1516	10/14/11	1021			SED			1	X											Note: extra sample is required for sample specific QC
DSY-SD-GP09-2021		1024						1	X											
DSY-SD-GP09-2627		1027						1	X											
DSY-SD-GP10-0102		1040						1	X											
DSY-SD-GP10-0304		1043						1	X											
DSY-SD-GP10-0809		1046						1	X											
DSY-SD-GP10-1112		1049						1	X											
DSY-SD-GP10-1617		1052						1	X											
DSY-SD-GP10-2122		1055						1	X											
DSY-SD-GP10-2627	↓	1058			↓			1	X											

Sample Analysis Requested (5) (Fill in the number of containers for each test)

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge)
Fax Results: Yes / No
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		10/17/11	1000	FedEx		
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate. If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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MH 7

Page 1 of 2

Client	Contact	Phone #	Fax #
Tetra Tech NUS	Steve Parker	(978) 474-8434	(978) 474-849

Address	City	State	Zip Code
850 Andover St, Suite 200	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MH	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)						
	DSY-SD-J24-0012	10/4/11 / 1045	SED	3	X	X	X	X						
	DSY-SD-J24-~~0012~~ MH 1224	/ 1048		2	X	X		X						
	DSY-SD-J26-0012	/ 1115		3	X	X	X	X						
	DSY-SD-J26-1224	/ 1118		2	X	X		X						
	DSY-SD-J26-2448	/ 1121		2	X	X		X						
	DSY-SD-DUP24-100411	/ —		2	X	X		X						
	DSY-SD-J28-0012	/ 1205		3	X	X	X	X						
	DSY-SD-J28-1224	/ 1208		2	X	X		X						
	DSY-SD-J28-2448	/ 1211		2	X	X		X						
	DSY-SD-J30-0012	/ 1235		3	X	X	X	X						
	DSY-SD-J30-1224	/ 1238		2	X	X		X						
	DSY-SD-J30-2448	/ 1241		2	X	X		X						
	DSY-SD-L30-0012	/ 1315		6	X	X	X	X						
	DSY-SD-L30-1224	/ 1318		2	X	X		X						
	DSY-SD-L30-2448	/ 1321		2	X	X		X						
	DSY-SD-L28-0012	/ 1335		3	X	X	X	X						

COMMENTS DSY-SD-L30-0012 is designated as Lab QC

DUP24 → J26-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MH	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Page 2 of 2

Client	Contact	Phone # ( )	Fax # ( )
Address SEE PAGE ONE	City	State	Zip Code
Purchase Order #	Proj. Name / No. CTO WE61, Dereckton SY	Katahdin Quote #	
Bill (if different than above)	Address		
Sampler (Print / Sign) Michael Horton / MJH		Copies To:	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE • PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-L28-1224	10/4/11 / 1338	SED	2	X	X		X								
	DSY-SD-L28-2448	/ 1341		2	X	X		X								
	DSY-SD-DUP25-100411	/ —		2	X	X		X								
	DSY-SD-L26-0012	/ 1430		3	X	X	X	X								
	DSY-SD-L26-1224	/ 1433		2	X	X		X								
	DSY-SD-L26-2448	/ 1436		2	X	X		X								
	DSY-SD-L24-0012	/ 1450		3	X	X	X	X								
	DSY-SD-L24-1224	/ 1453		2	X	X		X								
	DSY-SD-L24-2448	/ 1456		2	X	X		X								
	DSY-SD-RB09-100411	/ 1610	AQ	5	X	X		X								
	DSY-SD-N24-0012	10/5/11 / 0830	SED	3	X	X	X	X								
	DSY-SD-N24-1224	/ 0833		2	X	X	MH	X								
	DSY-SD-N24-2448	/ 0836		2	X	X		X								
	DSY-SD-DUP26-100511	/ —		2	X	X		X								
	DSY-SD-N26-0012	/ 0850		3	X	X	X	X								
	DSY-SD-N26-1224	/ 0853		2	X	X		X								

COMMENTS DUP25 → L28-D24 DUP26 → N24-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MJH	10/7/11 1300	Andrew Harlow			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address: SEE PAGE ONE | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE 61 Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-N26-2448	10/5/11 / 0856	SED	2	X	X		X						
	DSY-SD-N28-0012	/ 0945		3	X	X	X	X						
	DSY-SD-N28-1224	/ 0948		2	X	X		X						
	DSY-SD-N28-2448	/ 0951		4	X	X		X						
	DSY-SD-N30-0012	/ 1000		3	X	X	X	X						
	DSY-SD-N30-1224	/ 1003		2	X	X		X						
	DSY-SD-N30-2448	/ 1006		2	X	X		X						
	DSY-SD-Q25-0012	/ 1015		3	X	X	X	X						
	DSY-SD-Q25-1224	/ 1018		2	X	X		X						
	DSY-SD-Q25-2448	/ 1021		2	X	X		X						
	DSY-SD-W26-0012	/ 1035		3	X	X	X	X						
	DSY-SD-W26-1224	/ 1038		2	X	X		X						
	DSY-SD-W26-2448	/ 1041		2	X	X		X						
	DSY-SD-DUP27-100511	/	↓	2	X	X		X						
	DSY-SD-RB10-100511	/ 1215	AQ	5	X	X		X						
	DSY-SD-T25-0012	↓ / 1055	SED	3	X	X	X	X						

COMMENTS

DSY-SD-N28-2448 is designated as LabQC

DUP27 → W26-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	10/7/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
SEE PAGE ONE		SEE PAGE ONE	

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTOWEG1, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / [signature]	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)						
	DSY-SD-T25-1224	10/5/11 / 1058	SED	2	X	X		X						
	DSY-SD-T25-2448	/ 1101		2	X	X		X						
	DSY-SD-Q29-0012	10/6/11 / 1045		3	X	X	X	X						
	DSY-SD-Q29-1224	/ 1048		2	X	X		X						
	DSY-SD-Q29-2448	/ 1051		2	X	X		X						
	DSY-SD-T29-0012	/ 1116		3	X	X	X	X						
	DSY-SD-T29-1224	/ 1113		2	X	X		X						
	DSY-SD-T29-2448	/ 1116		4	X	X		X						
	DSY-SD-W24-0012	/ 1225		3	X	X	X	X						
	DSY-SD-W24-1224	/ 1228		2	X	X		X						
	DSY-SD-W24-2448	/ 1231		2	X	X		X						
	DSY-SD-DUP28-100611	/ —		3	X	X	X	X						
	DSY-SD-W30-0012	/ 1245		3	X	X	X	X						
	DSY-SD-W30-1224	/ 1248		2	X	X		X						
	DSY-SD-W30-2448	/ 1251		2	X	X		X						
	DSY-SD-W28-0012	/ 1300		3	X	X	X	X						

COMMENTS

DSY-SD-T29-2448 is designated as the lab QC

DUP28 → W24-0012

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	10/7/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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MK

Client	Contact	Phone # ( )	Fax # ( )
Address SEE PAGE ONE	City	State	Zip Code
Purchase Order #	Proj. Name / No. CTO WE61, Derecktor SY	Katahdin Quote #	
Bill (if different than above)	Address		
Sampler (Print / Sign) Michael Horton		Copies To:	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: Filt. ❒Y ❒N PAH	Filt. ❒Y ❒N PCB	Filt. ❒Y ❒N Metals (Pb)	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N	Filt. ❒Y ❒N
	DSY-SD-W28-1224	10/6/11 / 1303	SED	2	X	X	X							
	DSY-SD-W28-2448	10/6/11 / 1306	SED	2	X	X	X							
	DSY-~~RB1~~ SD-RB11-100611	10/6/11 / 1430	AQ	5	X	X	X							
		/												
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		/												
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Horton	10/7/11 1300	Andrew Hanlon			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
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Tel: (207) 874-2400
Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8134	(978) 474-8949

Address	City	State	Zip Code
250 Andover St. Suite 200	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton MH	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)					
	DSY-SD-C25-0012	10/7/11 /0800	SED	3	X	X	X	X						
	DSY-SD-C25-1224	/0803		2	X	X		X						
	DSY-SD-C25-2448	/0806		2	X	X		X						
	DSY-SD-DUP29-100711	/—		2	X	X		X						
	DSY-SD-C21-0012	/0840		3	X	X	X	X						
	DSY-SD-C21-1224	/0843		2	X	X		X						
	DSY-SD-C21-2448	/0846		2	X	X		X						
	DSY-SD-18-0012	/1000		3	X	X	X	X						
	DSY-SD-18-1224	/1003		2	X	X		X						
	DSY-SD-18-2448	/1006		2	X	X		X						
	DSY SD-C09-0012	/1020		3	X	X	X	X						
	DSY-SD-C09-1224	/1023		2	X	X		MA	X					
	DSY-SD-C09-2448	/1026		2	X	X			X					
	DSY-SD-DUP30-100711	/—		2	X	X			X					
	DSY-SD-C29-0012	/1125		3	X	X	X	X						
	DSY-SD-C29-1224	/1128		2	X	X		X						

COMMENTS

DUP29 -> C25-1224 DUP30-C09-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MH	10/7/11 1300	Andrew Hamler			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Tel: (207) 874-2400
Fax: (207) 775-4029

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MH

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Dorchester SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-C13-0012	10/7/11 / 1100	SED	3	X	X	X	X						
	DSY-SD-C13-1224	/ 1103		2	X	X		X						
	DSY-SD-C13-2448	/ 1106		2	X	X		X						
	DSY-SD-C29-2448	/ 1131		2	X	X		X						
	DSY-SD-C17-0012	/ 1150		3	X	X	X	X						
	DSY-SD-C17-1224	/ 1153		2	X	X		X						
	DSY-SD-C17-2448	/ 1156		2	X	X		X						
	DSY-SD-RB12-100711	10/7/11 / 1245	AQ	5	X	X		X						
		/												
		/												
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		/												
		/												

COMMENTS DSY-SD-C13-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
TetraTech NUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover Street	Wilmington	MA	01887

Purchase Order # | Proj. Name / No. CTO WE 61 Dereck to Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

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KATAHDIN PROJECT NUMBER

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AIRBILL NO:

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ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ☐Y ☐N HMW PAHs	Filt. ☐Y ☐N Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N TOC	Filt. ☐Y ☐N PCBs	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-BB26-0012	9/21/11 0855	SED	3	X	X	X	X					
	DSY-SD-BB26-1224	0857		2	X	X		X					
	DSY-SD-BB26-2448	0900		2	X	X		X					
	DSY-SD-BC28-0012	0920		3	X	X	X	X					
	DSY-SD-BC28-1224	0923		2	X	X		X					
	DSY-SD-BC28-2448	0926		2	X	X		X					
	DSY-SD-BC30-0012	1015		3	X	X	X	X					
	DSY-SD-BC30-1224	1018		2	X	X		X					
	DSY-SD-BC30-2448	1021		2	X	X		X					
	DSY-SD-DUP01-092111	/		3	X	X	X	X					
	DSY-SD-BD26-0012	1050		3	X	X	X	X					
	DSY-SD-BD26-1224	1053		2	X	X		X					
	DSY-SD-BD26-2448	1056		2	X	X		X					
	DSY-SD-BG26-0012	1215		3	X	X	X	X					
	DSY-SD-BG26-1224	1218		2	X	X		X					
	DSY-SD-BG26-2448	1221		2	X	X		X					

COMMENTS DUP01 → DSY-SD-BD26-0012

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/23/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Scarborough, ME 04074
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Client	Contact	Phone #	Fax #
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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WECI Dereckter Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MH	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: HMW PAH (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	PCBs (Filt. ☐Y ☐N)
	DSY-SD-BI23-0012	9/21/11 / 1255	SED	3	X	X	X	X
	DSY-SD-BI23-1224	/ 1258		2	X	X		X
	DSY-SD-BI23-2448	/ 1301		2	X	X		X
	DSY-SD-DUP02-092111	/ —		2	X	X		X
	DSY-SD-BG28-0012	/ 1320		6	X	X	X	X
	DSY-SD-BG28-1224	/ 1323		2	X	X		X
	DSY-SD-BG28-2448	/ 1326		2	X	X		X
	DSY-SD-~~BG~~ BI26-0012	/ 1405		3	X	X	X	X
	DSY-SD-BI26-1224	/ 1408		2	X	X		X
	DSY-SD-BI26-2448	/ 1411		2	X	X		X
	DSY-SD-DUP03-092111	/ —		2	X	X		X
	DSY-SD-BE30-0012	/ 1445		3	X	X	X	X
	DSY-SD-BE30-1224	/ 1448		2	X	X		X
	DSY-SD-BE30-2448	/ 1451		2	X	X		X
	DSY-SD-BE28-0012	9/22/11 / 1450		3	X	X	X	X
	DSY-SD-BE28-1224	/ 1453		2	X	X		X

COMMENTS DSY-SD-BG28-0012 is designated for Lab QC

DUP02 → BI23-2448 DUP03 → BI26-1224

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MH	9/23/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Scarborough, ME 04074
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Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Dereck for Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / Michael Horton	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: HMW PAH	Metals (Cu, Zn, Pb)	PCBs	TOC	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-BE28-2448	9/22/11 1456	SED	2	X	X	X							
	DSY-SD-BF23-0012	/ 1420		3	X	X	X	X						
	DSY-SD-BF23-1224	/ 1423		2	X	X	X							
	DSY-SD-BF23-2448	/ 1426		2	X	X	X							
	DSY-SD-BB02-0012	/ 0940		3	X		X	X	X					
	DSY-SD-BB02-1224	/ 0943		2	X		X		X					
	DSY-SD-BB02 2448	/ 0946		2	X		X		X					
	DSY-SD-BF06-0012	/ 1000		3	X		X	X	X					
	DSY-SD-DUP04-092211	/ —		2	X		X		X					
	DSY-SD-BF06-1224	/ 1003		2	X		X		X					
	DSY-SD-BF06 2448	/ 1006		4	X		X		X					
	DSY-SD-~~BF06~~ BB06-0012	/ 1045		3	X		X	X	X					
	DSY-SD-~~BF06~~ BB06-1224	/ 1048		2	X		X		X					
	DSY-SD-~~BF06~~ BB06-2448	/ 1051		2	X		X		X					
	DSY-SD-BB10-0012	/ 1105		3	X		X	X	X					
	DSY-SD-BB10-1224	/ 1108		2	X		X		X					

COMMENTS DSY-SD-BF06-2448 is designated for Lab QC

DUP04 → BB02-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Horton	9/23/11 1300	Andrew Hallo			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE 61, Derecktor Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / [signature] | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAHs (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	PCBs (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)
	DSY-SD-BB10-02448 MS/MSD	9/22/11 1111	SED	2	X	X	X	
	DSY-SD-DUP05-092211	/ —		2	X	X	X	
	DSY-SD-BB06-0012	/ 1120		3	X	X	X	X
	DSY-SD-BB06-1224	/ 1123		2	X	X	X	
	DSY-SD-BB06-2448	/ 1126		2	X	X	X	
	DSY-SD-AT20-0012	/ 1200		3	X	X	X	X
	DSY-SD-AT20-1224	/ 1203		2	X	X	X	
	DSY-SD-AT20-2448	/ 1206		2	X	X	X	
	DSY-SD-AT16-0012	/ 1215		3	X	X	X	X
	DSY-SD-AT16-1224	/ 1218		2	X	X	X	
	DSY-SD-AT16-2448	/ 1221		2	X	X	X	
	DSY-SD-DUP06-092211	/ —		2	X	X	X	
	DSY-SD-AP20-0012	/ 1230		3	X	X	X	X
	DSY-SD-AP20-1224	/ 1233		2	X	X	X	
	DSY-SD-AP20-2448	/ 1236		2	X	X	X	
	DSY-SD-AX26-0012	/ 1340		3	X	X	X	X

COMMENTS DSY-SD-AP20-2448 is designated as lab QC

DUP05 → BB10-2448 DUP06 → AT16-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/23/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Scarborough, ME 04074
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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
SEE PAGE ONE	CTO WF61, Derecktor Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / [signature]	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (HMW) Filt. ☐Y ☐N	Metals (Pb) Filt. ☐Y ☐N	PCBs Filt. ☐Y ☐N	TOC Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AX20-1224	9/22/11 / 1343	SED	2	X	X	X							
	DSY-SD-AX20-2448	/ 1346		2	X	X	X							
	DSY-SD-AT24-0012	/ 1400		3	X	X	X	X						
	DSY-SD-DUP07-092211	/ —		3	X	X	X	X						
	DSY-SD-AT24-1224	/ 1403		2	X	X	X							
	DSY-SD-AT24-2448	/ 1406		2	X	X	X							
	DSY-SD-RB01-092111	9/21/11 / 1700	AQ	5	X	X	X							
	DSY-SD-RB02-092211	9/22/11 / 1645	AQ	5	X	X	X							
		/												
		/												
		/												
		MJH /												
		/												
		/												
		/												
		/												

COMMENTS

DUP07 -> AT24-0012

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[signature]	9/23/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
TetraTech NUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address 250 INDOVER ST. SUITE 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61, Dereck for Shipyard Katahdin Quote #

Bill (if different than above) Address

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ANALYSIS AND CONTAINER TYPE · PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	PAH Filt. ☐Y ☐N	Metals (Pb) Filt. ☐Y ☐N	PCB Filt. ☐Y ☐N	TOC. Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-~~AY30~~-SD-AY30-0012	9/23/11 / 0825	SED	~~3~~6	X	X	X	X						
	DSY-SD-AY30-1224	/0828		2	X	X	X							
	DSY-SD-AY30-2448	/0831		2	X	X	X							
	DSY-SD-AT30-0012	/0855		3	X	X	X	X						
	DSY-SD-AT30-1224	/0858		2	X	X	X							
	DSY-SD-AT30-2448	/0901		2	X	X	X							
	DSY-SD-DUP08-092311	/ —		2	X	X	X							
	DSY-SD-A030-0012	/0915		3	X	X	X	X						
	DSY-SD-A030-1224	/0918		2	X	X	X							
	DSY-SD-A030-2448	/0921		2	X	X	X							
	DSY-SD-AK26-0012	/1005		3	X	X	X	X						
	DSY-SD-AK26-1224	/1008		2	X	X	X							
	DSY-SD-AK26-2448	/1011		2	X	X	X							
	DSY-SD-AK24-0012	/1020		3	X	X	X	X						
	DSY-SD-AK24-1224	/1023		2	X	X	X							
	DSY-SD-AK24-2448	/1026		2	X	X	X							

MJH

COMMENTS DSY-SD-AY30-0012 ~~does not contain~~ Lab QC

DUP08 → AT30-1224

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MJH	9/27/11 1300	Andrea Haley			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Scarborough, ME 04074
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Purchase Order # SEE PAGE ONE | Proj. Name / No. CTO WE61. Dereck for Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / [signature] | Copies To:

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AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: PAHs	Metals (Pb)	PCBs	TOC	Filt. ☐Y ☐N (×10)
	DSY-SD-DUP09-092311	9/23/11 / —	SED	2	X	X	X		
	DSY-SD-AK28-0012	/ 1045		3	X	X	X	X	
	DSY-SD-AK28-1224	/ 1048		2	X	X	X		
	DSY-SD-AK28-2448	/ 1051		2	X	X	X		
	DSY-SD-AK30-0012	/ 1100		3	X	X	X	X	
	DSY-SD-AK30-1224	/ 1103		2	X	X	X		
	DSY-SD-AK30-2448	/ 1106		4	X	X	X		
	DSY-SD-AI28-0012	/ 1130		3	X	X	X	X	
	DSY-SD-AI28-1224	/ 1133		2	X	X	X		
	DSY-SD-AI28-2448	/ 1136		2	X	X	X		
	DSY-SD-RB03-092311	/ 1330	AQ	5	X	X	X		
	DSY-SD-AI30-0012	9/26/11 / 1010	SED	3	X	X	X	X	
	DSY-SD-AI30-1224	/ 1013		2	X	X	X		
	DSY-SD-AI30-2448	/ 1016		2	X	X	X		
	DSY-SD-AI AG28-0012	/ 1100		3	X	X	X	X	
	DSY-SD-AG28-1224	/ 1103							

COMMENTS DSY-SD-AK30-2448 is designated as Lab QC DUP09 → AK24-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/27/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MH	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	Metals (Pb)	TOC	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N
	DSY-SD-AG28-2448	9/26/11 1106	SED	2	X	X	X			
	DSY-SD-DUP10-092611	/ —		2	X	X	X			
	DSY-SD-AG24-0012	/ 1145		3	X	X	X	X		
	DSY-SD-AG24-1224	/ 1148		2	X	X	X			
	DSY-SD-AG24-2448	/ 1151		2	X	X	X			
	DSY-SD-AI24-0012	/ 1200		3 6	X	X	X	X		
	DSY-SD-AI24-1224	/ 1203		2	X	X	X			
	DSY-SD-AI24-2448	/ 1206		2	X	X	X			
	DSY-SD-AI26-0012	/ 1305		3	X	X	X	X		
	DSY-SD-AI26-1224	/ 1308		2	X	X	X			
	DSY-SD-AI26-2448	/ 1311		2	X	X	X			
	DSY-SD-AG26-0012	/ 1320		3	X	X	X	X		
	DSY-SD-AG26-1224	/ 1323		2	X	X	X			
	DSY-SD-AG26-2448	/ 1326		2	X	X	X			
	DSY-SD-DUP611-092611	/ —		3	X	X	X	X		
	DSY-SD-AC24-0012	/ 1415		2	X	X	X NOT		X	

COMMENTS

AT24-0012 is designated as lab QC

AG28-2448 IS DUP10

AG26-0012 is DUP11

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MH	9/27/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Purchase Order # SEE PAGE ONE | Proj. Name / No. CTO WE 61, Derecktor Shipyard | Katahdin Quote #

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Sampler (Print / Sign) Michael Horton

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REMARKS: ___

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: ___

TEMP°C ___ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ❒Y ❒N PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)					
	DSY-SD-AC24-1224	9/26/11 1418	SED	2	X	X			X					
	DSY-SD-AC24-2448	1421		2	X	X			X					
	DSY-SD-~~AE~~ MJH AE24-0012	1430		3	X	X	X	X						
	DSY-SD-AE24-1224	1433		2	X	X		X						
	DSY-SD-AE24-2448	1436		2	X	X		X						
	DSY-SD-~~RBOT~~ RB04-092611	1625	AQ	5	X	X			X					
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		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/27/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Client	Contact	Phone #	Fax #
TENUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address 250 Andover St. Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61, Derecktor Shipyard Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton / MJH Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE • PRESERVATIVES: PAH	PCB	Metals (Pb)	Metals (Pb,Cu,Zn)	TOC	Filt. ☐Y ☐N
	DSY-SD-AC26-0012	9/28/11 / 0930	SED	3	X	X	X		X	
	DSY-SD-AC26-1224	/ 0933		2	X	X	X			
	DSY-SD-AC26-2448	/ 0936		2	X	X	X			
	DSY-SD-DUP13-092811	/ —		2	X	X	X			
	DSY-SD-AE28-0012	/ 1035		3	X	X		X	X	
	DSY-SD-AE28-1224	/ 1038		2	X	X		X		
	DSY-SD-AE28-2448	/ 1041		4	X	X		X		
	DSY-SD-AE26-0012	/ 1015		3	X	X	X		X	
	DSY-SD-AE26-1224	/ 1018		2	X	X	X			
	DSY-SD-AE26-2448	/ 1021		2	X	X	X			
	DSY-SD-AC28-0012	/ 1105		3	X	X	X		X	
	DSY-SD-AC28-1224	/ 1108		2	X	X	X			
	DSY-SD-AC28-2448	/ 1111		2	X	X	X			
	DSY-SD-DUP14-092811	/ —		3	X	X	X		X	
	DSY-SD-AE30-0012	/ 1350		3	X	X	X		X	
	DSY-SD-AE30-1224	/ 1353		2	X	X	X			

COMMENTS DSY-SD-AE28-2448 is designated as lab QC

DUP13 → AC26-2448 DUP14 → AC28-0012

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MJH	9/28/11 1520				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Client	Contact	Phone #	Fax #
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Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / [signature]	

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE · PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AD13-1224	9/29/11 / 0928	SED	2	X	X			X					
	DSY-SD-AD13-2448	/ 0931		2	X	X			X					
	DSY-SD-~~AD~~ DUP15-092911	/ —		2	X	X			X					
	DSY-SD-AB15-0012	/ 1020		3	X	X	X		X					
	DSY-SD-AB15-1224	/ 023		2	X	X			X					
	DSY-SD-AB15-2448	/ 026		2	X	X			X					
	DSY-SD-AB11-0012	/ 1105		3	X	X	X		X					
	DSY-SD-AB11-1224	/ 1108		2	X	X			X					
	DSY-SD-AB11-2448	/ 1111		2	X	X			X					
	DSY-SD-~~AD~~ AD21-0012	/ 1145		3	X	X	X		X					
	DSY-SD-AD21-1224	/ 1148		2	X	X			X					
	DSY-SD-AD21-2448	/ 1151		2	X	X			X					
	DSY-SD-AD01-0012	/ 1305		3	X	X	X	X	~~X~~ ^AgHg					
	DSY-SD-AD01-1224	/ 1308		2	X	X		X						
	DSY-SD-AD01-2448	/ 1311		2	X	X		X						
	DSY-SD-~~AB~~ AB05-092811	9/28/11 / 1530	AQ	~~5~~ 2	X	X			X					

COMMENTS Samples collected from AB15 potentially have heavy contamination

DSY-SD-AD21-2448 is designated as lab QC DUP15 -> AD13-2448

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[signature]	9/29/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Michael Horton / [signature]	

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TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AG30-0012	9/28/11 / 1330	SED	3	X	X	X	X										
	DSY-SD-AG30-1224	/ 1333		2	X	X		X										
	DSY-SD-AG30-2436	/ 1336		2	X	X		X										
	DSY-SD-AC30-0012	/ 1435		6	X	X	X	X										
	DSY-SD-AC30-1224	/ 1438		2	X	X		X										
	DSY SD-AC30-2448	/ 1441		2	X	X		X										
	DSY-SD-AD05-0012	9/29/11 / 0840		3	X	X	X		X									
	DSY-SD-AD05-1224	/ 0843		2	X	X			X									
	DSY-SD-AD05-2448	/ 0846		2	X	X			X									
	DSY-SD-AD09-0012	/ 0820		3	X	X	X		X									
	DSY-SD-AD09-1224	/ 0823		2	X	X			X									
	DSY-SD-AD09-2448	/ 0826		2	X	X			X									
	DSY-SD-AD17-0012	/ 0950		3	X	X	X		X									
	DSY-SD-AD17-1224	/ 0953		2	X	X			X									
	DSY-SD-AD17-2448	/ 0956		2	X	X			X									
	DSY-SD-AD13-0012	/ 0925		3	X	X	X		X									

COMMENTS DSY-SD-AC30-0012 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/30/11 1720	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Michael Horton /	

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KATAHDIN PROJECT NUMBER _____

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AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE • PRESERVATIVES									
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
					PAH	PCB	Metals (Pb, Cu, Zn)							
	DSYSD RB06-092911	9/29/11 / 1558	AQ	5	X	X	X							
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COMMENTS

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	9/30/11 1320				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8499

Address 250 Andover Street, Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61, Dereckton Shipyard Katahdin Quote #

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Sampler (Print / Sign) Christopher Ferdin / Christopher L Ferdin Copies To:

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SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: ____

TEMP°C ____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: GRAIN SIZE	Filt. ❒Y ❒N (×10)
	DSY-SD-GP01-0012	09/27/11 / 1530	SED	1	X	
	DSY-SD-~~GP01~~ GP02-0012	/ 1440		2	X	
	DSY-SD-GP03-0012	/ 1400		1	X	
	DSY-SD-GP04-0012	/ 1340		1	X	
	DSY-SD-GP05-0012	/ 1300		1	X	
	DSY-SD-GP06-0012	/ 1220		1	X	
	DSY-SD-GP07-0012	/ 1130		1	X	
	DSY-SD-GP08-0012	/ 1050		1	X	
	DSY-SD-GP09-0012	/ 1000		1	X	
	DSY-SD-GP10-0012	/ 0900		1	X	
	DSY-SD-DUP12-092711	/ 1500		1	X	
		/				
		/				
		/				
		/				
		/				

COMMENTS DSY-SD-GP02-0012 is designated as lab QC * CF DUP12 → GP03

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[signature]	9/30/11	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
TENUS	STEVE PARKER	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover St. Suite 200	Wilmington	MA	01887

Purchase Order # | Proj. Name / No. CTO WE61, Derecktor Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: EPH	PCB	TOC	Metals (Pb)	Filt. ☐Y ☐N (×10)
	DSY-SD-509-0012	9/30/11 / 0755	SED	3	X	X	X	X	
	DSY-SD-509-1224	/ 0758		2	X	X		X	
	DSY-SD-509-2448	/ 0801		2	X	X		X	
	DSY-SD-DUP16-093011	/ —		2	X	X		X	
	DSY-SD-009-0012	/ 0946		3	X	X	X	X	
	DSY-SD-009-1224	/ 0943		2	X	X		X	
	DSY-SD-009-2448	/ 0946		2	X	X		X	
	DSY-SD-017-0012	/ 0920		3	X	X	X	X	
	DSY-SD-017-1224	/ 0923		2	X	X		X	
	DSY-SD-017-2448	/ 0926		4	X	X		X	
	DSY-SD-013-0012	/ 0905		3	X	X	X	X	
	DSY-SD-013-1224	/ 0908		2	X	X		X	
	DSY-SD-013-2448	/ 0911		2	X	X		X	
	DSY-SD-DUP17-093011	/ —		3	X	X	X	X	
	DSY-SD-513-0012	/ 1050		3	X	X	X	X	
	DSY-SD-513-1224	/ 1053		2	X	X		X	

COMMENTS DSY-SD-017-2448 is designated as lab QC
DUP16 → 509-2448 DUP17 → 013-0012

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Peter Lee	10-4-11 1225	Andrew Hale			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derektor Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	PAH	PCB	TOC	Metals (Pb)	Metals (Pb Cu Zn)					
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY SD-S13-2448	9/30/11 / 1056	SED	4 MH	X	X		X						
	DSY-SD-W13-0012	9/30/11 / 1030		3	X	X	X		X					
	DSY-SD-W13-1224	/ 1033		2	X	X			X					
	DSY-SD-W13-2448	/ 1036		2	X	X			X					
	DSY-SD-DUP18-093010	/ —		2	X	X			X					
	DSY-SD-W09-0012	/ 1015		3	X	X	X		X					
	DSY-SD-W09-1224	/ 1018		2	X	X			X					
	DSY-SD-W09-2448	~~1025~~ MH / 1021		2	X	X			X					
	DSY-SD-W17-0012	/ 1200		3	X	X	X		X					
	DSY-SD-W17-1224	/ 1203		2	X	X			X					
	DSY SD-W17-2448	/ 1206		2	X	X			X					
	DSY-SD-W21-0012	/ 1220		3	X	X	X		X					
	DSY-SD-W21-1224	/ 1223		2	X	X			X					
	DSY-SD-W21-2448	/ 1226		2	X	X			X					
	DSY SD-DUP19-093011	/ —		3	X	X	X		X					
	DSY-SD-S17-0012	/ 1320		3	X	X	X	X						

COMMENTS DSY SD-S13-2448 Designated as lab QC

DUP18 → W13-1224 DUP19 → W21-0012

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-4-11 1225				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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600 Technology Way
Scarborough, ME 04074
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Fax: (207) 775-4029

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Page 3 of 3

Client	Contact	Phone #	Fax #
TENUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover St. #200	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61/Derecktor Sy	

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Sampler (Print / Sign) Michael Horton/MHA Net — Copies To:

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TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N	TOC	Filt. ☐Y ☐N	PCB	Filt. ☐Y ☐N	PAH	Filt. ☐Y ☐N	Metals (Pb)	Filt. ☐Y ☐N	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-S17-1224	9/30/11 / 1323	SED	2				X		X		X							
	DSY-SD-S17-2448	/ 1326		2				X		X		X							
	DSY-SD-021-0012	/ 1335		3		X		X		X		X							
	DSY-SD-021-1224	/ 1338		2				X		X		X							
	DSY-SD-021-2448	/ 1341		4				X		X		X							
	DSY-SD-S21-0012	/ 1350		3		X		X		X		X							
	DSY-SD-S21-1224	/ 1353		2				X		X		X							
	DSY-SD-S21-2448	/ 1356		2				X		X		X							
	DSY-SD-RB07-093011	/ 1430		5				X		X				X					
	DSY-SD-K09-0012	10/3/11 / 0956		3		X		X		X		X							
	DSY-SD-K09-1224	/ 0953		2				X		X		X							
	DSY-SD-K09-2448	/ 0956		2				X		X		X							
	DSY-SD-DUP21-100311	/ —		3		X		X		X		X							
	DSY-SD-K05-0012	/ 1010		3		X		X		X				X					
	DSY-SD-K05-1224	/ 1013		2		[illegible]		X		X				X					
	DSY-SD-K05-2448	/ 1016		2				X		X				X					

COMMENTS DSY-SD-021-2448 is designated as lab QC

DUP21 → K09-0012 DUP20 → S21-2448 (NOT Listed on Chain)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	10/4/11 1225	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MH	

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)					
	DSY-SD-K13-0012	10/31/11 / 1106	SED	3	X	X	X	X						
	DSY-SD-K13-1224	/ 1103		2	X	X		X						
	DSY-SD-K13-2448	/ 1106		4	X	X		X						
	DSY-SD-K17-0012	/ 1130		3	X	X	X	X						
	DSY-SD-K17-1224	/ 1133		2	X	X		X						
	DSY-SD-K17-2448	/ 1136		2	X	X		X						
	DSY-SD-Y03-0012	/ 1215		3	X	X	X		X					
	DSY-SD-Y03-1224	/ 1218		2	X	X			X					
	DSY-SD-Y03-2448	/ 1221		2	X	X			X					
	DSY-SD-DUP22 (10031)	/ —		2	X	X			X					
	DSY-SD-K21-0012	/ 1245		3	X	X	X	X						
	DSY-SD-K21-1224	/ 1248		2	X	X		X						
	DSY-SD-K21-2448	/ 1251		2	X	X		X						
	DSY-SD-Y25-0012	/ 1345		3	X	X	X	X						
	DSY-SD-Y25-1224	/ 1348		2	X	X		X						
	DSY-SD-Y25-2448	/ 1351		2	X	X		X						

COMMENTS DSY-SD-K13-2448 is designated as lab QC DUP22 → Y03-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/31/11 1225				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Tel: (207) 874-2400
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		( )	( )

Address	City	State	Zip Code
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Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTOWEGL, Derecktor Shipyard	

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Sampler (Print / Sign)	Copies To:
Michael Horton /	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	Metals (Pb)	TOC	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N
	DSY-SD-DUP23-100311	10/3/11 / —	SED	2	X	X	X			
	DSY-SD-Y26-0012	/ 1405		3	X	X	X	X		
	DSY-SD-Y26-1224	/ 1408		2	X	X	X			
	DSY-SD-Y26-2448	/ 1411		2	X	X	X			
	DSY-SD-Y28-0012	/ 1430		3	X	X	X	X		
	DSY-SD-Y28-1224	/ 1433		2	X	X	X			
	DSY-SD-Y28-2448	/ 1436		2	X	X	X			
	DSY-SD-Y30-0012	/ 1500		3	X	X	X	X		
	DSY-SD-Y30-1224	/ 1503		2	X	X	X			
	DSY-SD-RB08-100311	/ 1630	AQ	5	X	X		X		
	DSY-SD-DUP20-093011	9/30/11 / —	SED	2	X	X	X			
		/								
		/								
		/								
		/								
		/								

COMMENTS DSY-SD-~~DUP~~ MW Y28 2448 is designated as Lab QC

DSY-SD-Y30-0012, DSY-SD-Y30-1224 pot~~DUP23~~ contain ~~Y25-2448~~

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-4-11 1225				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Fax: (207) 775-4029

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Client	Contact	Phone #	Fax #
Tetra Tech NUS	STEVE PARKER	(978) 474 8434	(978) 474-8475

Address	City	State	Zip Code
250 ANDOVER ST SUITE 200	WILMINGTON	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61 Derecktor SY	

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / MH | Copies To:

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AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-G01-0012	10/12/11 / 0920	SED	3	X	X	X	X						
	DSY-SD-G01-1224	/ 0923		2	X	X	X							
	DSY-SD-G01-2448	/ 0926		2	X	X	X							
	DSY-SD-G05-0012	/ 1205		3	X	X	X	X						
	DSY-SD-G05-1224	/ 1208		2	X	X	X							
	DSY SD-G05-2448	/ 1211		2	X	X	X							
	DSY-SD-DUP31-101211	/ —		2	X	X	X							
	DSY-SD-G09-0012	/ 1240		3	X	X	X	X						
	DSY-SD-G09-1224	/ 1243		2	X	X	X							
	DSY-SD-G09-2448	/ 1246		2	X	X	X							
	DSY-SD-G13-0012	/ 1310		3	X	X	X	X						
	DSY-SD-G13-1224	/ 1313		2	X	X	X							
	DSY-SD-G13-2448	/ 1316		2	X	X	X							
	DSY-SD-G17-0012	/ 1325		3	X	X	X	X						
	DSY-SD-G17-1224	/ 1328		2	X	X	X							
	DSY-SD-G17-2448	/ 1331		2	X	X	X							

COMMENTS DUP31 → G05-2448

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE 61, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MJH MA	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

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SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

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TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Asbestos (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-DUP32-101211	10/12/11 / —	SED	2	X	X	X							
	DSY-SD-G21-0012	/ 1345		3	X	X	X	X						
	DSY-SD-G21-1224	/ 1348		2	X	X	X							
	DSY-SD-G21-2448	/ 1351		4	X	X	X							
	DSY-SD-G25-0012	/ 1405		3	X	X	X	X						
	DSY-SD-G25-1224	/ 1408		2	X	X	X							
	DSY-SD-G25-2448	/ 1411		2	X	X	X							
	DSY-SD-AA01-0012	/ 1420		4	X	X	X	X	X					
	DSY-SD-AA01-1224	/ 1423		3	X	X	X		X					
	DSY-SD-AA01-2448	/ 1428		3	X	X	X		X					
	DSY-SD-DUP33-101211	/ —		3	X	X	X		X					
	DSY-SD-AA05-0012	/ 1445		4	X	X	X	X	X					
	DSY-SD-AA05-1224	/ 1448		3	X	X	X		X					
	DSY-SD-AA05-2448	/ 1451		3	X	X	X		X					
	DSY-SD-RB13-101211	/ 1600	AQ	5	X	X	X							
		/												

COMMENTS DSY-SD-G21-2448 is designated as Lab QC
DUP32 → G17-2448 DUP33 → AA01-2448
AA05-0012 TOC Jar was not sent until 10/17/11 shipment

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

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Name Steve Parker	Name
Company Tetra Tech NUS	Company
Address 250 Andover St.	Address
City Wilmington	City
State, Zip MA 01887	State, Zip
Phone (978) 474-8434	Phone
Fax (978) 474-8499	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Directive 5Y	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1155	~~09~~ MH 10/18/11 DSY-SD-AA~~11~~09-0012	SED	1	1	1	1		4	
	1158	~~09~~ MH 10/18/11 DSY-SD-AA~~11~~09-1224		1	1	1			3	
	1201	~~09~~ MH 10/18/11 DSY-SD-AA~~11~~09-2448		1	1	1			3	
	1220	DSY-SD-AA13-0012		1	1	1	1		4	
	1223	DSY-SD-AA13-1224		1	1	1			3	
	1226	DSY-SD-AA13-2448		2	2	2	1	Lab QC	~~6~~ 6	
	1245	DSY-SD-AA17-0012		1	1	1	1		4	
	1248	DSY-SD-AA17-1224		1	1	1			3	
	1251	DSY-SD-AA17-2448		1	1	1			3	
	1305	DSY-SD-AA21-0012		1	1	1	1		4	
	1308	DSY-SD-AA21-1224		1	1	1			3	
	1311	DSY-SD-AA21-2448		1	1	1			3	

	Date/Time	
Sample Kit Prep'd by: (Signature)		Received By: (Signature)
Michael Horton	10/17/11 1300	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

EOC updated to change all AA11 samples to AA09

Michael Horton

Details:

Page 1 of 3

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Date Shipped ____

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State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Derecktor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: _____

CAR #: _____

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 —	DSY-SD-DUP34-101311	SED	1	1	1		AA21-2448	3	
	1325	DSY-SD-AA27-0012		1	1	1	1		4	
	1328	DSY-SD-AA28-1224		1	1	1			3	
	1331	DSY-SD-AA28-2448		1	1	1			3	
	1400	DSY-SD-AA26-0012		1	1	1	1		4	
	1403	DSY-SD-AA26-1224		1	1	1			3	
	1406	DSY-SD-AA26-2448		1	1	1			3	
	1430	DSY-SD-AA28-0016		1	1	1	1		4	
	—	DSY-SD-~~AA~~DUP35-101311		1	1	1	1	AA28-0016	4	
	1445	DSY-SD-AA30-0012		1	1	1	1		4	
	1448	DSY-SD-AA30-1224		1	1	1			3	
	1455	DSY-SD-G30-G018		1	1		1		3	

Sample Kit Prep'd by: (Signature)	Date/Time 10/17/11 1300	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

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Date Shipped _____

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Name	Name
Company SEE PAGE ONE	Company
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City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Dockstor SY	**Sampler's (Signature):** Michael Horton

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PCB	Metals (Pb, Cu, Zn)	PAH	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1630	DSY-SD-RB14-101311	AQ	2	1	2			5	
	10/12/11 1415	DSY-SD-AA05-0012	SED				1	supposed to be in last shipment but was missed	1	

Sample Kit Prep'd by: (Signature)	Date/Time 10/17/11 1300	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

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Scarborough, ME 04074
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Fax: (207) 775-4029

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Tetra Tech NUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover St. #200	Wilmington	MA	01945

Purchase Order # | Proj. Name / No. CTO WE61, Dereck Lor Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO: _____

TEMP°C _____ ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ❒Y ❒N — Total Suspended Solids
	DSY-SW-GP05-090111	9/1/11 / 1210	SW	1	X
	DSY-SW-GP03-090111	/ 1200		1	X
	DSY-SW-GP04-090111	/ 1150		1	X
	DSY-SW-GP07-090111	/ 1135		1	X
	DSY-SW-GP02-090111	/ 1120		1	X
	DSY-SW-GP06-090111	/ 1105		1	X
	DSY-SW-GP08-090111	/ 1040		1	X
	DSY-SW-GP09-090111	/ 1020		2	X
	DSY-SW-GP10-090111	/ 1000		1	X
	DSY-SW-GP01-090111	/ 0920		1	X
	DSY-SW-DUP01-090111	/ —		1	X
		/			
		/			
		/	MJH		
		/			
		/			

COMMENTS

DSY-SW-GP09-090111 is Lab QC

DSY-SW-GP10-090111 = DUP01

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9/2/11 1130				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS

CUSTOMER COPY

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
TetraTech NUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover St. #200	Wilmington	MA	01887

Purchase Order # | Proj. Name / No. CTO WE61, Dereckton Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ☐Y ☐N — Total Suspended Solids
	DSY-SW-GP07-090611	9/6/11 / 0955	SW	1	X
	DSY-SW-GP08-090611	/ 0950		1	X
	DSY-SW-GP09-090611	/ 0945		1	X
	DSY-SW-GP05-090611	/ 1000		1	X
	DSY-SW-GP01-090611	/ 1020		1	X
	DSY-SW-GP02-090611	/ 1015		1	X
	DSY-SW-GP04-090611	/ 1010		1	X
	DSY-SW-GP10-090611	/ 0940		1	X
	DSY-SW-GP06-090611	/ 1005		1	X
	DSY-SW-GP03-090611	/ 1025		1	X
	DSY-SW-DUP02-090611	/ —		1	X
		/			
		/			
		/			
		/			
		/			

MSH

COMMENTS

DUP02 → GP09

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Horton	9/6/11 1410	Andrew M. Vala			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES. EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

CUSTOMER COPY

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page 1 of 1

Client	Contact	Phone #	Fax #
Tetra Tech NUS	Steve Parker	(978) 474-8434	(978) 474-8499

Address	City	State	Zip Code
250 Andover Street	Wilmington	MA	01945

Purchase Order # | Proj. Name / No. CTO WE61 Derecktor Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ❒ FED EX ❒ UPS ❒ CLIENT

AIRBILL NO:

TEMP°C ❒ TEMP BLANK ❒ INTACT ❒ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Total Suspended Solids (Filt. ❒Y ❒N)
	DSY-SW-GP01-091711	9/17/11 / 1255	SW	1	X
	DSY-SW-GP02-091711	/ 0825		1	X
	DSY-SW-GP03-091711	/ 0915		2	X
	DSY-SW-GP04-091711	/ 0950		1	X
	DSY-SW-GP05-091711	/ 1200		1	X
	DSY-SW-GP06-091711	/ 1030		1	X
	DSY-SW-GP07-091711	/ 1320		1	X
	DSY-SW-GP08-091711	/ 1400		1	X
	DSY-SW-GP09-091711	/ 1435		1	X
	DSY-SW-GP10-091711	/ 1455		1	X
	DSY-SW-DUP03-091711	/ —		1	X
		/			
		/			
		/			
		/			
		/			

MJH 9/19/11

MJH 9/19/11

COMMENTS

DSY-SW-GP04-091711 is DUP03

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9/19/11 1310	Andrea Hodder			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES. EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

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APPENDIX B

ANALYTICAL RESULTS

B1 DATA TABLE (A-0 to 1 sed, B-1 to 2 sed, C-2 to 4 sed)

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-18-0012	DSY-SD-AA01-0012	DSY-SD-AA05-0012	DSY-SD-AA09-0012	DSY-SD-AA13-0012	DSY-SD-AA17-0012	DSY-SD-AA21-0012	DSY-SD-AA24-0012	DSY-SD-AA26-0012	DSY-SD-AA28-0016-AVG	DSY-SD-AA30-0012	DSY-SD-AB11-0012	DSY-SD-AB15-0012	DSY-SD-AC24-0012	DSY-SD-AC26-0012	DSY-SD-AC28-0012-AVG
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26	DSY-SD-AA28	DSY-SD-AA30	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1.33 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		310 U	730 U	720 U	840 UJ	800 U	730 U	800 U	580 U	320 J	375 J	360 J	330 J	470 J	690 U	680 U	400 J
BENZO(A)PYRENE	539	45	140	170	120 J	71	120	73	54	170	300	290	160	220	180 J	180	230 J
BENZO(B)FLUORANTHENE		310 U	730 U	720 U	840 UJ	800 U	730 U	800 U	580 U	330 J	460 J	570 J	570 U	340 J	690 UJ	680 UJ	365 J
BENZO(G,H,I)PERYLENE		310 U	730 U	720 U	840 UJ	800 U	730 U	800 U	580 U	480 U	410 U	170 J	570 U	610 U	690 UJ	680 UJ	655 UJ
BENZO(K)FLUORANTHENE		310 U	730 U	720 U	840 UJ	800 U	730 U	800 U	580 U	180 J	195 J	260 J	230 J	430 J	690 UJ	270 J	445 J
CHRYSENE		310 U	290 J	280 U	840 UJ	800 U	730 U	800 U	580 U	380 J	450 J	440	520 J	580 J	300 J	300 J	425 J
DIBENZO(A,H)ANTHRACENE		310 U	730 U	720 U	840 UJ	800 U	730 U	800 U	580 U	480 U	410 U	320 UJ	570 U	610 U	690 UJ	680 UJ	655 UJ
FLUORANTHENE		310 U	590 J	560 J	840 UJ	800 U	730 U	800 U	580 U	670	555 J	660	740 J	620 J	690 U	350 J	435 J
HIGH MOLECULAR WEIGHT PAHS	13903	45 J	1640 J	1340 J	540 J	71 J	560 J	73 J	54 J	2820 J	3540 J	5220 J	2960 J	3960 J	1280 J	1740 J	2790 J
INDENO(1,2,3-CD)PYRENE		310 UJ	730 U	720 U	840 UJ	800 U	730 U	800 U	580 UJ	480 UJ	410 U	170 J	570 U	610 U	690 UJ	680 UJ	655 UJ
PYRENE		310 U	620 J	610 J	420 J	800 UJ	440 J	800 UJ	580 U	770	1200	2300	980	1300	800 J	640 J	1320 J
PCBS (UG/KG)																	
AROCLOR-1016		10 U	25 UJ	25 UJ	27 UJ	28 U	23 U	26 U	19 UJ	16 U	13.5 UJ	10 UJ	18 U	19 UJ	24 UJ	23 U	21 U
AROCLOR-1221		10 U	25 UJ	25 UJ	27 UJ	28 U	23 U	26 U	19 UJ	16 U	13.5 U	10 U	18 U	19 UJ	24 UJ	23 U	21 U
AROCLOR-1232		12 U	30 UJ	30 UJ	32 UJ	33 U	28 U	31 U	22 UJ	19 U	15.5 U	12 U	21 U	23 UJ	28 UJ	27 U	25 U
AROCLOR-1242		10 U	25 UJ	25 UJ	27 UJ	28 U	23 U	26 U	19 UJ	16 U	13.5 U	10 U	18 U	19 UJ	24 UJ	23 U	21 U
AROCLOR-1248		10 U	25 UJ	25 UJ	27 UJ	28 U	23 U	26 U	19 UJ	16 U	13.5 U	10 U	18 U	19 UJ	24 UJ	23 U	21 U
AROCLOR-1254		10 U	25 UJ	25 UJ	27 UJ	28 U	240 J	26 U	19 UJ	97 J	410	1100	18 U	19 UJ	24 UJ	170	65.2 J
AROCLOR-1260		10 U	25 UJ	25 UJ	27 UJ	28 U	330	26 U	19 UJ	16 U	225	780 J	18 U	19 UJ	24 UJ	23 U	21 U
TOTAL AROCLOR	1060	10.3 U	25.7 UJ	25.7 UJ	27.7 UJ	28.7 U	570 J	26.7 U	19.4 UJ	97 J	635 J	1880 J	18.4 U	19.6 UJ	24.6 UJ	170	65.4 J
METALS (MG/KG)																	
COPPER	74	NA	36.9	49.4	63 J	62	77.8	61.3	24.5	48.8	72.6	37.5	35.7 J	109 J	119	NA	NA
LEAD	168	14.1 J	45	55.7	66.3 J	58.5	76.8	57.4	25.2	44.9	82	59.8	58.3 J	166 J	90.8	114	75.3
ZINC	118	NA	114	152	156 J	162 J	397 J	167 J	66.8 J	158 J	230 J	206 J	82.5 J	137 J	320	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		19000 J	53000	52000	52000 J	49000	48000	48000	52000	49000	30500	17000	42000	50000	42000	35000	41000
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	ND	<1	<1	<1	<1	ND	<1	<1	<1	<1	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		78	33	34	30	30	33	31	42	52	59.5	74	NA	NA	34	36	37.5
MISCELLANEOUS PARAMETERS (UG/KG)																	
TRIBUTYLTIN (AS TIN)	228	0.67 U	0.69 U	1.7	1.8	1.5 J	7.9	3.5	0.8 J	7.9	1.9 J	5.7	1.3 J	0.7 U	14	8.3	38.9 J

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-AC30-0012	DSY-SD-AD01-0012	DSY-SD-AD05-0012	DSY-SD-AD09-0012	DSY-SD-AD13-0012	DSY-SD-AD17-0012	DSY-SD-AD21-0012	DSY-SD-AE24-0012	DSY-SD-AE26-0012	DSY-SD-AE28-0012	DSY-SD-AE30-0012	DSY-SD-AG24-0012	DSY-SD-AG26-0012-AVG	DSY-SD-AG28-0012	DSY-SD-AG30-0012	DSY-SD-AI24-0012
LOCATION ID		DSY-SD-AC30	DSY-SD-AD01	DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AE30	DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24
SAMPLE DATE		09/28/11	09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/26/11	09/26/11	09/26/11	09/28/11	09/26/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		710 U	190 J	590 U	530 U	1700	680 U	330 J	630 U	720 U	760 U	220 J	210 J	275 J	650 U	300 U	440 J
BENZO(A)PYRENE	539	80 J	150	88	56	1300	98	250	270 J	100	130	240	250	225 J	150	35	400
BENZO(B)FLUORANTHENE		710 U	430 UJ	590 UJ	530 UJ	1000	680 U	580 U	630 U	720 UJ	760 U	260 J	400 J	395 J	650 UJ	300 U	780 J
BENZO(G,H,I)PERYLENE		710 UJ	430 U	590 UJ	530 UJ	890	680 U	580 U	630 U	720 UJ	760 U	330 UJ	290 J	625 UJ	650 UJ	300 U	630 UJ
BENZO(K)FLUORANTHENE		710 U	200 J	590 UJ	530 UJ	1300	680 U	580 U	630 U	720 UJ	760 U	400 J	230 J	285 J	650 UJ	300 U	350 J
CHRYSENE		710 U	390 J	590 U	530 U	1700	680 U	430 J	330 J	720 U	760 U	380 J	360 J	315 J	650 U	300 U	660 J
DIBENZO(A,H)ANTHRACENE		710 UJ	430 UJ	590 UJ	530 UJ	470 U	680 U	580 U	630 U	720 UJ	760 U	330 UJ	500 U	625 UJ	650 UJ	300 U	630 UJ
FLUORANTHENE		710 U	230 J	590 U	530 U	2500	680 U	580 U	630 U	720 U	760 U	350 J	280 J	310 J	650 U	150 J	360 J
HIGH MOLECULAR WEIGHT PAHS	13903	80 J	1770 J	418 J	296 J	17300	408 J	2310 J	1360 J	430 J	130	2670 J	3010 J	1920 J	650 J	315 J	5090 J
INDENO(1,2,3-CD)PYRENE		710 UJ	430 UJ	590 UJ	530 UJ	1100	680 U	580 U	630 UJ	720 UJ	760 U	330 UJ	500 U	625 UJ	650 UJ	300 U	630 UJ
PYRENE		710 UJ	610 J	330 J	240 J	5800	310 J	1300 J	760 J	330 J	760 U	820	990	740 J	500 J	130 J	2100
PCBS (UG/KG)																	
AROCLOR-1016		24 U	15 UJ	23 U	20 U	19 U	24 U	21 U	23 UJ	25 U	26 U	11 U	17 U	22.5 UJ	22 U	10 U	22 U
AROCLOR-1221		24 U	15 UJ	23 U	20 U	19 U	24 U	21 U	23 UJ	25 U	26 U	11 U	17 U	22.5 UJ	22 U	10 U	22 U
AROCLOR-1232		28 U	18 UJ	27 U	24 U	22 U	28 U	24 U	27 UJ	29 U	30 U	13 U	20 U	26.5 UJ	26 U	12 U	25 U
AROCLOR-1242		24 U	15 UJ	23 U	20 U	19 U	24 U	21 U	23 UJ	25 U	26 U	11 U	17 U	22.5 UJ	22 U	10 U	22 U
AROCLOR-1248		24 U	15 UJ	23 U	20 U	19 U	24 U	21 U	23 UJ	25 U	26 U	11 U	17 U	22.5 UJ	22 U	10 U	22 U
AROCLOR-1254		24 U	15 UJ	23 U	20 U	120	83 J	110 J	290 J	25 U	26 U	60	180	22.5 UJ	22 U	10 U	360 J
AROCLOR-1260		24 U	15 UJ	23 U	20 U	19 U	24 U	21 U	23 UJ	25 U	26 U	11 U	17 U	22.5 UJ	22 U	10 U	22 U
TOTAL AROCLOR	1060	24.6 U	15.4 UJ	23.6 U	20.6 U	120	83 J	110 J	290 J	25.6 U	26.6 U	60	180	23.1 UJ	22.6 U	10.3 U	360 J
METALS (MG/KG)																	
COPPER	74	NA	NA	70.5 J	81.1 J	208 J	65.6 J	185 J	NA	NA	45.3 J	NA	NA	NA	NA	NA	NA
LEAD	168	63.4 J	107 J	43.7 J	35.7 J	109 J	59.7 J	200 J	1020	48.4	48.8	51.3	69.9	68.9	66.1	8.7	91.5
ZINC	118	NA	NA	138 J	119 J	413 J	159 J	294 J	NA	NA	138 J	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		42000	21000	38000	31000	36000	44000	37000	53000	36000	36000	12000	28000	39000	38000	1600	44000
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	36	34	32	74	NA	36.5	NA	83	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	
TRIBUTYLTIN (AS TIN)	228	5.9	1.5	3.4	0.73 U	410	0.72 U	9.3	9.3	1.8	0.95 J	0.64 U	3.9	14	7.4	1.9	9.8

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-AI26-0012	DSY-SD-AI28-0012	DSY-SD-AI30-0012	DSY-SD-AK24-0012	DSY-SD-AK26-0012	DSY-SD-AK28-0012	DSY-SD-AK30-0012	DSY-SD-AO30-0012	DSY-SD-AP20-0012	DSY-SD-AT16-0012	DSY-SD-AT20-0012	DSY-SD-AT24-0012-AVG	DSY-SD-AT30-0012	DSY-SD-AX06-0012	DSY-SD-AX20-0012	DSY-SD-AY30-0012
LOCATION ID		DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24	DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30
SAMPLE DATE		09/26/11	09/23/11	09/26/11	09/23/11	09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/23/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		630 U	640 U	270 U	320 U	310 U	290 U	310 U	310 U	360 UJ	460 U	340 U	180 J	1100	470 U	370 UJ	300 U
BENZO(A)PYRENE	539	240 J	140	75	22 J	66	12 U	110 J	59	91	160	100	144 J	890	160	140	12 U
BENZO(B)FLUORANTHENE		380 J	640 U	270 UJ	320 U	310 U	290 U	310 U	310 U	360 U	460 U	340 U	265 J	1400	470 U	370 U	300 U
BENZO(G,H,I)PERYLENE		630 UJ	640 U	270 UJ	320 U	310 U	290 U	310 U	310 U	360 U	460 U	340 U	340 UJ	420	470 U	370 U	300 U
BENZO(K)FLUORANTHENE		630 UJ	640 U	270 UJ	320 U	310 U	290 U	310 U	310 U	360 U	460 U	340 U	340 UJ	620	470 U	370 U	300 U
CHRYSENE		630 U	640 U	110 J	320 U	310 U	290 U	130 J	310 U	360 U	220 J	340 U	230 J	1400	470 U	170 J	300 U
DIBENZO(A,H)ANTHRACENE		630 UJ	640 U	270 UJ	320 U	310 U	290 U	310 U	310 U	360 U	460 U	340 U	340 UJ	290 U	470 U	370 U	300 U
FLUORANTHENE		440 J	640 U	160 J	320 U	310 U	290 U	180 J	310 U	180 J	250 J	170 J	335 J	3000	230 J	290 J	300 U
HIGH MOLECULAR WEIGHT PAHS	13903	1860 J	510 J	675 J	22 J	66	262 U	840 J	269 J	461 J	1140 J	550 J	1260 J	12300	780 J	1040 J	271 U
INDENO(1,2,3-CD)PYRENE		630 UJ	640 U	270 UJ	320 U	310 U	290 U	310 U	310 U	360 U	460 U	340 U	340 UJ	440	470 U	370 U	300 U
PYRENE		800 J	370 J	330 J	320 U	310 U	290 U	420 J	210 J	190 J	510 J	280 J	375 J	3000	390 J	440 J	300 U
PCBS (UG/KG)																	
AROCLOR-1016		22 UJ	20 UJ	10 U	11 UJ	10 U	10 UJ	11 UJ	11 UJ	12 UJ	16 U	11 U	12.5 UJ	10 UJ	16 U	12 UJ	10 UJ
AROCLOR-1221		22 UJ	20 UJ	10 U	11 U	10 U	10 UJ	11 UJ	11 U	12 UJ	16 U	11 U	12.5 UJ	10 U	16 U	12 UJ	10 U
AROCLOR-1232		25 UJ	23 UJ	12 U	13 U	12 U	12 UJ	13 UJ	13 U	15 UJ	19 U	13 U	14.5 UJ	12 U	19 U	14 UJ	12 U
AROCLOR-1242		22 UJ	20 UJ	10 U	11 U	10 U	10 UJ	11 UJ	11 U	12 UJ	16 U	11 U	12.5 UJ	10 U	16 U	12 UJ	10 U
AROCLOR-1248		22 UJ	20 UJ	10 U	11 U	10 U	10 UJ	11 UJ	11 U	12 UJ	16 U	11 U	12.5 UJ	10 U	16 U	12 UJ	10 U
AROCLOR-1254		22 UJ	20 UJ	10 U	11 U	10 U	10 UJ	65 J	11 U	58 J	130	11 U	12.5 UJ	10 U	100 J	12 UJ	10 U
AROCLOR-1260		22 UJ	20 UJ	10 U	11 UJ	10 U	10 UJ	11 UJ	11 UJ	12 UJ	16 U	11 U	12.5 UJ	10 UJ	16 U	12 UJ	10 UJ
TOTAL AROCLOR	1060	22.4 UJ	20.4 UJ	10.3 U	11.3 UJ	10.3 U	10.3 UJ	65 J	11.3 UJ	58 J	130	11.3 U	12.8 UJ	10.3 UJ	100 J	12.3 UJ	10.3 UJ
METALS (MG/KG)																	
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	54.6	56.1	20.9	9.5	8.2	2.3	80.1	13	20 J	65.7	32.2	20.7 J	35	51.7	41.6 J	5.1
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		35000	36000	2200	8200	7000	1200	8200	3800	16000	30000	19000	16000	3000	27000	20000	1700 J
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	
TRIBUTYLTIN (AS TIN)	228	4.6	12	16	0.68 U	0.66 U	0.64 U	13	0.65 U	0.68 U	3.2	0.65 U	0.69 U	0.65 U	0.72 U	0.66 U	0.62 U

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-BB02-0012	DSY-SD-BB06-0012	DSY-SD-BB10-0012	DSY-SD-BB26-0012	DSY-SD-BC28-0012	DSY-SD-BC30-0012	DSY-SD-BD26-0012-AVG	DSY-SD-BE28-0012	DSY-SD-BE30-0012	DSY-SD-BF06-0012	DSY-SD-BF23-0012	DSY-SD-BG26-0012	DSY-SD-BG28-0012	DSY-SD-BI26-0012	DSY-SD-BJ23-0012	DSY-SD-C09-0012
LOCATION ID		DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09
SAMPLE DATE		09/22/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		420 U	390 U	350 U	1300 J	940 J	1300 J	1650 J	710 J	10000	310 U	290 U	640 J	850 J	650	150 J	310 U
BENZO(A)PYRENE	539	140	64	100	930 J	790 J	1200 J	1260 J	610	9000	87	79	490	810 J	580	12 U	37
BENZO(B)FLUORANTHENE		420 UJ	390 U	350 U	1600 J	1000 J	1900 J	2050 J	950 J	10000	310 U	290 U	1000	1300 J	830	210 J	310 U
BENZO(G,H,I)PERYLENE		420 UJ	390 U	350 U	560 J	430 J	520 J	695 J	640 UJ	6300 J	310 U	290 U	310 J	380 J	300 J	310 U	310 U
BENZO(K)FLUORANTHENE		190 J	390 U	350 U	670 J	400 J	840 J	950 J	580 J	4400 J	310 U	290 U	430 J	560	370 J	310 U	310 U
CHRYSENE		170 J	390 U	350 U	1500 J	1200 J	1700 J	2000 J	990	12000	310 U	290 U	770	1100 J	690	210 J	310 U
DIBENZO(A,H)ANTHRACENE		420 UJ	390 U	350 U	480 UJ	400 UJ	580 UJ	535 UJ	640 UJ	1300 J	310 U	290 U	540 U	340 U	380 U	310 U	310 U
FLUORANTHENE		240 J	390 U	170 J	1700	1000	1700	1850 J	1200	24000	180 J	180 J	860	1300 J	1000 J	250 J	310 U
HIGH MOLECULAR WEIGHT PAHS	13903	1180 J	234 J	530 J	16400 J	9660 J	14100 J	16600 J	7640 J	117000 J	487 J	539 J	6700 J	9760 J	6450 J	1190 J	37 J
INDENO(1,2,3-CD)PYRENE		420 UJ	390 U	350 U	500 J	300 J	330 J	542 J	640 UJ	6400 J	310 UJ	290 UJ	540 UJ	460 J	330 J	310 UJ	310 UJ
PYRENE		440 J	170 J	260 J	7600 J	3600 J	4600 J	5750 J	2600	34000	220 J	280 J	2200	3000 J	1700	370 J	310 U
PCBS (UG/KG)																	
AROCLOR-1016		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 UJ	14 UJ	12 UJ	11 UJ	19 UJ	12 U	13 UJ	10 UJ	11 U
AROCLOR-1221		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 U	14 U	12 U	11 UJ	19 UJ	12 U	13 U	10 U	11 U
AROCLOR-1232		18 UJ	15 U	14 U	19 UJ	15 UJ	22 UJ	21 UJ	25 U	17 U	14 U	13 UJ	22 UJ	14 U	16 U	12 U	13 U
AROCLOR-1242		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 U	14 U	12 U	11 UJ	19 UJ	12 U	13 U	10 U	11 U
AROCLOR-1248		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 U	14 U	12 U	11 UJ	19 UJ	12 U	13 U	10 U	11 U
AROCLOR-1254		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 U	14 U	12 U	11 UJ	19 UJ	12 U	13 U	10 U	11 U
AROCLOR-1260		15 UJ	12 U	12 U	16 UJ	13 UJ	19 UJ	18 UJ	22 U	14 U	12 U	11 UJ	19 UJ	12 U	13 U	10 U	11 U
TOTAL AROCLOR	1060	15.4 UJ	12.4 U	12.3 U	16.4 UJ	13.3 UJ	19.4 UJ	18.4 UJ	22.4 UJ	14.4 UJ	12.3 UJ	11.3 UJ	19.4 UJ	12.3 U	13.4 UJ	10.3 UJ	11.3 U
METALS (MG/KG)																	
COPPER	74	NA	NA	NA	110 J	69.3 J	159 J	136 J	91.8 J	113 J	NA	13.4 J	111 J	29.6 J	41.1 J	12.4 J	NA
LEAD	168	45 J	26.1	30.2	143	67.5	94.6	134	80.4 J	173 J	14.9 J	14.5 J	91.4	28.8 J	39.7 J	13.3	15.9 J
ZINC	118	NA	NA	NA	799	168	422	312	246 J	354 J	NA	55.9 J	250	108 J	139 J	48.7	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		30000	22000	18000	51000	40000	45000	55000	50000	36000	18000	9400 J	45000	16000 J	21000	8000 J	13000 J
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	
TRIBUTYLTIN (AS TIN)	228	0.69 U	0.69 U	0.65 U	3.2	14	20	8.75	13	15	0.66 U	1.9	12	2.5	4.6	13	0.68 U

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-C13-0012	DSY-SD-C17-0012	DSY-SD-C21-0012	DSY-SD-C25-0012	DSY-SD-C29-0012	DSY-SD-G01-0012	DSY-SD-G05-0012	DSY-SD-G09-0012	DSY-SD-G13-0012	DSY-SD-G17-0012	DSY-SD-G21-0012	DSY-SD-G25-0012	DSY-SD-G29-0018	DSY-SD-J24-0012	DSY-SD-J26-0012	DSY-SD-J28-0012	DSY-SD-J30-0012	DSY-SD-K05-0012
LOCATION ID		DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-G29	DSY-SD-J24	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/13/11	10/04/11	10/04/11	10/04/11	10/04/11	10/03/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		140 J	330 U	160 J	780	620 J	450 J	290 J	310 J	300 J	630 U	490 J	2100	1600	170 J	380 J	560 J	21000 J	410 UJ
BENZO(A)PYRENE	539	110 J	44	160	840	620 J	210	160	190	160	130	250	1200	1600 J	100	230	350 J	8800 J	97 J
BENZO(B)FLUORANTHENE		350 U	330 U	240 J	1200	670 J	400 J	330 J	400 J	590 U	630 U	590 J	1900	2700 J	390 UJ	410 J	500 J	11000 J	410 UJ
BENZO(G,H,I)PERYLENE		350 U	330 U	370 U	340 J	590 UJ	620 U	550 U	670 U	590 U	630 U	730 U	410 J	650 J	390 UJ	640 UJ	550 U	3000 J	410 UJ
BENZO(K)FLUORANTHENE		350 U	330 U	200 J	940	660 J	210 U	550 U	670 U	590 U	630 U	300 J	830 J	1200 J	390 UJ	450 J	520 J	7900 J	410 UJ
CHRYSENE		170 J	330 U	210 J	1200	850	520 J	330 J	430 J	410 J	240 J	720 J	2000	2200	320 J	550 J	620 J	21000 J	410 UJ
DIBENZO(A,H)ANTHRACENE		350 UJ	330 UJ	370 U	570 U	590 UJ	620 U	550 U	670 U	590 U	630 U	730 U	640 U	480 UJ	390 UJ	640 UJ	550 UJ	1100 J	410 UJ
FLUORANTHENE		350 U	330 U	180 J	620 J	510 J	1500	660 J	690 J	470 J	470 J	1000 J	2700	2000	230 J	640 U	720 J	53000 J	410 UJ
HIGH MOLECULAR WEIGHT PAHS	13903	680 J	44 J	1670 J	9250 J	6430 J	4280 J	2560 J	2820 J	1920 J	1260 J	4450 J	15000 J	17300 J	1680 J	3320 J	6270 J	186000 J	507 J
INDENO(1,2,3-CD)PYRENE		350 UJ	330 UJ	370 UJ	430 J	590 UJ	620 U	550 U	670 U	590 U	630 U	730 U	510 J	780 J	390 UJ	640 UJ	550 UJ	3700 J	410 UJ
PYRENE		260 J	330 U	520	2900	2500	1200	790	800 J	580 J	420 J	1100	3400	4600	860 J	1300	3000 J	55000 J	410 J
PCBS (UG/KG)																			
AROCLOR-1016		12 UJ	12 UJ	14 U	20 UJ	20 UJ	22 U	19 U	23 UJ	21 U	23 U	27 U	22 UJ	17 UJ	12 U	23 UJ	19 UJ	24 UJ	13 U
AROCLOR-1221		12 UJ	12 UJ	14 U	20 UJ	20 UJ	22 U	19 U	23 UJ	21 U	23 U	27 U	22 U	17 U	12 U	23 UJ	19 UJ	24 UJ	13 U
AROCLOR-1232		15 UJ	14 UJ	16 U	24 UJ	24 UJ	26 U	23 U	28 UJ	24 U	27 U	32 U	26 U	20 U	14 U	27 UJ	22 UJ	28 UJ	16 U
AROCLOR-1242		12 UJ	12 UJ	14 U	20 UJ	20 UJ	22 U	19 U	23 UJ	21 U	23 U	27 U	22 U	17 U	12 U	23 UJ	19 UJ	24 UJ	13 U
AROCLOR-1248		12 UJ	12 UJ	14 U	20 UJ	20 UJ	22 U	19 U	23 UJ	21 U	23 U	27 U	22 U	17 U	12 U	23 UJ	19 UJ	24 UJ	13 U
AROCLOR-1254		120 J	12 UJ	190 J	140 J	470 J	22 U	19 U	23 UJ	21 U	23 U	27 U	22 U	260 J	1200	180 J	180 J	24 UJ	240
AROCLOR-1260		12 UJ	12 UJ	14 U	20 UJ	20 UJ	22 U	19 U	23 UJ	21 U	23 U	27 U	22 U	220	12 U	23 UJ	19 UJ	24 UJ	13 U
TOTAL AROCLOR	1060	120 J	12.3 UJ	190 J	140 J	470 J	22.6 U	19.6 U	23.7 UJ	21.4 U	23.6 U	27.7 U	22.6 UJ	480 J	1200	180 J	180 J	24.6 UJ	240
METALS (MG/KG)																			
COPPER	74	NA	NA	NA	NA	NA	36.4	40.1	51.3	56.1	45.6	56.5	69.2	107	NA	NA	NA	NA	42.2
LEAD	168	19.2 J	22.5 J	320 J	198 J	209 J	368 J	43.8 J	61.7 J	54.4 J	48.6 J	53.1 J	49.7 J	98.2	1100 J	57.9 J	52.2 J	58.6 J	1410
ZINC	118	NA	NA	NA	NA	NA	111	124	166	152	137	159	162	243 J	NA	NA	NA	NA	678
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		14000	10000	24000 J	38000 J	36000	43000 J	38000 J	44000 J	34000 J	54000 J	53000 J	46000 J	44000	28000 J	38000 J	28000 J	36000 J	22000 J
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			
TRIBUTYLTIN (AS TIN)	228	0.69 U	0.67 U	0.66 U	10	0.85 J	0.71 U	0.71 U	0.73 U	0.73 U	0.73 U	0.72 U	2.7	6.6	0.7 U	0.71 U	5.2	0.77 J	0.69 U

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-K09-0012-AVG	DSY-SD-K13-0012	DSY-SD-K17-0012	DSY-SD-K21-0012	DSY-SD-L24-0012	DSY-SD-L26-0012	DSY-SD-L28-0012	DSY-SD-L30-0012	DSY-SD-N24-0012	DSY-SD-N26-0012	DSY-SD-N28-0012	DSY-SD-N30-0012	DSY-SD-O09-0012	DSY-SD-O13-0012-AVG	DSY-SD-O17-0012	DSY-SD-O21-0012	DSY-SD-Q25-0012	DSY-SD-Q29-0012
LOCATION ID		DSY-SD-K09	DSY-SD-K13	DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29
SAMPLE DATE		10/03/11	10/03/11	10/03/11	10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		340 UJ	270 J	680 UJ	620 UJ	570 U	890 J	560 J	1000 J	230 J	400 J	620 UR	290 J	240 J	325 U	560 U	590 UJ	320 J	630 U
BENZO(A)PYRENE	539	28.5 J	160 J	160 J	140 J	580 J	670 J	420	930 J	290 J	450 J	68 J	310 J	160	20 J	79	130 J	300 J	190
BENZO(B)FLUORANTHENE		340 UJ	440 UJ	680 UJ	620 UJ	570 U	590 J	550 J	930 J	590 U	570 J	620 UR	470 J	260 J	325 U	560 U	590 UJ	530 UJ	630 U
BENZO(G,H,I)PERYLENE		340 UJ	440 UJ	680 UJ	620 UJ	570 U	300 J	500 UJ	490 UJ	590 U	640 U	620 UR	560 UJ	460 U	325 U	560 U	590 UJ	530 UJ	630 U
BENZO(K)FLUORANTHENE		340 UJ	440 UJ	680 UJ	210 J	570 U	650 J	660 J	1100 J	400 J	560 J	620 UR	300 J	230 J	325 U	560 U	210 J	530 UJ	630 U
CHRYSENE		340 UJ	360 J	260 UJ	620 UJ	570 U	970 J	860 J	1000 J	380 J	530 J	620 UR	400 J	300 J	325 U	560 U	590 UJ	440 J	270 J
DIBENZO(A,H)ANTHRACENE		340 UJ	440 UJ	680 UJ	620 UJ	570 U	460 UJ	500 UJ	490 UJ	590 U	640 U	620 UR	560 UJ	460 U	325 U	560 U	590 UJ	530 UJ	630 U
FLUORANTHENE		340 UJ	350 J	680 UJ	620 UJ	570 U	990	290 J	980 J	300 J	450 J	620 UR	350 J	280 J	325 U	560 U	270 J	320 J	630 U
HIGH MOLECULAR WEIGHT PAHS	13903	28.5 J	2940 J	720 J	1310 J	580 J	8580 J	5640 J	11500 J	2310 J	4360 J	748 J	3070 J	1970 J	20 J	79	1160 J	2980 J	1090 J
INDENO(1,2,3-CD)PYRENE		340 UJ	440 UJ	680 UJ	620 UJ	570 U	420 J	500 UJ	430 J	590 U	640 U	620 UR	560 UJ	460 U	325 U	560 U	590 UJ	530 UJ	630 U
PYRENE		340 UJ	1800 J	560 J	960 J	570 U	3100 J	2300 J	5100 J	710 J	1400	680 J	950	500 J	325 U	560 U	550 J	1600	630 J
PCBS (UG/KG)																			
AROCLOR-1016		9.85 U	310 U	22 U	19 U	18 UJ	16 U	17 U	16 U	19 UJ	21 UJ	20 U	20 UJ	16 U	11.5 U	20 U	19 UJ	18 UJ	21 U
AROCLOR-1221		9.85 U	310 U	22 U	19 U	18 UJ	16 U	17 U	16 U	19 UJ	21 UJ	20 U	20 UJ	16 U	11.5 U	20 U	19 UJ	18 UJ	21 U
AROCLOR-1232		12 U	360 U	26 U	22 U	21 UJ	19 U	20 U	20 U	23 UJ	25 UJ	23 U	24 UJ	18 U	13.5 U	24 U	22 UJ	21 UJ	25 U
AROCLOR-1242		9.85 U	310 U	22 U	19 U	18 UJ	16 U	17 U	16 U	19 UJ	21 UJ	20 U	20 UJ	16 U	11.5 U	20 U	19 UJ	18 UJ	21 U
AROCLOR-1248		9.85 U	310 U	22 U	19 U	18 UJ	16 U	17 U	16 U	19 UJ	21 UJ	20 U	20 UJ	16 U	11.5 U	20 U	19 UJ	18 UJ	21 U
AROCLOR-1254		46.5	17000	110 J	140	1200 J	1800 J	3600	270	100 J	110 J	100	74 J	160 J	40 J	96 J	19 UJ	260 J	21 U
AROCLOR-1260		9.85 U	310 U	22 U	19 U	510 J	16 U	17 U	16 U	92 J	21 UJ	20 U	20 UJ	16 U	11.5 U	20 U	19 UJ	150 J	21 U
TOTAL AROCLOR	1060	46.5	17000	110 J	140	1710 J	1800 J	3600	270	192 J	110 J	100	74 J	160 J	40.1 J	96 J	19.4 UJ	410 J	21.6 U
METALS (MG/KG)																			
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	13.9	598	55.1	57.4	884 J	324 J	878 J	65.2 J	53.2 J	110 J	70.6 J	51.1 J	63.5 J	27.6 J	45.4 J	51.5 J	60.6 J	56.5
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		10100 J	34000 J	33000 J	37000 J	64000	36000 J	39000 J	27000 J	33000	37000	38000	38000	23000	9150	28000	36000 J	34000	34000 J
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			
TRIBUTYLTIN (AS TIN)	228	0.68 U	3.4 U	0.69 U	0.7 U	2.6	7.5	0.77 J	3.5	3.3	7.7	2.9	1.5	1.8	0.715 U	1.8	1.1 J	3.8	1.1 J

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-A
ANALYTICAL RESULTS FOR 0 TO 1 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-S09-0012	DSY-SD-S13-0012	DSY-SD-S17-0012	DSY-SD-S21-0012	DSY-SD-T25-0012	DSY-SD-T29-0012	DSY-SD-W09-0012	DSY-SD-W13-0012	DSY-SD-W17-0012	DSY-SD-W21-0012-AVG	DSY-SD-W24-0012-AVG	DSY-SD-W26-0012	DSY-SD-W28-0012	DSY-SD-W30-0012	DSY-SD-Y03-0012	DSY-SD-Y25-0012	DSY-SD-Y26-0012
LOCATION ID		DSY-SD-S09	DSY-SD-S13	DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26
SAMPLE DATE		09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SEMIVOLATILES (UG/KG)																		
BENZO(A)ANTHRACENE		190 J	250 J	410 U	290 J	220 J	210 J	210 J	160 J	260 J	665 UJ	460 J	420 J	220 U	750	410 UJ	1000	1300
BENZO(A)PYRENE	539	170	180	61	240	250	190	230	150	240 J	200 J	355	320	230	500	38 J	520	900 J
BENZO(B)FLUORANTHENE		450 U	530 U	410 U	350 J	470 J	310 J	290 J	400 U	350 J	665 UJ	680 J	640 J	630 U	610	410 UJ	650 J	1200 J
BENZO(G,H,I)PERYLENE		450 U	530 U	410 U	480 UJ	620 U	310 U	500 U	400 U	640 UJ	665 UJ	595 UJ	600 UJ	630 U	360 U	410 UJ	320 J	600 UJ
BENZO(K)FLUORANTHENE		240 J	320 J	410 U	340 J	620 U	130 J	360 J	210 J	400 J	300 J	295 J	300 J	630 U	520	410 UJ	700 J	1200 J
CHRYSENE		250 J	340 J	410 U	390 J	290 J	270 J	290 J	220 J	340 J	665 UJ	620 J	500 J	280 J	780	410 UJ	1200	1600
DIBENZO(A,H)ANTHRACENE		450 U	530 U	410 U	480 UJ	620 U	310 U	500 U	400 U	640 UJ	665 UJ	595 UJ	600 U	630 U	360 UJ	410 UJ	640 UJ	600 UJ
FLUORANTHENE		250 J	250 J	410 U	260 J	620 U	190 J	250 J	180 J	640 UJ	665 UJ	785 J	350 J	630 U	1400	410 UJ	1500	1200
HIGH MOLECULAR WEIGHT PAHS	13903	1650 J	1890 J	61	3370 J	2070 J	1870 J	2200 J	1500 J	2690 J	855 J	4900 J	3830 J	1150 J	6560 J	38 J	10200 J	10800 J
INDENO(1,2,3-CD)PYRENE		450 U	530 U	410 U	480 UJ	620 U	310 U	500 U	400 U	640 UJ	665 UJ	595 UJ	600 U	630 UJ	360 UJ	410 UJ	350 J	380 J
PYRENE		550 J	550 J	410 U	1500 J	840	570	570 J	580	1100 J	520 J	1700	1300 J	640 J	2000	410 UJ	4000 J	3000
PCBS (UG/KG)																		
AROCLOR-1016		17 U	19 U	14 UJ	16 UJ	22 U	11 U	17 UJ	14 U	21 UJ	21.5 UJ	21.5 U	22 UJ	22 U	12 U	13 U	20 UJ	22 UJ
AROCLOR-1221		17 U	19 U	14 UJ	16 UJ	22 U	11 U	17 UJ	14 U	21 UJ	21.5 UJ	21.5 U	22 UJ	22 U	12 U	13 U	20 UJ	22 UJ
AROCLOR-1232		20 U	22 U	16 UJ	19 UJ	26 U	13 U	20 UJ	16 U	25 UJ	25.5 UJ	25.5 U	26 UJ	26 U	15 U	15 U	24 UJ	25 UJ
AROCLOR-1242		17 U	19 U	14 UJ	16 UJ	22 U	11 U	17 UJ	14 U	21 UJ	21.5 UJ	21.5 U	22 UJ	22 U	12 U	13 U	20 UJ	22 UJ
AROCLOR-1248		17 U	19 U	14 UJ	16 UJ	22 U	11 U	17 UJ	14 U	21 UJ	21.5 UJ	21.5 U	22 UJ	22 U	12 U	13 U	20 UJ	22 UJ
AROCLOR-1254		120	19 U	14 UJ	430 J	1500	110	17 UJ	260	21 UJ	65 J	1500	150 J	280	89	13 U	190 J	200 J
AROCLOR-1260		17 U	19 U	14 UJ	16 UJ	22 U	11 U	17 UJ	14 U	21 UJ	21.5 UJ	550	22 UJ	22 U	12 U	13 U	20 UJ	22 UJ
TOTAL AROCLOR	1060	120	19.4 U	14.3 UJ	430 J	1500	110	17.4 UJ	260	21.6 UJ	65.2 J	2050	150 J	280	89	13.3 U	190 J	200 J
METALS (MG/KG)																		
COPPER	74	NA	NA	NA	NA	NA	NA	75.4	90.8	167	133	NA	NA	NA	NA	9.3	NA	NA
LEAD	168	51.1 J	48.6 J	18 J	64.6 J	64.2	20.1	64.7 J	58.2 J	118 J	67.4 J	904 J	68	66.2 J	36.8 J	11.1	165	69.5
ZINC	118	NA	NA	NA	NA	NA	NA	148	172	823	196	NA	NA	NA	NA	48.4	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																		
TOTAL ORGANIC CARBON		28000	31000	21000 J	36000 J	37000 J	13000 J	31000 J	24000	35000 J	39500 J	47500 J	32000 J	38000 J	20000 J	17000 J	45000	48000
MISCELLANEOUS PARAMETERS (%)																		
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																		
TRIBUTYLTIN (AS TIN)	228	1.6	3	0.71 U	3.3	8.2	0.69 U	9.3	5.1	43	25.5 J	15	16	15	27	0.73 U	14	6.5

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	**Comparison Criteria**	DSY-SD-Y28-0012	DSY-SD-Y30-0012
LOCATION ID		DSY-SD-Y28	DSY-SD-Y30
SAMPLE DATE		10/03/11	10/03/11
TOP DEPTH		0 FT	0 FT
BOTTOM DEPTH		1 FT	1 FT
SEMIVOLATILES (UG/KG)			
BENZO(A)ANTHRACENE		320 J	1300
BENZO(A)PYRENE	539	220	1100 J
BENZO(B)FLUORANTHENE		740 UJ	1100 J
BENZO(G,H,I)PERYLENE		740 UJ	450 J
BENZO(K)FLUORANTHENE		740 UJ	1400 J
CHRYSENE		400 J	1600
DIBENZO(A,H)ANTHRACENE		740 UJ	440 UJ
FLUORANTHENE		740 U	2000
HIGH MOLECULAR WEIGHT PAHS	13903	1840 J	18900 J
INDENO(1,2,3-CD)PYRENE		740 UJ	530 J
PYRENE		900 J	9400 J
PCBS (UG/KG)			
AROCLOR-1016		23 UJ	14 U
AROCLOR-1221		23 UJ	14 U
AROCLOR-1232		27 UJ	17 U
AROCLOR-1242		23 UJ	14 U
AROCLOR-1248		23 UJ	14 U
AROCLOR-1254		190 J	530
AROCLOR-1260		23 UJ	14 U
TOTAL AROCLOR	1060	190 J	530
METALS (MG/KG)			
COPPER	74	NA	NA
LEAD	168	69.4	256
ZINC	118	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)			
TOTAL ORGANIC CARBON		40000	26000
MISCELLANEOUS PARAMETERS (%)			
AMOSITE	1	NA	NA
ASBESTOS	1	NA	NA
CHRYSOTILE	1	NA	NA
TOTAL SOLIDS		NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)			
TRIBUTYLTIN (AS TIN)	228	2.9	32

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-18-1224	DSY-SD-AA01-1224	DSY-SD-AA05-1224	DSY-SD-AA09-1224	DSY-SD-AA13-1224	DSY-SD-AA17-1224	DSY-SD-AA21-1224	DSY-SD-AA24-1224	DSY-SD-AA26-1224	DSY-SD-AA30-1224	DSY-SD-AB11-1224	DSY-SD-AB15-1224	DSY-SD-AC24-1224	DSY-SD-AC26-1224	DSY-SD-AC28-1224	DSY-SD-AC30-1224
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26	DSY-SD-AA30	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		290 U	720 U	470 J	280 J	760 U	270 J	720 U	720 U	880	280 J	470 J	290 J	340 UJ	550 J	740 J	820 J
BENZO(A)PYRENE	539	9.4 J	140	310	180	150	160	100	80	420	200	260	200 J	100	370	310	520
BENZO(B)FLUORANTHENE		290 U	720 U	530 J	690 U	760 U	760 U	720 U	720 U	880 J	410 J	330 J	600 U	340 UJ	550 UJ	410 J	650 J
BENZO(G,H,I)PERYLENE		290 U	720 U	630 U	690 U	760 U	760 U	720 U	720 U	230 J	160 J	600 U	600 U	340 UJ	550 UJ	600 UJ	330 J
BENZO(K)FLUORANTHENE		290 U	720 U	280 J	690 U	760 U	760 U	720 U	720 U	370 J	200 J	600 U	270 J	340 UJ	500 J	550 J	870 J
CHRYSENE		290 U	720 U	620 J	380 J	760 U	310 J	720 U	720 U	1000	310 J	560 J	460 J	340 UJ	700 J	690 J	900
DIBENZO(A,H)ANTHRACENE		290 U	720 U	630 U	690 U	760 U	760 U	720 U	720 U	500 UJ	310 U	600 U	600 U	340 UJ	550 UJ	600 UJ	620 UJ
FLUORANTHENE		290 U	520 J	1000	470 J	390 J	630 J	720 U	720 U	2200	370 J	1400	590 J	340 U	410 J	1700	700 J
HIGH MOLECULAR WEIGHT PAHS	13903	9.4 J	1260 J	4210 J	1860 J	990 J	2120 J	420 J	80 J	9740 J	3390 J	5120 J	2810 J	880 J	4730 J	8600 J	7910 J
INDENO(1,2,3-CD)PYRENE		290 UJ	720 U	630 U	690 U	760 U	760 U	720 UJ	720 UJ	260 J	160 J	600 U	600 U	340 UJ	550 UJ	600 UJ	420 J
PYRENE		290 U	600 J	1000	550 J	450 J	750 J	320 J	720 U	3500	1300	2100	1000	780 J	2200 J	4200 J	2700 J
PCBS (UG/KG)																	
AROCLOR-1016		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	17 U	9.2 UJ	21 U	20 UJ	12 UJ	18 UJ	20 UJ	22 U
AROCLOR-1221		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	17 U	9.2 U	21 U	20 UJ	12 UJ	18 UJ	20 UJ	22 U
AROCLOR-1232		12 U	29 UJ	25 UJ	27 U	28 U	26 U	30 U	29 U	20 U	11 U	25 U	24 UJ	14 UJ	21 UJ	24 UJ	25 U
AROCLOR-1242		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	17 U	9.2 U	21 U	20 UJ	12 UJ	18 UJ	20 UJ	22 U
AROCLOR-1248		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	17 U	9.2 U	21 U	20 UJ	12 UJ	18 UJ	20 UJ	22 U
AROCLOR-1254		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	960	160	21 U	20 UJ	170 J	1100 J	460 J	170
AROCLOR-1260		10 U	25 UJ	22 UJ	23 U	24 U	22 U	25 U	25 U	320	9.2 U	21 U	20 UJ	12 UJ	18 UJ	20 UJ	22 U
TOTAL AROCLOR	1060	10.3 U	25.6 UJ	22.4 UJ	23.6 U	24.6 U	22.6 U	25.7 U	25.6 U	1280	160 J	21.6 U	20.6 UJ	170 J	1100 J	460 J	170
METALS (MG/KG)																	
COPPER	74	NA	41.3	60.9	116	89.7	90.5	75.1	93.5	154	32.4	74.6 J	54.7 J	6	NA	NA	NA
LEAD	168	10 J	49.9	55.2	96	80.7	74.8	67.4	70.6	180	48.9	88.4 J	89.8 J	4.6	473	103	104 J
ZINC	118	NA	122	153	210 J	242 J	237 J	155 J	229 J	583 J	129 J	111 J	124 J	424	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	ND	<1	<1	<1	<1	<1	<1	2	<1	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		82	34	39	35	32	32	33	34	49	79	NA	NA	70	44	40	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-18-1224	DSY-SD-AA01-1224	DSY-SD-AA05-1224	DSY-SD-AA09-1224	DSY-SD-AA13-1224	DSY-SD-AA17-1224	DSY-SD-AA21-1224	DSY-SD-AA24-1224	DSY-SD-AA26-1224	DSY-SD-AA30-1224	DSY-SD-AB11-1224	DSY-SD-AB15-1224	DSY-SD-AC24-1224	DSY-SD-AC26-1224	DSY-SD-AC28-1224	DSY-SD-AC30-1224
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26	DSY-SD-AA30	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.62 U	0.71 U	4.4	75	8.4	7.6	11	1 J	43	0.67 U	1.6	4.3	0.67 J	0.68 U	16	23
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-AD01-1224	DSY-SD-AD05-1224	DSY-SD-AD09-1224	DSY-SD-AD13-1224	DSY-SD-AD17-1224	DSY-SD-AD21-1224	DSY-SD-AE24-1224	DSY-SD-AE26-1224	DSY-SD-AE28-1224	DSY-SD-AE30-1224	DSY-SD-AG24-1224	DSY-SD-AG26-1224	DSY-SD-AG28-1224	DSY-SD-AG30-1224	DSY-SD-AI24-1224	DSY-SD-AI26-1224
LOCATION ID		DSY-SD-AD01	DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AE30	DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/26/11	09/26/11	09/26/11	09/28/11	09/26/11	09/26/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		350 U	270 J	560 U	380 U	350 J	390 UJ	200 J	270 J	650 U	280 U	380 U	550 UJ	260 J	290 U	330 U	620 U
BENZO(A)PYRENE	539	19 J	160	110	6.4 J	220	100	190	240	200	5.6 J	35	200	210	27	89	170 J
BENZO(B)FLUORANTHENE		350 U	560 UJ	560 U	380 U	320 J	390 UJ	490 UJ	620 UJ	650 U	280 U	380 UJ	550 UJ	400 J	290 U	330 U	620 U
BENZO(G,H,I)PERYLENE		350 U	560 UJ	560 U	380 U	560 UJ	390 UJ	490 UJ	620 UJ	650 U	280 U	380 UJ	550 UJ	620 U	290 U	330 U	620 U
BENZO(K)FLUORANTHENE		350 U	320 J	560 U	380 U	360 J	390 UJ	490 UJ	350 J	350 J	280 U	380 UJ	550 UJ	620 U	290 U	330 U	620 U
CHRYSENE		350 U	330 J	220 J	380 U	420 J	390 UJ	290 J	400 J	320 J	280 U	380 U	550 UJ	330 J	290 U	330 U	240 J
DIBENZO(A,H)ANTHRACENE		350 U	560 UJ	560 U	380 U	560 UJ	390 UJ	490 UJ	620 UJ	650 U	280 U	380 UJ	550 UJ	620 U	290 U	330 U	620 U
FLUORANTHENE		350 U	560 U	560 U	380 U	300 J	390 U	490 U	620 U	650 U	280 U	380 U	550 U	320 J	290 U	330 U	620 U
HIGH MOLECULAR WEIGHT PAHS	13903	19 J	2020 J	690 J	6.4 J	3570 J	680 J	1660 J	2130 J	1550 J	5.6 J	245 J	1300 J	2290 J	27 J	489 J	1030 J
INDENO(1,2,3-CD)PYRENE		350 U	560 UJ	560 U	380 U	560 UJ	390 UJ	490 UJ	620 UJ	650 U	280 U	380 UJ	550 UJ	620 U	290 U	330 U	620 UJ
PYRENE		350 U	940 J	360 J	380 U	1600 J	580 J	980	870 J	680 J	280 UJ	210 J	1100 J	770 J	290 UJ	400 J	620 J
PCBS (UG/KG)																	
AROCLOR-1016		13 UJ	20 U	20 U	13 UJ	20 UJ	13 U	16 UJ	21 U	22 U	9.5 U	13 U	19 UJ	21 U	8.9 U	12 U	20 UJ
AROCLOR-1221		13 UJ	20 U	20 U	13 UJ	20 UJ	13 U	16 UJ	21 U	22 U	9.5 U	13 U	19 UJ	21 U	8.9 U	12 U	20 UJ
AROCLOR-1232		15 UJ	23 U	24 U	16 UJ	24 UJ	16 U	19 UJ	25 U	26 U	11 U	15 U	22 UJ	25 U	10 U	14 U	24 UJ
AROCLOR-1242		13 UJ	20 U	20 U	13 UJ	20 UJ	13 U	16 UJ	21 U	22 U	9.5 U	13 U	19 UJ	21 U	8.9 U	12 U	20 UJ
AROCLOR-1248		13 UJ	20 U	20 U	13 UJ	20 UJ	13 U	16 UJ	21 U	22 U	9.5 U	13 U	19 UJ	21 U	8.9 U	12 U	20 UJ
AROCLOR-1254		13 UJ	20 U	20 U	13 UJ	430 J	49 J	160 J	21 U	22 U	9.5 U	13 U	130 J	140	8.9 U	250 J	63 J
AROCLOR-1260		13 UJ	20 U	20 U	13 UJ	20 UJ	13 U	16 UJ	21 U	22 U	9.5 U	13 U	19 UJ	21 U	8.9 U	12 U	20 UJ
TOTAL AROCLOR	1060	13.3 UJ	20.4 U	20.6 U	13.4 UJ	430 J	49 J	160 J	21.6 U	22.6 U	9.71 U	13.3 U	130 J	140	9.06 U	250 J	63 J
METALS (MG/KG)																	
COPPER	74	NA	84.2 J	95.3 J	8.4 J	282 J	38.1 J	NA	NA	86.8 J	NA	NA	NA	NA	NA	NA	NA
LEAD	168	11.6 J	60.5 J	60 J	8.2 J	190 J	36.6 J	198	68.2	88.4	8.3	7.2	113	106	191	78.3	98.2
ZINC	118	NA	179 J	186 J	48.9 J	577 J	619 J	NA	NA	209 J	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	49	39	38	88	NA	43	NA	84	NA	40
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-AD01-1224	DSY-SD-AD05-1224	DSY-SD-AD09-1224	DSY-SD-AD13-1224	DSY-SD-AD17-1224	DSY-SD-AD21-1224	DSY-SD-AE24-1224	DSY-SD-AE26-1224	DSY-SD-AE28-1224	DSY-SD-AE30-1224	DSY-SD-AG24-1224	DSY-SD-AG26-1224	DSY-SD-AG28-1224	DSY-SD-AG30-1224	DSY-SD-AI24-1224	DSY-SD-AI26-1224
LOCATION ID		DSY-SD-AD01	DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AE30	DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/26/11	09/26/11	09/26/11	09/28/11	09/26/11	09/26/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.69 U	18	2.5	0.73 U	15	0.79 J	0.65 U	160	49	0.64 U	0.63 U	1.4 J	3.8	17	0.72 U	9.3
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-AI28-1224	DSY-SD-AI30-1224	DSY-SD-AK24-1224	DSY-SD-AK26-1224	DSY-SD-AK28-1224	DSY-SD-AK30-1224	DSY-SD-AO30-1224	DSY-SD-AP20-1224	DSY-SD-AT16-1224	DSY-SD-AT20-1224	DSY-SD-AT24-1224	DSY-SD-AT30-1224-AVG	DSY-SD-AX06-1224	DSY-SD-AX20-1224	DSY-SD-AY30-1224	DSY-SD-BB02-1224
LOCATION ID		DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24	DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02
SAMPLE DATE		09/23/11	09/26/11	09/23/11	09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/23/11	09/22/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		300 J	200 J	300 U	280 U	290 U	300 U	300 U	380 UJ	370 U	330 UJ	330 UJ	290 U	380 U	330 UJ	300 U	340 U
BENZO(A)PYRENE	539	310	180	57	11 U	12 U	59	12 U	16 U	6.1 J	13 UJ	4.6 J	11.5 U	15 J	13 U	12 U	4.7 J
BENZO(B)FLUORANTHENE		530 J	300 J	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
BENZO(G,H,I)PERYLENE		610 U	290 U	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
BENZO(K)FLUORANTHENE		270 J	290 U	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
CHRYSENE		480 J	270 J	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
DIBENZO(A,H)ANTHRACENE		610 U	290 U	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
FLUORANTHENE		500 J	370 J	300 U	280 U	290 U	300 U	300 U	380 UJ	370 U	330 UJ	330 UJ	290 U	380 U	330 UJ	300 U	340 U
HIGH MOLECULAR WEIGHT PAHS	13903	3370 J	2280 J	197 J	253 U	262 U	279 J	271 U	344 UJ	6.1 J	298 UJ	4.6 J	262 U	15 J	298 UJ	271 U	4.7 J
INDENO(1,2,3-CD)PYRENE		610 U	290 U	300 U	280 U	290 U	300 U	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 UJ
PYRENE		980	960	140 J	280 U	290 U	220 J	300 U	380 U	370 U	330 UJ	330 U	290 U	380 U	330 U	300 U	340 U
PCBS (UG/KG)																	
AROCLOR-1016		21 UJ	10 U	11 UJ	10 UJ	10 UJ	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 UJ	12 U	12 UJ	10 UJ	12 UJ
AROCLOR-1221		21 UJ	10 U	11 U	10 U	10 U	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 U	12 U	12 UJ	10 U	12 UJ
AROCLOR-1232		24 UJ	12 U	13 U	12 U	12 U	12 U	12 U	15 UJ	12 UJ	14 U	12 UJ	12 U	15 U	14 UJ	12 U	14 UJ
AROCLOR-1242		21 UJ	10 U	11 U	10 U	10 U	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 U	12 U	12 UJ	10 U	12 UJ
AROCLOR-1248		21 UJ	10 U	11 U	10 U	10 U	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 U	12 U	12 UJ	10 U	12 UJ
AROCLOR-1254		21 UJ	10 U	11 U	10 U	10 U	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 U	12 U	12 UJ	10 U	12 UJ
AROCLOR-1260		21 UJ	10 U	11 UJ	10 UJ	10 UJ	10 U	10 U	13 UJ	11 UJ	12 U	11 UJ	10 UJ	12 U	12 UJ	10 UJ	12 UJ
TOTAL AROCLOR	1060	21.4 UJ	10.3 U	11.3 UJ	10.3 UJ	10.3 UJ	10.3 U	10.3 U	13.3 UJ	11.1 UJ	12.3 U	11.1 UJ	10.3 UJ	12.4 U	12.3 UJ	10.3 UJ	12.3 UJ
METALS (MG/KG)																	
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	95	24.9	22.6	6.1	2	12.1	2.6	6.9 J	8.8	5.8	6.1 J	2.9	13	5.2 J	2.2	28.5 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-AI28-1224	DSY-SD-AI30-1224	DSY-SD-AK24-1224	DSY-SD-AK26-1224	DSY-SD-AK28-1224	DSY-SD-AK30-1224	DSY-SD-AO30-1224	DSY-SD-AP20-1224	DSY-SD-AT16-1224	DSY-SD-AT20-1224	DSY-SD-AT24-1224	DSY-SD-AT30-1224-AVG	DSY-SD-AX06-1224	DSY-SD-AX20-1224	DSY-SD-AY30-1224	DSY-SD-BB02-1224
LOCATION ID		DSY-SD-AI28	DSY-SD-AI30	DSY-SD-AK24	DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02
SAMPLE DATE		09/23/11	09/26/11	09/23/11	09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/23/11	09/22/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	24	0.96 J	0.69 U	0.66 U	0.66 U	0.64 U	0.67 U	0.72 U	0.68 U	0.66 U	0.7 U	0.7 U	0.71 U	0.7 U	0.62 U	0.64 U
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-BB06-1224	DSY-SD-BB10-1224	DSY-SD-BB26-1224	DSY-SD-BC28-1224	DSY-SD-BC30-1224	DSY-SD-BD26-1224	DSY-SD-BE28-1224	DSY-SD-BE30-1224	DSY-SD-BF06-1224	DSY-SD-BF23-1224	DSY-SD-BG26-1224	DSY-SD-BG28-1224	DSY-SD-BI26-1224-AVG	DSY-SD-BJ23-1224	DSY-SD-C09-1224	DSY-SD-C13-1224
LOCATION ID		DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09	DSY-SD-C13
SAMPLE DATE		09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11	10/07/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		360 U	400 U	930 J	420 J	420 UJ	1300 J	1200	1800	340 U	310 U	340 J	300 U	470 J	320 UJ	310 U	310 U
BENZO(A)PYRENE	539	15 U	16 U	940 J	340	2100 J	1100 J	940 J	1600	14 U	7.6 J	240	42	465	11 J	12 U	8.2 J
BENZO(B)FLUORANTHENE		360 U	400 U	1100 J	550 J	1900 J	1600 J	1400 J	2300	340 U	310 U	570 J	300 U	730	320 U	310 U	310 U
BENZO(G,H,I)PERYLENE		360 U	400 U	720 J	180 J	1800 J	660 J	370 UJ	690	340 U	310 U	240 J	300 U	225 J	320 U	310 U	310 U
BENZO(K)FLUORANTHENE		360 U	400 U	420 J	230 J	690 J	700 J	660 J	950	340 U	310 U	260 J	300 U	295 J	320 U	310 U	310 U
CHRYSENE		360 U	400 U	1300 J	510 J	420 UJ	1400	1400	1800	340 U	310 U	480 J	300 U	545	320 U	310 U	310 U
DIBENZO(A,H)ANTHRACENE		360 U	400 U	360 UJ	350 UJ	420 UJ	410 UJ	370 UJ	250 J	340 U	310 U	370 UJ	300 U	280 U	320 U	310 U	310 UJ
FLUORANTHENE		360 U	400 U	1100	510	1400	1800	1500	3100 J	340 U	310 U	570	160 J	695 J	320 U	310 U	310 U
HIGH MOLECULAR WEIGHT PAHS	13903	326 U	362 U	10900 J	4240 J	19700 J	13300 J	11600 J	20600 J	307 U	7.6 J	4100 J	352 J	5210 J	11 J	280 UJ	8.2 J
INDENO(1,2,3-CD)PYRENE		360 U	400 U	470 J	350 UJ	850 J	560 J	370 UJ	880 J	340 U	310 UJ	370 UJ	300 UJ	235 J	320 UJ	310 UJ	310 UJ
PYRENE		360 U	400 U	3900 J	1500 J	11000 J	4200	4500	7200 J	340 U	310 U	1400	150 J	1550	320 U	310 U	310 U
PCBS (UG/KG)																	
AROCLOR-1016		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 UJ	11 UJ	12 U	11 UJ	12 UJ	11 UJ	10.5 UJ	11 UJ	11 U	10 UJ
AROCLOR-1221		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 U	11 UJ	12 U	11 UJ	12 U	11 UJ	10.5 UJ	11 U	11 U	10 UJ
AROCLOR-1232		14 U	17 U	15 UJ	15 UJ	17 UJ	16 UJ	14 U	13 UJ	14 U	13 UJ	14 U	13 UJ	12.5 UJ	13 U	12 U	12 UJ
AROCLOR-1242		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 U	11 UJ	12 U	11 UJ	12 U	11 UJ	10.5 UJ	11 U	11 U	10 UJ
AROCLOR-1248		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 U	11 UJ	12 U	11 UJ	12 U	11 UJ	10.5 UJ	11 U	11 U	10 UJ
AROCLOR-1254		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 U	11 UJ	12 U	11 UJ	12 U	11 UJ	10.5 UJ	11 U	11 U	10 UJ
AROCLOR-1260		12 U	15 U	13 UJ	12 UJ	14 UJ	14 UJ	12 U	11 UJ	12 U	11 UJ	12 U	11 UJ	10.5 UJ	11 U	11 U	10 UJ
TOTAL AROCLOR	1060	12.3 U	15.3 U	13.3 UJ	12.4 UJ	14.4 UJ	14.3 UJ	12.3 UJ	11.3 UJ	12.3 U	11.3 UJ	12.3 UJ	11.3 UJ	10.8 UJ	11.3 UJ	11.1 U	10.3 UJ
METALS (MG/KG)																	
COPPER	74	NA	NA	108 J	35.8 J	67 J	43.8 J	63.9 J	25.2 J	NA	4.2 J	28 J	6.5 J	22.6 J	6.8 J	3.2	NA
LEAD	168	6.5	7.9	149	44.3	62.6	50.9	50.6 J	61.7 J	5.1	4 J	32	7.3 J	30.6 J	6.7	4 J	4.5 J
ZINC	118	NA	NA	432	98.2	147	122	136 J	82.9 J	NA	29.4 J	78.7	42.2 J	74.5 J	38.4	20.8	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-BB06-1224	DSY-SD-BB10-1224	DSY-SD-BB26-1224	DSY-SD-BC28-1224	DSY-SD-BC30-1224	DSY-SD-BD26-1224	DSY-SD-BE28-1224	DSY-SD-BE30-1224	DSY-SD-BF06-1224	DSY-SD-BF23-1224	DSY-SD-BG26-1224	DSY-SD-BG28-1224	DSY-SD-BI26-1224-AVG	DSY-SD-BJ23-1224	DSY-SD-C09-1224	DSY-SD-C13-1224
LOCATION ID		DSY-SD-BB06	DSY-SD-BB10	DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09	DSY-SD-C13
SAMPLE DATE		09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11	10/07/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.71 U	0.7 U	0.7 U	0.65 U	3.8 J	0.69 U	7.6	0.72 U	0.66 U	0.68 U	0.66 U	0.66 U	0.715 U	0.67 U	0.66 U	0.64 U
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78	79

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-C17-1224	DSY-SD-C21-1224	DSY-SD-C25-1224-AVG	DSY-SD-C29-1224	DSY-SD-G01-1224	DSY-SD-G05-1224	DSY-SD-G09-1224	DSY-SD-G13-1224	DSY-SD-G17-1224	DSY-SD-G21-1224	DSY-SD-G25-1224	DSY-SD-J24-0012	DSY-SD-J26-1224	DSY-SD-J28-1224	DSY-SD-J30-1224	DSY-SD-K05-1224	DSY-SD-K09-1224	DSY-SD-K13-1224
LOCATION ID		DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-J24	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09	DSY-SD-K13
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	0 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	1 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		300 U	140 J	135 J	520 J	400 J	440 J	700 J	390 J	340 J	290 J	3900	170 J	1500	740 J	960 J	310 UJ	340 UJ	320 UJ
BENZO(A)PYRENE	539	5.6 J	170	97.5 J	550	200	210	320	210	240	270	2200	100	1000 J	400 J	580 J	12 UJ	14 UJ	37 J
BENZO(B)FLUORANTHENE		300 U	220 J	195 J	480 UJ	390 J	510 J	720 J	750 U	470 J	720 UR	3500	390 UJ	1500 J	570 J	910 J	310 UJ	340 UJ	320 UJ
BENZO(G,H,I)PERYLENE		300 U	340 U	300 U	480 UJ	660 U	670 U	740 U	750 U	690 U	720 UR	700 J	390 UJ	590 UJ	580 UJ	650 UJ	310 UJ	340 UJ	320 UJ
BENZO(K)FLUORANTHENE		300 U	220 J	145 J	480 UJ	660 U	670 U	360 J	750 U	230 J	720 UR	1500	390 UJ	1800 J	570 J	730 J	310 UJ	340 UJ	320 UJ
CHRYSENE		300 U	210 J	160 J	730 J	480 J	660 J	1000	480 J	500 J	330 J	3900	320 J	2000	820 J	1100 J	310 UJ	340 UJ	320 UJ
DIBENZO(A,H)ANTHRACENE		300 UJ	340 U	300 U	480 UJ	660 U	670 U	740 U	750 U	690 U	720 UR	680 U	390 UJ	590 UJ	580 UJ	650 UJ	310 UJ	340 UJ	320 UJ
FLUORANTHENE		300 U	340 U	300 U	430 J	2300	1100	1000	960 J	1200 J	530 J	1600	230 J	450 J	1100 J	2700 J	310 UJ	340 UJ	320 UJ
HIGH MOLECULAR WEIGHT PAHS	13903	5.6 J	1810 J	909 J	5330 J	5570 J	4020 J	5200 J	2880 J	3880 J	2140 J	26800 J	1680 J	13000 J	8700 J	12400 J	280 UJ	307 UJ	337 J
INDENO(1,2,3-CD)PYRENE		300 UJ	340 UJ	300 UJ	480 UJ	660 U	670 U	740 U	750 U	690 U	720 UR	810 J	390 UJ	590 UJ	580 UJ	650 UJ	310 UJ	340 UJ	320 UJ
PYRENE		300 U	850	445	3100 J	1800	1100	1100	840 J	900 J	720 J	8700 J	860 J	4800	4500 J	5400 J	310 UJ	340 UJ	300 J
PCBS (UG/KG)																			
AROCLOR-1016		10 U	12 U	10.6 U	17 UJ	23 U	25 U	26 U	24 U	28 U	24 U	23 UJ	12 U	21 UJ	20 UJ	21 UJ	11 U	11 U	10 U
AROCLOR-1221		10 U	12 U	10.6 U	17 UJ	23 U	25 U	26 U	24 U	28 U	24 U	23 U	12 U	21 UJ	20 UJ	21 UJ	11 U	11 U	10 U
AROCLOR-1232		12 U	14 U	12.5 U	20 UJ	27 U	30 U	30 U	29 U	33 U	29 U	27 U	14 U	25 UJ	23 UJ	25 UJ	13 U	13 U	12 U
AROCLOR-1242		10 U	12 U	10.6 U	17 UJ	23 U	25 U	26 U	24 U	28 U	24 U	23 U	12 U	21 UJ	20 UJ	21 UJ	11 U	11 U	10 U
AROCLOR-1248		10 U	12 U	10.6 U	17 UJ	23 U	25 U	26 U	24 U	28 U	24 U	23 U	12 U	21 UJ	20 UJ	21 UJ	11 U	11 U	10 U
AROCLOR-1254		10 U	180	192 J	550 J	23 U	25 U	26 U	24 U	28 U	24 U	170 J	1200	160 J	380 J	130 J	11 U	11 U	66 J
AROCLOR-1260		10 U	180	10.6 U	17 UJ	23 U	25 U	26 U	24 U	28 U	24 U	23 U	12 U	21 UJ	20 UJ	21 UJ	11 U	11 U	10 U
TOTAL AROCLOR	1060	10.3 U	360	192 J	550 J	23.6 U	25.7 U	26.6 U	24.7 U	28.7 U	24.7 U	170 J	1200	160 J	380 J	130 J	11.3 U	11.3 U	66 J
METALS (MG/KG)																			
COPPER	74	NA	NA	NA	NA	37.1	46.6	53	55	54.7	49	260	NA	NA	NA	NA	4.2	NA	NA
LEAD	168	3.6 J	88.4 J	68.4 J	759 J	47.7 J	62.8 J	63.4 J	56.5 J	60.6 J	49.3 J	199 J	1100 J	54.9 J	315 J	81 J	5.3	4.9	168
ZINC	118	NA	NA	NA	NA	110	145	161	144	154	135	675	NA	NA	NA	NA	24.9	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28000 J	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-C17-1224	DSY-SD-C21-1224	DSY-SD-C25-1224-AVG	DSY-SD-C29-1224	DSY-SD-G01-1224	DSY-SD-G05-1224	DSY-SD-G09-1224	DSY-SD-G13-1224	DSY-SD-G17-1224	DSY-SD-G21-1224	DSY-SD-G25-1224	DSY-SD-J24-0012	DSY-SD-J26-1224	DSY-SD-J28-1224	DSY-SD-J30-1224	DSY-SD-K05-1224	DSY-SD-K09-1224	DSY-SD-K13-1224
LOCATION ID		DSY-SD-C17	DSY-SD-C21	DSY-SD-C25	DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-J24	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09	DSY-SD-K13
SAMPLE DATE		10/07/11	10/07/11	10/07/11	10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	0 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	1 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.62 U	0.72 U	1.3 J	0.7 U	0.69 U	0.7 U	0.73 U	0.73 U	0.7 U	0.72 U	44	0.7 U	6.9	1.2 J	2.3	0.65 U	0.69 U	0.71 U
MISCELLANEOUS PARAMETERS (%)																			
TOTAL SOLIDS		82	66	78.5	49	36	33	32	31	30	34	36	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-K17-1224	DSY-SD-K21-1224	DSY-SD-L24-1224	DSY-SD-L26-1224	DSY-SD-L28-1224-AVG	DSY-SD-L30-1224	DSY-SD-N24-1224	DSY-SD-N26-1224	DSY-SD-N28-1224	DSY-SD-N30-1224	DSY-SD-O09-1224	DSY-SD-O13-1224	DSY-SD-O17-1224	DSY-SD-O21-1224	DSY-SD-Q25-1224	DSY-SD-Q29-1224	DSY-SD-S09-1224	DSY-SD-S13-1224
LOCATION ID		DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13
SAMPLE DATE		10/03/11	10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		350 UJ	150 J	480 J	300 U	340 U	130 UJ	500 J	390 J	760 J	600 J	350 U	320 U	380 J	270 J	340 U	840	380 U	280 J
BENZO(A)PYRENE	539	24 J	110 J	20 UJ	13 J	73.5	140 J	500	300 J	710 J	580 J	14 U	13 U	390	200	36	560	21 J	220
BENZO(B)FLUORANTHENE		350 UJ	400 UJ	410 J	300 U	340 UJ	340 UJ	700 J	430 UJ	760 J	670 J	350 U	320 U	550 J	340 J	340 U	970	380 U	350 J
BENZO(G,H,I)PERYLENE		350 UJ	400 UJ	500 UJ	300 U	340 UJ	340 UJ	550 UJ	430 UJ	580 U	580 UJ	350 U	320 U	560 UJ	510 UJ	340 UJ	280 J	380 U	520 U
BENZO(K)FLUORANTHENE		350 UJ	140 J	430 J	300 U	340 UJ	340 UJ	580 J	430 UJ	780	620 J	350 U	320 U	520 J	300 J	340 U	500 J	380 U	350 J
CHRYSENE		350 UJ	180 J	620 J	300 U	155 J	140 J	700 J	460 J	900	680 J	350 U	320 U	520 J	340 J	340 U	1200	380 U	420 J
DIBENZO(A,H)ANTHRACENE		350 UJ	400 UJ	500 UJ	300 U	340 UJ	340 UJ	550 UJ	430 UJ	580 U	580 UJ	350 U	320 U	560 UJ	510 UJ	340 U	520 U	380 U	520 U
FLUORANTHENE		350 UJ	210 J	760	300 U	340 U	340 UJ	400 J	750 J	680 J	560 J	350 U	320 U	270 J	280 J	340 U	810	380 U	230 J
HIGH MOLECULAR WEIGHT PAHS	13903	24 J	1370 J	5300 J	13 J	458 J	1120 J	6880 J	3900 J	7790 J	5910 J	316 U	289 U	4030 J	3030 J	36 J	7860 J	21 J	2730 J
INDENO(1,2,3-CD)PYRENE		350 UJ	400 UJ	500 UJ	300 U	340 UJ	340 UJ	550 UJ	430 UJ	580 U	580 UJ	350 U	320 U	560 UJ	510 UJ	340 U	300 J	380 U	520 U
PYRENE		350 UJ	580 J	2600 J	300 U	315 J	840 J	3500 J	2000 J	3200	2200	350 U	320 U	1400	1300 J	140 UJ	2400	380 U	880
PCBS (UG/KG)																			
AROCLOR-1016		11 U	13 U	16 U	10 U	12 U	11 U	19 U	14 U	20 U	20 UJ	12 U	11 U	19 U	18 UJ	11 U	18 U	13 U	18 UJ
AROCLOR-1221		11 U	13 U	16 U	10 U	12 U	11 U	19 U	14 U	20 U	20 UJ	12 U	11 U	19 U	18 UJ	11 U	18 U	13 U	18 UJ
AROCLOR-1232		13 U	16 U	19 U	12 U	14 U	13 U	22 U	17 U	23 U	24 UJ	14 U	13 U	22 U	21 UJ	13 U	21 U	16 U	21 UJ
AROCLOR-1242		11 U	13 U	16 U	10 U	12 U	11 U	19 U	14 U	20 U	20 UJ	12 U	11 U	19 U	18 UJ	11 U	18 U	13 U	18 UJ
AROCLOR-1248		11 U	13 U	16 U	10 U	12 U	11 U	19 U	14 U	20 U	20 UJ	12 U	11 U	19 U	18 UJ	11 U	18 U	13 U	18 UJ
AROCLOR-1254		54	550	2000	10 U	115	220	710	580	740	86 J	12 U	11 U	250	18 UJ	89	260	13 U	140 J
AROCLOR-1260		11 U	13 U	760	10 U	12 U	11 U	280	250	220	20 UJ	12 U	11 U	19 U	18 UJ	11 U	18 U	13 U	18 UJ
TOTAL AROCLOR	1060	54	550	2760	10.3 U	115	220	990	830	960	86 J	12.3 U	11.3 U	250	18.4 UJ	89	260	13.4 U	140 J
METALS (MG/KG)																			
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	13	135	543 J	4.3 J	85.5 J	9.5 J	66.6 J	68.8 J	246 J	213 J	6.2 J	3.7 J	79.8 J	56.4 J	23.3	63.3	12.6 J	97 J
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	**Comparison Criteria**	DSY-SD-K17-1224	DSY-SD-K21-1224	DSY-SD-L24-1224	DSY-SD-L26-1224	DSY-SD-L28-1224-AVG	DSY-SD-L30-1224	DSY-SD-N24-1224	DSY-SD-N26-1224	DSY-SD-N28-1224	DSY-SD-N30-1224	DSY-SD-O09-1224	DSY-SD-O13-1224	DSY-SD-O17-1224	DSY-SD-O21-1224	DSY-SD-Q25-1224	DSY-SD-Q29-1224	DSY-SD-S09-1224	DSY-SD-S13-1224
LOCATION ID		DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26	DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13
SAMPLE DATE		10/03/11	10/03/11	10/04/11	10/04/11	10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.7 U	0.67 U	0.68 U	0.64 U	0.675 U	0.71 U	3	0.66 U	10	8.6	0.67 U	0.65 U	20	5.3	0.62 U	1.7	0.71 U	1.7
MISCELLANEOUS PARAMETERS (%)																			
TOTAL SOLIDS		NA	NA	48	80	NA	NA	44	56	41	42	NA	NA	NA	NA	71	47	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-S17-1224	DSY-SD-S21-1224	DSY-SD-T25-1224	DSY-SD-T29-1224	DSY-SD-W09-1224	DSY-SD-W13-1224-AVG	DSY-SD-W17-1224	DSY-SD-W21-1224	DSY-SD-W24-1224	DSY-SD-W26-1224	DSY-SD-W28-1224	DSY-SD-W30-1224	DSY-SD-Y03-1224	DSY-SD-Y25-1224	DSY-SD-Y26-1224	DSY-SD-Y28-1224	DSY-SD-Y30-1224
LOCATION ID		DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28	DSY-SD-Y30
SAMPLE DATE		09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																		
BENZO(A)ANTHRACENE		340 U	380 UJ	380 J	300 U	410 U	360 U	160 J	420 U	220 J	330 J	1000 J	300 U	380 UJ	3000 J	1900 J	4700 J	1100 J
BENZO(A)PYRENE	539	14 U	70	490	56	31 J	40.5	150	97	150	300	930 J	34	15 UJ	1600 J	1200 J	2300 J	650 J
BENZO(B)FLUORANTHENE		340 UJ	380 UJ	560 U	300 U	410 U	360 U	440 UJ	420 UJ	360 UJ	610 J	920 J	300 U	380 UJ	1800 J	1500 J	2600 J	640 J
BENZO(G,H,I)PERYLENE		340 UJ	380 UJ	560 U	300 U	410 U	360 U	440 UJ	420 UJ	360 UJ	600 U	520 J	300 U	380 UJ	690 J	370 J	640 J	320 UJ
BENZO(K)FLUORANTHENE		340 UJ	380 UJ	560 U	300 U	410 U	360 U	440 UJ	170 J	360 UJ	250 J	1000 J	300 U	380 UJ	1800 J	1300 J	2900 J	800 J
CHRYSENE		340 U	380 UJ	560 J	300 U	410 U	360 U	280 J	420 U	270 J	470 J	1400 J	300 U	380 UJ	2900 J	2200 J	6100 J	1400 J
DIBENZO(A,H)ANTHRACENE		340 UJ	380 UJ	560 U	300 U	410 U	360 U	440 UJ	420 UJ	360 UJ	600 U	440 UJ	300 UJ	380 UJ	580 UJ	560 UJ	580 UJ	320 UJ
FLUORANTHENE		340 U	380 U	300 J	300 U	410 U	360 U	440 U	420 U	430 J	300 J	510 J	300 U	380 UJ	4500	1800 J	4900	2300 J
HIGH MOLECULAR WEIGHT PAHS	13903	307 UJ	510 J	3830 J	246 J	31 J	40.5	1690 J	817 J	1870 J	3460 J	10300 J	274 J	344 UJ	31100 J	17200 J	39000 J	15000 J
INDENO(1,2,3-CD)PYRENE		340 UJ	380 UJ	560 U	300 U	410 U	360 U	440 UJ	420 UJ	360 UJ	600 U	380 J	300 UJ	380 UJ	810 J	500 J	840 J	370 J
PYRENE		340 U	440 J	2100	190 J	410 U	360 U	1100 J	550 J	800	1200	3600 J	240 J	380 UJ	14000	6400 J	14000	7700 J
PCBS (UG/KG)																		
AROCLOR-1016		12 UJ	13 J	19 U	10 U	15 UJ	13 UJ	15 U	14 UJ	13 U	21 U	16 U	8.6 U	13 U	20 UJ	21 U	19 UJ	12 UJ
AROCLOR-1221		12 UJ	13 J	19 U	10 U	15 UJ	13 UJ	15 U	14 UJ	13 U	21 U	16 U	8.6 U	13 U	20 UJ	21 U	19 UJ	12 UJ
AROCLOR-1232		14 UJ	16 J	22 U	12 U	18 UJ	15 UJ	18 U	16 UJ	15 U	24 U	18 U	10 U	15 U	23 UJ	25 U	23 UJ	14 UJ
AROCLOR-1242		12 UJ	13 J	19 U	57	15 UJ	13 UJ	15 U	14 UJ	13 U	21 U	16 U	8.6 U	13 U	20 UJ	21 U	19 UJ	12 UJ
AROCLOR-1248		12 UJ	13 J	19 U	10 U	15 UJ	13 UJ	15 U	14 UJ	13 U	21 U	16 U	8.6 U	13 U	20 UJ	21 U	19 UJ	12 UJ
AROCLOR-1254		12 UJ	230 J	92	10 U	15 UJ	13 UJ	450	80 J	630	240	1400	420	13 U	1000 J	1000 J	680 J	12 UJ
AROCLOR-1260		12 UJ	13 J	19 U	10 U	15 UJ	13 UJ	450	14 UJ	500	21 U	16 U	8.6 U	13 U	20 UJ	21 U	19 UJ	12 UJ
TOTAL AROCLOR	1060	12.3 UJ	311 J	92	57	15.4 UJ	13.3 UJ	900	80 J	1130	240	1400	420	13.3 U	1000 J	1000 J	680 J	12.3 UJ
METALS (MG/KG)																		
COPPER	74	NA	NA	NA	NA	17	17.3	239	47	NA	NA	NA	NA	6.2	NA	NA	NA	NA
LEAD	168	11.5 J	80.4 J	236	16	46.4 J	25.6 J	210 J	133 J	577	109	94.8 J	21.7 J	7.3	918	160	199	41
ZINC	118	NA	NA	NA	NA	84	68.3	590	122	NA	NA	NA	NA	41.2	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																		
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																		
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																		

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-B
ANALYTICAL RESULTS FOR 1 TO 2 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-S17-1224	DSY-SD-S21-1224	DSY-SD-T25-1224	DSY-SD-T29-1224	DSY-SD-W09-1224	DSY-SD-W13-1224-AVG	DSY-SD-W17-1224	DSY-SD-W21-1224	DSY-SD-W24-1224	DSY-SD-W26-1224	DSY-SD-W28-1224	DSY-SD-W30-1224	DSY-SD-Y03-1224	DSY-SD-Y25-1224	DSY-SD-Y26-1224	DSY-SD-Y28-1224	DSY-SD-Y30-1224
LOCATION ID		DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29	DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28	DSY-SD-Y30
SAMPLE DATE		09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.65 U	0.71 U	0.67 U	0.71 U	0.71 U	0.695 U	0.66 U	78	0.69 U	8.8	9.7	0.72 U	0.66 U	10	24	39	3.4 U
MISCELLANEOUS PARAMETERS (%)																		
TOTAL SOLIDS		NA	NA	44	81	NA	NA	NA	NA	64	40	53	83	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-18-2448	DSY-SD-AA01-2448-AVG	DSY-SD-AA05-2448	DSY-SD-AA09-2448	DSY-SD-AA13-2448	DSY-SD-AA17-2448	DSY-SD-AA21-2448-AVG	DSY-SD-AA24-2448	DSY-SD-AA26-2448	DSY-SD-AB11-2448	DSY-SD-AB15-2448	DSY-SD-AC24-2448	DSY-SD-AC26-2448-AVG	DSY-SD-AC28-2448	DSY-SD-AC30-2448	DSY-SD-AD01-2448
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30	DSY-SD-AD01
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/29/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		260 U	260 J	3000	1100	530 J	1400	555 J	540 J	370 J	3200 J	880	300 U	320 U	2700 J	870 J	340 U
BENZO(A)PYRENE	539	10 U	195	1600	580	320	820	183 J	280	200	1300 J	450	11 J	52 J	1600 J	470	14 U
BENZO(B)FLUORANTHENE		260 U	665 U	2600	870	560 J	1200	500 J	640 J	470 UJ	1300 J	510 J	300 UJ	320 UJ	1500 J	460 UJ	340 U
BENZO(G,H,I)PERYLENE		260 U	665 U	570 J	620 U	710 U	370 J	695 U	690 U	470 UJ	680 J	460 J	300 UJ	320 UJ	820 J	360 J	340 U
BENZO(K)FLUORANTHENE		260 U	665 U	1100	440 J	260 J	620 J	275 J	300 J	470 UJ	1300 J	600 J	300 UJ	320 UJ	1600 J	460 UJ	340 U
CHRYSENE		260 U	350 J	3200	1200	640 J	1600	715 J	760 J	520 J	3400 J	1100	300 U	145 J	2800 J	980 J	340 U
DIBENZO(A,H)ANTHRACENE		260 U	665 U	560 U	620 U	710 U	720 U	695 U	690 U	470 UJ	370 UJ	560 U	300 UJ	320 UJ	550 UJ	460 UJ	340 U
FLUORANTHENE		260 U	740 J	9900	2700	930 J	2700	1350	1100	800	16000	1900	300 U	230 U	3200	1200	340 U
HIGH MOLECULAR WEIGHT PAHS	13903	235 UJ	2300 J	31600 J	9690 J	4340 J	12100 J	4980 J	5420 J	3390 J	41000 J	8970 J	11 J	317 J	23200 J	7480 J	307 U
INDENO(1,2,3-CD)PYRENE		260 UJ	665 U	680 J	620 U	710 U	400 J	695 UJ	690 UJ	470 UJ	830 J	470 J	300 UJ	320 UJ	880 J	460 UJ	340 U
PYRENE		260 U	755 J	8900	2800 J	1100 J	3000	1400	1800	1500	13000	2600	300 U	280 J	8100 J	3600 J	340 U
PCBS (UG/KG)																	
AROCLOR-1016		9.3 U	23 UJ	19 UJ	21 U	24 U	24 U	24 U	23 U	16 U	13 U	20 U	11 UJ	11 UJ	18 U	17 U	13 UJ
AROCLOR-1221		9.3 U	23 UJ	19 UJ	21 U	24 U	24 U	24 U	23 U	16 U	13 U	20 U	11 UJ	11 UJ	18 U	17 U	13 UJ
AROCLOR-1232		11 U	27 UJ	22 UJ	25 U	28 U	28 U	28 U	27 U	18 U	15 U	23 U	13 UJ	13 UJ	120 J	20 U	15 UJ
AROCLOR-1242		9.3 U	23 UJ	19 UJ	21 U	24 U	24 U	24 U	23 U	16 U	13 U	20 U	11 UJ	11 UJ	18 U	17 U	13 UJ
AROCLOR-1248		9.3 U	23 UJ	19 UJ	21 U	24 U	24 U	24 U	23 U	16 U	13 U	20 U	11 UJ	11 UJ	18 U	17 U	13 UJ
AROCLOR-1254		9.3 U	23 UJ	170 J	1300	24 U	24 U	220 J	190 J	730	13 U	97	11 UJ	122 J	690	2600	13 UJ
AROCLOR-1260		9.3 U	23 UJ	19 UJ	21 U	24 U	24 U	24 U	23 U	540	13 U	20 U	11 UJ	11 UJ	18 U	17 U	13 UJ
TOTAL AROCLOR	1060	9.54 U	23.6 UJ	170 J	1300	24.6 U	24.6 U	220 J	190 J	1270	13.3 U	97	11.3 UJ	122 J	810 J	2600	13.3 UJ
METALS (MG/KG)																	
COPPER	74	NA	39.5	155	123	126	226	151	87.8	183	66.9 J	154 J	59.1	NA	NA	NA	NA
LEAD	168	8.1 J	57.2	111	111	115	138	139	81	148	139 J	281 J	42.9	90.9	276	788 J	7 J
ZINC	118	NA	126	373	275 J	289 J	309 J	330 J	197 J	570 J	163 J	466 J	126	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	ND	<1	<1	<1	<1	<1	<1	2	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		88	37	42	40	34	34	35.5	36	52	NA	NA	77	76	44	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-18-2448	DSY-SD-AA01-2448-AVG	DSY-SD-AA05-2448	DSY-SD-AA09-2448	DSY-SD-AA13-2448	DSY-SD-AA17-2448	DSY-SD-AA21-2448-AVG	DSY-SD-AA24-2448	DSY-SD-AA26-2448	DSY-SD-AB11-2448	DSY-SD-AB15-2448	DSY-SD-AC24-2448	DSY-SD-AC26-2448-AVG	DSY-SD-AC28-2448	DSY-SD-AC30-2448	DSY-SD-AD01-2448
LOCATION ID		DSY-SD-18	DSY-SD-AA01	DSY-SD-AA05	DSY-SD-AA09	DSY-SD-AA13	DSY-SD-AA17	DSY-SD-AA21	DSY-SD-AA24	DSY-SD-AA26	DSY-SD-AB11	DSY-SD-AB15	DSY-SD-AC24	DSY-SD-AC26	DSY-SD-AC28	DSY-SD-AC30	DSY-SD-AD01
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/28/11	09/29/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.67 U	0.705 U	16	42	240	100	21.5 J	23	1.2 J	34	160	0.65 U	0.64 U	6.8 U	0.72 U	0.7 U
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-AD05-2448	DSY-SD-AD09-2448	DSY-SD-AD13-2448-AVG	DSY-SD-AD17-2448	DSY-SD-AD21-2448	DSY-SD-AE24-2448	DSY-SD-AE26-2448	DSY-SD-AE28-2448	DSY-SD-AG24-2448	DSY-SD-AG26-2448	DSY-SD-AG28-2448-AVG	DSY-SD-AG30-2436	DSY-SD-AI24-2448	DSY-SD-AI26-2448	DSY-SD-AI28-2448	DSY-SD-AI30-2448
LOCATION ID		DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/26/11	09/26/11	09/26/11	09/28/11	09/26/11	09/26/11	09/23/11	09/26/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	3 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		820 J	240 J	355 U	360 U	340 U	320 U	740 J	360 U	340 U	340 U	175 J	290 U	310 U	440 U	410 J	290 U
BENZO(A)PYRENE	539	400	140	14.5 U	14 J	22 J	16 J	730 J	77	22 J	67	145	12 U	5.5 J	120	260	19 J
BENZO(B)FLUORANTHENE		550 J	410 U	355 UJ	360 U	340 U	320 U	670 J	360 UJ	340 U	340 U	232 J	290 U	310 U	440 UJ	530 UJ	290 UJ
BENZO(G,H,I)PERYLENE		210 UJ	410 U	355 UJ	360 U	340 U	320 U	500 UJ	360 UJ	340 U	340 U	400 U	290 U	310 U	440 UJ	530 UJ	290 UJ
BENZO(K)FLUORANTHENE		720 J	210 J	355 UJ	360 U	340 U	320 U	760 J	360 UJ	340 U	340 U	400 U	290 U	310 U	440 UJ	530 UJ	290 UJ
CHRYSENE		900 J	370 J	355 U	360 U	340 U	320 U	1100 J	360 U	340 U	340 U	248 J	290 U	310 U	440 U	610 J	290 U
DIBENZO(A,H)ANTHRACENE		500 UJ	410 U	355 UJ	360 U	340 U	320 U	500 UJ	360 UJ	340 U	340 U	400 U	290 U	310 U	440 UJ	530 UJ	290 UJ
FLUORANTHENE		800	210 J	355 U	360 U	340 U	320 U	620 J	360 U	340 U	340 U	202 J	290 U	310 U	440 U	660 J	290 U
HIGH MOLECULAR WEIGHT PAHS	13903	7750 J	2050 J	320 UJ	14 J	22 J	16 J	8020 J	437 J	22 J	337 J	1440 J	262 UJ	5.5 J	740 J	3340 J	139 J
INDENO(1,2,3-CD)PYRENE		260 J	410 U	355 UJ	360 U	340 U	320 UJ	500 UJ	360 UJ	340 U	340 UJ	400 U	290 U	310 U	440 UJ	530 UJ	290 UJ
PYRENE		3300 J	880	355 U	360 U	340 U	320 U	3400 J	360 J	340 U	270 J	725	290 UJ	310 U	620	1400 J	120 J
PCBS (UG/KG)																	
AROCLOR-1016		18 U	15 U	13 U	13 U	12 UJ	11 UJ	17 UJ	12 U	12 U	13 UJ	13.5 U	8.8 U	10 U	15 UJ	19 UJ	9.6 U
AROCLOR-1221		18 U	15 U	13 U	13 U	12 UJ	11 UJ	17 UJ	12 U	12 U	13 UJ	13.5 U	8.8 U	10 U	15 UJ	19 UJ	9.6 U
AROCLOR-1232		21 U	17 U	15 U	15 U	14 UJ	13 UJ	20 UJ	14 U	14 U	15 UJ	15.5 U	10 U	12 U	17 UJ	22 UJ	11 U
AROCLOR-1242		18 U	15 U	13 U	13 U	12 UJ	11 UJ	17 UJ	12 U	12 U	13 UJ	13.5 U	8.8 U	10 U	15 UJ	19 UJ	9.6 U
AROCLOR-1248		18 U	15 U	13 U	13 U	12 UJ	11 UJ	17 UJ	12 U	12 U	13 UJ	13.5 U	8.8 U	10 U	15 UJ	19 UJ	9.6 U
AROCLOR-1254		340	310	13 U	120	12 UJ	11 UJ	860 J	130	12 U	55 J	240	8.8 U	10 U	86 J	230 J	9.6 U
AROCLOR-1260		18 U	15 U	13 U	13 U	12 UJ	11 UJ	530 J	12 U	12 U	13 UJ	13.5 U	8.8 U	10 U	15 UJ	19 UJ	9.6 U
TOTAL AROCLOR	1060	340	310	13.3 U	120	12.3 UJ	11.3 UJ	1390 J	130	12.3 U	55 J	240	8.97 U	10.3 U	86 J	230 J	9.8 U
METALS (MG/KG)																	
COPPER	74	131 J	295 J	6.6 J	16.1 J	8 J	NA	NA	72.1 J	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	252 J	437 J	8.75 J	66 J	10.3 J	4.8	296	98.6	10.2	25.7	64.2	22.1	5.7	62.1	114	8.7
ZINC	118	320 J	782 J	43.2 J	196 J	142 J	NA	NA	931 J	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	75	48	68	NA	66	NA	86	NA	56	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-AD05-2448	DSY-SD-AD09-2448	DSY-SD-AD13-2448-AVG	DSY-SD-AD17-2448	DSY-SD-AD21-2448	DSY-SD-AE24-2448	DSY-SD-AE26-2448	DSY-SD-AE28-2448	DSY-SD-AG24-2448	DSY-SD-AG26-2448	DSY-SD-AG28-2448-AVG	DSY-SD-AG30-2436	DSY-SD-AI24-2448	DSY-SD-AI26-2448	DSY-SD-AI28-2448	DSY-SD-AI30-2448
LOCATION ID		DSY-SD-AD05	DSY-SD-AD09	DSY-SD-AD13	DSY-SD-AD17	DSY-SD-AD21	DSY-SD-AE24	DSY-SD-AE26	DSY-SD-AE28	DSY-SD-AG24	DSY-SD-AG26	DSY-SD-AG28	DSY-SD-AG30	DSY-SD-AI24	DSY-SD-AI26	DSY-SD-AI28	DSY-SD-AI30
SAMPLE DATE		09/29/11	09/29/11	09/29/11	09/29/11	09/29/11	09/26/11	09/28/11	09/28/11	09/26/11	09/26/11	09/26/11	09/28/11	09/26/11	09/26/11	09/23/11	09/26/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	3 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	32	1.3 J	0.705 U	0.71 U	0.69 U	0.68 U	7.8	22	0.67 U	0.71 U	0.8 J	1.2 J	0.64 U	0.69 U	0.97 J	0.7 U
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-AK24-2448-AVG	DSY-SD-AK26-2448	DSY-SD-AK28-2448	DSY-SD-AK30-2448	DSY-SD-AO30-2448	DSY-SD-AP20-2448	DSY-SD-AT16-2448-AVG	DSY-SD-AT20-2448	DSY-SD-AT24-2448	DSY-SD-AT30-2448	DSY-SD-AX06-2448	DSY-SD-AX20-2448	DSY-SD-AY30-2448-AVG	DSY-SD-BB02-2448-AVG	DSY-SD-BB06-2448	DSY-SD-BB10-2448-AVG
LOCATION ID		DSY-SD-AK24	DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10
SAMPLE DATE		09/23/11	09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/22/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	AVG
SEMIVOLATILES (UG/KG)																	
BENZO(A)ANTHRACENE		305 U	290 U	280 U	280 U	290 U	370 UJ	380 U	370 U	300 UJ	300 U	360 U	350 UJ	260 U	385 U	370 U	380 U
BENZO(A)PYRENE	539	6.85 J	12 U	11 U	12 U	12 U	15 U	15 U	15 U	12 U	12 U	14 U	14 U	10 U	15.5 U	15 U	63.5 J
BENZO(B)FLUORANTHENE		305 U	290 U	280 U	280 UJ	290 U	370 U	380 UJ	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	380 U
BENZO(G,H,I)PERYLENE		305 U	290 U	280 U	280 UJ	290 U	370 U	380 UJ	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	380 U
BENZO(K)FLUORANTHENE		305 U	290 U	280 U	280 UJ	290 U	370 U	380 UJ	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	380 U
CHRYSENE		305 U	290 U	280 U	280 U	290 U	370 U	380 U	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	380 U
DIBENZO(A,H)ANTHRACENE		305 U	290 U	280 U	280 UJ	290 U	370 U	380 UJ	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	380 U
FLUORANTHENE		305 U	290 U	280 U	280 U	290 U	370 UJ	380 U	370 U	300 UJ	300 U	360 U	350 UJ	260 U	385 U	370 U	192 J
HIGH MOLECULAR WEIGHT PAHS	13903	75.8 J	262 U	253 U	253 UJ	262 U	334 UJ	344 UJ	334 U	271 UJ	271 U	325 U	316 UJ	235 U	348 UJ	334 U	424 J
INDENO(1,2,3-CD)PYRENE		305 U	290 U	280 U	280 UJ	290 U	370 U	380 UJ	370 U	300 U	300 U	360 U	350 U	260 U	385 UJ	370 U	380 U
PYRENE		305 U	290 U	280 U	280 U	290 U	370 U	380 U	370 U	300 U	300 U	360 U	350 U	260 U	385 U	370 U	268 J
PCBS (UG/KG)																	
AROCLOR-1016		11 UJ	10 UJ	9.6 UJ	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 UJ	12 U	12 U	10 UJ	13 UJ	12 UJ	13.5 U
AROCLOR-1221		11 U	10 U	9.6 U	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 U	12 U	12 U	10 U	13 UJ	12 UJ	13.5 U
AROCLOR-1232		13.5 U	12 U	11 U	12 U	11 U	16 UJ	15 U	14 U	12 UJ	12 U	15 U	14 U	12 U	16 UJ	14 UJ	16 U
AROCLOR-1242		11 U	10 U	9.6 U	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 U	12 U	12 U	10 U	13 UJ	12 UJ	13.5 U
AROCLOR-1248		11 U	10 U	9.6 U	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 U	12 U	12 U	10 U	13 UJ	12 UJ	13.5 U
AROCLOR-1254		11 U	10 U	9.6 U	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 U	12 U	12 U	10 U	13 UJ	12 UJ	13.5 U
AROCLOR-1260		11 UJ	10 UJ	9.6 UJ	10 U	9.6 U	13 UJ	13 U	12 U	11 UJ	9.9 UJ	12 U	12 U	10 UJ	13 UJ	12 UJ	13.5 U
TOTAL AROCLOR	1060	11.4 UJ	10.3 UJ	9.8 UJ	10.3 U	9.8 U	13.4 UJ	13.3 U	12.3 U	11.1 UJ	10.2 UJ	12.4 U	12.3 U	10.3 UJ	13.4 UJ	12.3 UJ	13.8 U
METALS (MG/KG)																	
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	7.8	2.3	1.8	3.2	2.1	6.5 J	6.1	5.2	4.4 J	4.6	6	5 J	3.6	6.05 J	5.7	5.65
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																	
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22000
MISCELLANEOUS PARAMETERS (%)																	
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																	

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-AK24-2448-AVG	DSY-SD-AK26-2448	DSY-SD-AK28-2448	DSY-SD-AK30-2448	DSY-SD-AO30-2448	DSY-SD-AP20-2448	DSY-SD-AT16-2448-AVG	DSY-SD-AT20-2448	DSY-SD-AT24-2448	DSY-SD-AT30-2448	DSY-SD-AX06-2448	DSY-SD-AX20-2448	DSY-SD-AY30-2448-AVG	DSY-SD-BB02-2448-AVG	DSY-SD-BB06-2448	DSY-SD-BB10-2448-AVG
LOCATION ID		DSY-SD-AK24	DSY-SD-AK26	DSY-SD-AK28	DSY-SD-AK30	DSY-SD-AO30	DSY-SD-AP20	DSY-SD-AT16	DSY-SD-AT20	DSY-SD-AT24	DSY-SD-AT30	DSY-SD-AX06	DSY-SD-AX20	DSY-SD-AY30	DSY-SD-BB02	DSY-SD-BB06	DSY-SD-BB10
SAMPLE DATE		09/23/11	09/23/11	09/23/11	09/23/11	09/23/11	09/22/11	09/22/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/23/11	09/22/11	09/22/11	09/22/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	AVG
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.65 U	0.64 U	0.61 U	0.64 U	0.65 U	0.655 U	0.68 U	0.69 U	0.61 U	0.66 U	0.72 U	0.71 U	0.65 U	0.65 U	0.68 U
MISCELLANEOUS PARAMETERS (%)																	
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-BB26-2448	DSY-SD-BC28-2448	DSY-SD-BC30-2448	DSY-SD-BD26-2448	DSY-SD-BE28-2448	DSY-SD-BE30-2448	DSY-SD-BF06-2448	DSY-SD-BF23-2448	DSY-SD-BG26-2448	DSY-SD-BG28-2448	DSY-SD-BI26-2448	DSY-SD-BJ23-2448-AVG	DSY-SD-C09-2448-AVG	DSY-SD-C13-2448	DSY-SD-C17-2448	DSY-SD-C21-2448	DSY-SD-C25-2448
LOCATION ID		DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09	DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25
SAMPLE DATE		09/21/11	09/21/11	09/21/11	09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11	10/07/11	10/07/11	10/07/11	10/07/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																		
BENZO(A)ANTHRACENE		350 J	320 UJ	830 J	170 J	280 U	290 J	350 U	290 U	290 UJ	270 U	260 U	295 UJ	310 U	320 U	300 U	270 U	280 U
BENZO(A)PYRENE	539	300	13 U	690 J	120	5.2 J	250	14 U	12 U	12 U	58	10 U	12 U	12.5 UJ	13 UJ	12 U	11 U	11 U
BENZO(B)FLUORANTHENE		570	320 U	340 UJ	240 J	280 U	380 J	350 U	290 U	290 U	270 U	260 U	295 U	310 U	320 U	300 U	270 U	280 U
BENZO(G,H,I)PERYLENE		190 J	320 U	440 J	340 U	280 U	140 J	350 U	290 UJ	290 U	270 U	260 U	295 U	310 UJ	320 UJ	300 U	270 U	280 U
BENZO(K)FLUORANTHENE		220 J	320 U	340 UJ	340 U	280 U	190 J	350 U	290 U	290 U	97 J	260 U	295 U	310 U	320 U	300 U	270 U	280 U
CHRYSENE		440 J	320 U	1200 J	210 J	280 U	350 J	350 U	290 U	290 U	120 J	260 U	295 U	310 U	320 U	300 U	270 U	280 U
DIBENZO(A,H)ANTHRACENE		400 U	320 U	340 UJ	340 U	280 U	300 U	350 U	290 UJ	290 U	270 U	260 U	295 U	310 U	320 U	300 UJ	270 U	280 U
FLUORANTHENE		760	320 U	1000	300 J	280 U	720 J	350 U	290 U	290 U	250 J	260 U	295 U	310 U	320 U	300 U	270 U	280 U
HIGH MOLECULAR WEIGHT PAHS	13903	4030 J	289 UJ	8760 J	1530 J	5.2 J	3620 J	316 U	262 UJ	262 UJ	765 J	235 UJ	266 UJ	280 UJ	289 UJ	271 UJ	244 UJ	253 UJ
INDENO(1,2,3-CD)PYRENE		400 UJ	320 UJ	340 UJ	340 UJ	280 UJ	300 UJ	350 U	290 UJ	290 UJ	270 UJ	260 UJ	295 UJ	310 UJ	320 U	300 UJ	270 UJ	280 UJ
PYRENE		1200	320 U	4600 J	490	280 U	1300	350 U	290 U	290 U	240 J	260 U	295 U	310 U	320 U	300 U	270 U	280 U
PCBS (UG/KG)																		
AROCLOR-1016		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 UJ	9.8 U	9.2 UJ	9.9 UJ	10.2 UJ	11 UJ	10 U	9.8 U	10 U
AROCLOR-1221		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 U	9.8 U	9.2 UJ	9.9 U	10.2 UJ	11 UJ	10 U	9.8 U	10 U
AROCLOR-1232		15 UJ	12 UJ	14 UJ	13 UJ	12 UJ	13 UJ	14 U	12 UJ	11 U	11 U	11 UJ	12 U	12 UJ	13 UJ	12 U	12 U	12 U
AROCLOR-1242		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 U	9.8 U	9.2 UJ	9.9 U	10.2 UJ	11 UJ	10 U	9.8 U	10 U
AROCLOR-1248		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 U	9.8 U	9.2 UJ	9.9 U	10.2 UJ	11 UJ	10 U	9.8 U	10 U
AROCLOR-1254		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 U	9.8 U	9.2 UJ	9.9 U	10.2 UJ	11 UJ	10 U	9.8 U	10 U
AROCLOR-1260		13 UJ	10 UJ	11 UJ	11 UJ	10 UJ	11 UJ	12 U	10 UJ	9.7 U	9.8 U	9.2 UJ	9.9 UJ	10.2 UJ	11 UJ	10 U	9.8 U	10 U
TOTAL AROCLOR	1060	13.3 UJ	10.3 UJ	11.4 UJ	11.3 UJ	10.3 UJ	11.3 UJ	12.3 U	10.3 UJ	9.89 UJ	9.97 U	9.46 UJ	10.2 UJ	10.5 UJ	11.3 UJ	10.3 U	10.1 U	10.3 U
METALS (MG/KG)																		
COPPER	74	92.4 J	2.5 J	24.4 J	8 J	3 J	8.3 J	NA	3 J	2.6 J	4.8 J	8.5 J	4.5 J	39.2 J	NA	NA	NA	NA
LEAD	168	75.3	1.8	25.4	11.2	2 J	9.5 J	5.5	2.6 J	1.8	4.3 J	4.6 J	2.2	44.8 J	4.7 J	3.7 J	12 J	3.6 J
ZINC	118	168	18.7	69.6	40	20.5 J	46.6 J	NA	26.1 J	17.7	32.6 J	32.8 J	29	245 J	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																		
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																		
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																		

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-BB26-2448	DSY-SD-BC28-2448	DSY-SD-BC30-2448	DSY-SD-BD26-2448	DSY-SD-BE28-2448	DSY-SD-BE30-2448	DSY-SD-BF06-2448	DSY-SD-BF23-2448	DSY-SD-BG26-2448	DSY-SD-BG28-2448	DSY-SD-BI26-2448	DSY-SD-BJ23-2448-AVG	DSY-SD-C09-2448-AVG	DSY-SD-C13-2448	DSY-SD-C17-2448	DSY-SD-C21-2448	DSY-SD-C25-2448
LOCATION ID		DSY-SD-BB26	DSY-SD-BC28	DSY-SD-BC30	DSY-SD-BD26	DSY-SD-BE28	DSY-SD-BE30	DSY-SD-BF06	DSY-SD-BF23	DSY-SD-BG26	DSY-SD-BG28	DSY-SD-BI26	DSY-SD-BJ23	DSY-SD-C09	DSY-SD-C13	DSY-SD-C17	DSY-SD-C21	DSY-SD-C25
SAMPLE DATE		09/21/11	09/21/11	09/21/11	09/21/11	09/22/11	09/21/11	09/22/11	09/22/11	09/21/11	09/21/11	09/21/11	09/21/11	10/07/11	10/07/11	10/07/11	10/07/11	10/07/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.61 U	0.66 U	0.69 U	0.64 U	0.69 U	0.64 U	0.66 U	0.61 U	0.62 U	0.68 U	0.69 U	0.68 U	0.66 U	0.72 U	0.72 U	0.67 U
MISCELLANEOUS PARAMETERS (%)																		
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78	78	80	86	82

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	Comparison Criteria	DSY-SD-C29-2448	DSY-SD-G01-2448	DSY-SD-G05-2448-AVG	DSY-SD-G09-2448	DSY-SD-G13-2448	DSY-SD-G17-2448-AVG	DSY-SD-G21-2448	DSY-SD-G25-2448	DSY-SD-J26-2448-AVG	DSY-SD-J28-2448	DSY-SD-J30-2448	DSY-SD-K05-2448	DSY-SD-K09-2448	DSY-SD-K13-2448	DSY-SD-K17-2448	DSY-SD-K21-2448	DSY-SD-L24-2448	DSY-SD-L26-2448
LOCATION ID		DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09	DSY-SD-K13	DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11	10/03/11	10/03/11	10/03/11	10/04/11	10/04/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		340 U	970	1000	480 J	340 J	670 J	870	3900	330 J	220 J	350 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	460 J	320 U
BENZO(A)PYRENE	539	84 J	400	455	240 J	190	350	430	2100	162 J	170 J	240 J	13 UJ	13 UJ	13 UJ	13 UJ	22 J	41	57
BENZO(B)FLUORANTHENE		340 U	840 J	925 J	470 J	770 U	610 J	890	3300	390 UJ	440 UJ	420 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	380 J	320 U
BENZO(G,H,I)PERYLENE		340 U	700 U	655 U	730 UJ	770 U	735 U	630 U	750 J	390 UJ	440 UJ	400 UJ	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	350 UJ	320 U
BENZO(K)FLUORANTHENE		340 U	380 J	445 J	730 UJ	770 U	350 J	380 J	1500	390 UJ	170 J	280 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	340 J	320 U
CHRYSENE		340 U	1100	1250	560 J	430 J	755 J	940	4600	370 J	340 J	340 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	540 J	320 U
DIBENZO(A,H)ANTHRACENE		340 UJ	700 U	655 U	730 UJ	770 U	735 U	630 U	700 U	390 UJ	440 UJ	400 UJ	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	350 UJ	320 U
FLUORANTHENE		340 U	4300	3250	1300 J	720 J	1650 J	2300	1500	305 J	220 J	320 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	820	320 U
HIGH MOLECULAR WEIGHT PAHS	13903	414 J	11800 J	10200 J	4150 J	2650 J	5700 J	7910 J	26400 J	2250 J	1770 J	4250 J	289 UJ	289 UJ	289 UJ	289 UJ	22 J	4580 J	217 J
INDENO(1,2,3-CD)PYRENE		340 UJ	700 U	655 U	730 UJ	770 U	735 U	630 U	910 J	390 UJ	440 UJ	400 UJ	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	350 UJ	320 U
PYRENE		330 J	3800	2850	1100 J	970 J	1500	2100	7800 J	1360 J	650 J	2300 J	320 UJ	320 UJ	320 UJ	320 UJ	270 UJ	2000 J	160 J
PCBS (UG/KG)																			
AROCLOR-1016		12 UJ	24 U	23.5 U	26 U	27 U	26 U	22 U	22 UJ	12.5 UJ	14 UJ	13 U	9.6 U	10 U	9 U	9.5 U	11 U	11 U	9.5 U
AROCLOR-1221		12 UJ	24 U	23.5 U	26 U	27 U	26 U	22 U	22 U	12.5 UJ	14 UJ	13 U	9.6 U	10 U	9 U	9.5 U	11 U	11 U	9.5 U
AROCLOR-1232		14 UJ	28 U	27.5 U	31 U	32 U	31 U	26 U	26 U	15 UJ	17 UJ	16 U	11 U	12 U	11 U	11 U	13 U	13 U	11 U
AROCLOR-1242		12 UJ	24 U	23.5 U	26 U	27 U	26 U	22 U	22 U	12.5 UJ	14 UJ	13 U	9.6 U	10 U	9 U	9.5 U	11 U	11 U	9.5 U
AROCLOR-1248		12 UJ	24 U	23.5 U	26 U	27 U	26 U	22 U	22 U	12.5 UJ	14 UJ	13 U	9.6 U	10 U	9 U	9.5 U	11 U	11 U	9.5 U
AROCLOR-1254		59 J	24 U	195 J	26 U	130 J	26 U	22 U	190 J	690 J	400 J	160	9.6 UJ	10 U	9 UJ	9.5 U	11 U	11 U	46
AROCLOR-1260		12 UJ	24 U	23.5 U	26 U	27 U	26 U	22 U	22 U	12.5 UJ	14 UJ	13 U	9.6 U	10 U	9 U	9.5 U	11 U	11 U	9.5 U
TOTAL AROCLOR	1060	59 J	24.6 U	195 J	26.7 U	130 J	26.7 U	22.6 U	190 J	690 J	400 J	160	9.8 UJ	10.3 U	9.29 UJ	9.71 U	11.3 U	11.3 U	46
METALS (MG/KG)																			
COPPER	74	NA	102	94.2	79.6	57.7	83.6	89.8	284	NA	NA	NA	4	NA	NA	NA	NA	NA	NA
LEAD	168	11.7 J	74.5 J	77.9 J	82.2 J	68.3 J	78.2 J	75.3 J	212 J	44 J	51.9 J	94.1 J	4.4	4.7	5.2	3.4	7.2	20.8 J	9.2 J
ZINC	118	NA	172	248 J	183	167	171	183	738	NA	NA	NA	25.5	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-C29-2448	DSY-SD-G01-2448	DSY-SD-G05-2448-AVG	DSY-SD-G09-2448	DSY-SD-G13-2448	DSY-SD-G17-2448-AVG	DSY-SD-G21-2448	DSY-SD-G25-2448	DSY-SD-J26-2448-AVG	DSY-SD-J28-2448	DSY-SD-J30-2448	DSY-SD-K05-2448	DSY-SD-K09-2448	DSY-SD-K13-2448	DSY-SD-K17-2448	DSY-SD-K21-2448	DSY-SD-L24-2448	DSY-SD-L26-2448
LOCATION ID		DSY-SD-C29	DSY-SD-G01	DSY-SD-G05	DSY-SD-G09	DSY-SD-G13	DSY-SD-G17	DSY-SD-G21	DSY-SD-G25	DSY-SD-J26	DSY-SD-J28	DSY-SD-J30	DSY-SD-K05	DSY-SD-K09	DSY-SD-K13	DSY-SD-K17	DSY-SD-K21	DSY-SD-L24	DSY-SD-L26
SAMPLE DATE		10/07/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/12/11	10/04/11	10/04/11	10/04/11	10/03/11	10/03/11	10/03/11	10/03/11	10/03/11	10/04/11	10/04/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.69 U	1.2 J	2.95	0.8 J	0.75 J	2.1	6.4	1.9	0.72 U	0.69 U	0.66 U	0.7 U	0.68 U	0.68 U	0.68 U	0.69 U	0.65 U	0.68 U
MISCELLANEOUS PARAMETERS (%)																			
TOTAL SOLIDS		71	35	35	33	30	32	37	35	NA	NA	NA	NA	NA	NA	NA	NA	70	75

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-L28-2448	DSY-SD-L30-2448	DSY-SD-N24-2448-AVG	DSY-SD-N26-2448	DSY-SD-N28-2448	DSY-SD-N30-2448	DSY-SD-O09-2448	DSY-SD-O13-2448	DSY-SD-O17-2448	DSY-SD-O21-2448	DSY-SD-Q25-2448	DSY-SD-Q29-2448	DSY-SD-S09-2448-AVG	DSY-SD-S13-2448	DSY-SD-S17-2448	DSY-SD-S21-2448-AVG	DSY-SD-T25-2448	DSY-SD-T29-2448
LOCATION ID		DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13	DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29
SAMPLE DATE		10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)																			
BENZO(A)ANTHRACENE		310 U	300 U	305 U	340 U	380 U	200 J	330 U	320 U	390 U	200 J	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
BENZO(A)PYRENE	539	18 J	12 U	29.5 J	20 J	64 J	140 J	26 J	13 U	42	140	12 U	120	14 UJ	43	13 U	16.2 J	68	22 J
BENZO(B)FLUORANTHENE		310 UJ	300 UJ	305 U	340 U	380 UJ	340 U	330 U	320 U	390 U	370 UJ	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
BENZO(G,H,I)PERYLENE		310 UJ	300 UJ	305 U	340 U	380 UJ	340 UJ	330 U	320 U	390 UJ	370 UJ	300 UJ	330 U	345 U	410 U	340 U	345 U	300 U	280 U
BENZO(K)FLUORANTHENE		310 UJ	300 UJ	305 U	340 U	380 UJ	180 J	330 U	320 U	390 U	370 UJ	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
CHRYSENE		310 U	300 U	305 U	340 U	380 U	190 J	330 U	320 U	390 U	220 J	300 U	140 J	345 U	410 U	340 U	345 U	300 U	280 U
DIBENZO(A,H)ANTHRACENE		310 UJ	300 UJ	305 U	340 U	380 UJ	340 U	330 U	320 U	390 UJ	370 UJ	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
FLUORANTHENE		310 U	300 U	305 U	340 U	380 U	330 J	330 U	320 U	390 U	170 J	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
HIGH MOLECULAR WEIGHT PAHS	13903	18 J	271 UJ	124 J	20 J	484 J	1820 J	26 J	289 U	42 J	1830 J	271 UJ	810 J	312 UJ	43	307 U	16.2 J	338 J	22 J
INDENO(1,2,3-CD)PYRENE		310 UJ	300 UJ	305 U	340 U	380 UJ	340 U	330 U	320 U	390 UJ	370 UJ	300 U	330 U	345 U	410 U	340 U	345 U	300 U	280 U
PYRENE		310 U	300 U	170 J	340 U	420 J	780	330 U	320 U	390 U	1100 J	300 UJ	550	345 U	410 U	340 U	345 U	270 J	280 U
PCBS (UG/KG)																			
AROCLOR-1016		11 U	10 U	9.6 UJ	12 U	13 U	12 U	11 U	11 U	13 U	13 UJ	10 U	11 U	13 U	14 U	11 UJ	12 U	11 U	10 UJ
AROCLOR-1221		11 U	10 U	9.6 UJ	12 U	13 U	12 U	11 U	11 U	13 U	13 UJ	10 U	11 U	13 U	14 U	11 UJ	12 U	11 U	10 U
AROCLOR-1232		13 U	12 U	11.5 UJ	14 U	16 U	14 U	13 U	13 U	16 U	15 UJ	12 U	13 U	15 U	16 U	14 UJ	14 U	12 U	12 U
AROCLOR-1242		32	10 U	9.6 UJ	12 U	13 U	12 U	11 U	11 U	13 U	13 UJ	10 U	11 U	13 U	14 U	11 UJ	12 U	11 U	120 J
AROCLOR-1248		11 U	10 U	9.6 UJ	12 U	13 U	12 U	11 U	11 U	13 U	13 UJ	10 U	11 U	13 U	14 U	11 UJ	12 U	11 U	10 U
AROCLOR-1254		11 U	10 U	86.5 J	12 U	520 J	76	11 U	11 U	130	170 J	10 U	98	13 U	14 U	11 UJ	12 U	110	10 U
AROCLOR-1260		11 U	10 U	46.5 J	12 U	250	12 U	11 U	11 U	13 U	13 UJ	10 U	11 U	13 U	14 U	11 UJ	12 U	11 U	10 U
TOTAL AROCLOR	1060	32	10.3 U	130 J	12.3 U	770 J	76	11.3 U	11.3 U	130	170 J	10.3 U	98	13.3 U	14.3 U	11.4 UJ	12.3 U	110	120 J
METALS (MG/KG)																			
COPPER	74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	168	10.3 J	5.7 J	842 J	45.2 J	390 J	38.5 J	5.6 J	4.5 J	37.2 J	51.7 J	2.4	22.5	7.35 J	19.4 J	6.4 J	12.7 J	36.3	6.6
ZINC	118	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)																			
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)																			
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)																			

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	**Comparison Criteria**	DSY-SD-L28-2448	DSY-SD-L30-2448	DSY-SD-N24-2448-AVG	DSY-SD-N26-2448	DSY-SD-N28-2448	DSY-SD-N30-2448	DSY-SD-O09-2448	DSY-SD-O13-2448	DSY-SD-O17-2448	DSY-SD-O21-2448	DSY-SD-Q25-2448	DSY-SD-Q29-2448	DSY-SD-S09-2448-AVG	DSY-SD-S13-2448	DSY-SD-S17-2448	DSY-SD-S21-2448-AVG	DSY-SD-T25-2448	DSY-SD-T29-2448
LOCATION ID		DSY-SD-L28	DSY-SD-L30	DSY-SD-N24	DSY-SD-N26	DSY-SD-N28	DSY-SD-N30	DSY-SD-O09	DSY-SD-O13	DSY-SD-O17	DSY-SD-O21	DSY-SD-Q25	DSY-SD-Q29	DSY-SD-S09	DSY-SD-S13	DSY-SD-S17	DSY-SD-S21	DSY-SD-T25	DSY-SD-T29
SAMPLE DATE		10/04/11	10/04/11	10/05/11	10/05/11	10/05/11	10/05/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11	09/30/11	09/30/11	09/30/11	09/30/11	10/05/11	10/06/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.68 U	0.65 U	0.685 U	0.71 U	0.72 U	0.61 U	0.7 U	0.69 U	0.69 U	0.7 U	0.66 U	5.7	0.695 U	0.66 U	0.66 U	0.69 U	0.69 U	0.62 U
MISCELLANEOUS PARAMETERS (%)																			
TOTAL SOLIDS		NA	NA	79	72	63	72	NA	NA	NA	NA	80	74	NA	NA	NA	NA	75	83

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Comparison Criteria	DSY-SD-W09-2448	DSY-SD-W13-2448	DSY-SD-W17-2448	DSY-SD-W21-2448	DSY-SD-W24-2448	DSY-SD-W26-2448-AVG	DSY-SD-W28-2448	DSY-SD-W30-2448	DSY-SD-Y03-2448-AVG	DSY-SD-Y25-2448-AVG	DSY-SD-Y26-2448	DSY-SD-Y28-2448
LOCATION ID		DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28
SAMPLE DATE		09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL
SEMIVOLATILES (UG/KG)													
BENZO(A)ANTHRACENE		390 U	360 U	350 U	340 U	310 U	220 J	300 U	290 U	375 UJ	200 J	580 J	220 J
BENZO(A)PYRENE	539	9.2 J	14 U	5.2 J	14 U	13 J	150	11 J	55	7.35 J	126	370	230
BENZO(B)FLUORANTHENE		390 U	360 U	350 U	340 U	310 U	355 U	300 U	290 U	375 UJ	202 J	380 J	250 J
BENZO(G,H,I)PERYLENE		390 U	360 U	350 U	340 U	310 U	355 U	300 U	290 U	375 UJ	360 UJ	390 UJ	350 UJ
BENZO(K)FLUORANTHENE		390 U	360 U	350 U	340 U	310 U	355 U	300 U	290 U	375 UJ	192 J	420 J	330 J
CHRYSENE		390 U	360 U	350 U	340 U	310 U	245 J	300 U	290 U	375 UJ	270 J	730 J	440 J
DIBENZO(A,H)ANTHRACENE		390 U	360 U	350 U	340 U	310 U	355 U	300 U	290 U	375 UJ	360 UJ	390 UJ	350 UJ
FLUORANTHENE		390 U	360 U	350 U	340 U	310 U	168 J	300 U	290 U	375 UJ	220 J	720	280 J
HIGH MOLECULAR WEIGHT PAHS	13903	9.2 J	325 U	5.2 J	307 U	13 J	1500 J	11 J	295 J	87.1 J	2110 J	5500 J	3850 J
INDENO(1,2,3-CD)PYRENE		390 U	360 U	350 U	340 U	310 U	355 U	300 UJ	290 UJ	375 UJ	360 UJ	390 UJ	350 UJ
PYRENE		390 U	360 U	350 U	340 U	310 U	795	300 U	240 J	375 UJ	1080 J	2300 J	2100 J
PCBS (UG/KG)													
AROCLOR-1016		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	13 U	11 U	10 U	11 U	12 UJ	13 U	12 UJ
AROCLOR-1221		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	13 U	11 U	10 U	11 U	12 UJ	13 U	12 UJ
AROCLOR-1232		16 UJ	15 UJ	15 UJ	15 UJ	13 UJ	15 U	13 U	12 U	12.5 U	15 UJ	16 U	14 UJ
AROCLOR-1242		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	13 U	11 U	10 U	11 U	12 UJ	13 U	12 UJ
AROCLOR-1248		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	13 U	11 U	10 U	11 U	12 UJ	13 U	12 UJ
AROCLOR-1254		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	440 J	11 U	67	11 U	100 J	800	260 J
AROCLOR-1260		14 UJ	12 UJ	13 UJ	13 UJ	11 UJ	13 U	11 U	10 U	11 U	12 UJ	13 U	12 UJ
TOTAL AROCLOR	1060	14.3 UJ	12.4 UJ	13.3 UJ	13.3 UJ	11.3 UJ	440 J	11.3 U	67	11.2 U	100 J	800	260 J
METALS (MG/KG)													
COPPER	74	7.9	6.4	5.2	6.6	NA	NA	NA	NA	6.8	NA	NA	NA
LEAD	168	12.3 J	7 J	6.6 J	7.8 J	5	102	28 J	9.7 J	7.5	48.8	125	52.4
ZINC	118	49.8	46.3	42.5	44.5	NA	NA	NA	NA	42.8	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)													
AMOSITE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ASBESTOS	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSOTILE	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/KG)													

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

APPENDIX B1-C
ANALYTICAL RESULTS FOR 2 TO 4 FOOT INTERVAL SEDIMENT SAMPLES
DERECKTOR SHIPYARD OFFSHORE, SITE 19
SUPPLEMENTAL SEDIMENT INVESTIGATION
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	**Comparison Criteria**	DSY-SD-W09-2448	DSY-SD-W13-2448	DSY-SD-W17-2448	DSY-SD-W21-2448	DSY-SD-W24-2448	DSY-SD-W26-2448-AVG	DSY-SD-W28-2448	DSY-SD-W30-2448	DSY-SD-Y03-2448-AVG	DSY-SD-Y25-2448-AVG	DSY-SD-Y26-2448	DSY-SD-Y28-2448
LOCATION ID		DSY-SD-W09	DSY-SD-W13	DSY-SD-W17	DSY-SD-W21	DSY-SD-W24	DSY-SD-W26	DSY-SD-W28	DSY-SD-W30	DSY-SD-Y03	DSY-SD-Y25	DSY-SD-Y26	DSY-SD-Y28
SAMPLE DATE		09/30/11	09/30/11	09/30/11	09/30/11	10/06/11	10/05/11	10/06/11	10/06/11	10/03/11	10/03/11	10/03/11	10/03/11
TOP DEPTH		2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT
BOTTOM DEPTH		4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL
TRIBUTYLTIN (AS TIN)	228	0.7 U	0.67 U	0.71 U	0.68 U	0.65 U	5.15 J	0.63 U	0.72 U	0.69 U	0.69 U	3.4 U	0.66 U
MISCELLANEOUS PARAMETERS (%)													
TOTAL SOLIDS		NA	NA	NA	NA	76	66	78	80	NA	NA	NA	NA

DARK SHADING-EXCEEDS RPRG; LIGHT SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

B2 DV MEMORANDA

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-xxxxW

Date: January 31, 2012 c: File G02747-4.10

To: Steve Parker

From: Paula DiMattei (no copy)

Subject: Analytical Data Usability Assessment
SDG: DSY-9, DSY-11, DSY-18, DSY-19, DSY-20, DSY-21, DSY-22, DSY-23, DSY-24
CTO WE61, Derecktor Shipyard, Naval Station (NAVSTA), Newport, RI

Samples: DSY-9
13/Sediment: PAH

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448
DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
DSY-SD-DUP11-092611[1]		

[1]Field duplicate of DSY-SD-AG26-0012

1/Rinsate blank: PAH

DSY-SD-RB04-092611

DSY-11
19/Sediment: PAH

DSY-SD-AC26-0012	DSY-SD-AC26-1224	DSY-SD-AC26-2448
DSY-SD-AC28-0012	DSY-SD-AC28-1224	DSY-SD-AC28-2448
DSY-SD-AE26-0012	DSY-SD-AE26-1224	DSY-SD-AE26-2448
DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448
DSY-SD-AE30-0012	DSY-SD-AE30-1224	DSY-SD-AG30-0012
DSY-SD-AG30-1224	DSY-SD-AG30-2448	DSY-SD-DUP13-092811[2]
DSY-SD-DUP14-092811[3]		

[2]Field duplicate of DSY-SD-AC26-2448 [3]Field duplicate of DSY-SD-AG28-0012

DSY-18
19/Sediments: PAH

DSY-SD-DUP26-100511[4]	DSY-SD-L24-0012	DSY-SD-L24-1224
DSY-SD-L24-2448	DSY-SD-L26-1224	DSY-SD-L26-2448
DSY-SD-N24-0012	DSY-SD-N24-1224	DSY-SD-N24-2448
DSY-SD-N26-0012	DSY-SD-N26-1224	DSY-SD-N26-2448

DSY-SD-N28-0012	DSY-SD-N28-1224	DSY-SD-N28-2448
DSY-SD-N30-0012	DSY-SD-N30-1224	DSY-SD-N30-2448
DSY-SD-Q25-0012		

[4]Field duplicate of DSY-SD-N24-2448

1/Rinsate blank PAH

DSY-SD-RB09-100411

DSY-19
19/Sediments: PAH

DSY-SD-DUP27-100511[5]	DSY-SD-DUP28-100611[6]	DSY-SD-Q25-1224
DSY-SD-Q25-2448	DSY-SD-Q29-0012	DSY-SD-Q29-1224
DSY-SD-Q29-2448	DSY-SD-T25-0012	DSY-SD-T25-1224
DSY-SD-T25-2448	DSY-SD-T29-0012	DSY-SD-T29-1224
DSY-SD-T29-2448	DSY-SD-W24-0012	DSY-SD-W24-1224
DSY-SD-W24-2448	DSY-SD-W26-0012	DSY-SD-W26-1224
DSY-SD-W26-2448		

[5]Field duplicate of DSY-SD-W26-2448 [6]Field duplicate of DSY-SD-W24-0012

1/Rinsate blank PAH

DSY-SD-RB10-100511

DSY-20
19/Sediments: PAH

DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
DSY-SD-C25-0012	DSY-SD-C25-1224	DSY-SD-C25-2448
DSY-SD-DUP29-100711[7]	DSY-SD-W28-0012	DSY-SD-W28-1224
DSY-SD-W28-2448	DSY-SD-W30-0012	DSY-SD-W30-1224
DSY-SD-W30-2448		

[7]Field duplicate of DSY-SD-C25-1224

1/Rinsate blank PAH

DSY-SD-RB11-100611

DSY-21
10/Sediments: PAH

DSY-SD-C13-0012	DSY-SD-C13-1224	DSY-SD-C13-2448
DSY-SD-C17-0012	DSY-SD-C17-1224	DSY-SD-C17-2448
DSY-SD-C29-0012	DSY-SD-C29-1224	DSY-SD-C29-2448
DSY-SD-DUP30-100711[8]		

[8]Field duplicate of DSY-SD-C09-2448 (in SDG DSY-20)

1/Rinsate blank PAH

DSY-SD-RB12-100711

DSY-22
23/Sediments: PAH

DSY-SD-DUP31-101211[9]	DSY-SD-DUP32-101211[10]	DSY-SD-G01-0012
DSY-SD-G01-1224	DSY-SD-G01-2448	DSY-SD-G05-0012
DSY-SD-G05-1224	DSY-SD-G05-2448	DSY-SD-G09-0012
DSY-SD-G09-1224	DSY-SD-G09-2448	DSY-SD-G13-0012
DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-G21-0012
DSY-SD-G21-1224	DSY-SD-G21-2448	DSY-SD-G25-0012
DSY-SD-G25-1224	DSY-SD-G25-2448	

[9]Field duplicate of DSY-SD-G05-2448 [10]Field duplicate of DSY-SD-G17-2448

DSY-23
7/Sediments: PAH

DSY-SD-AA01-0012	DSY-SD-AA01-1224	DSY-SD-AA01-2448
DSY-SD-AA05-0012	DSY-SD-AA05-1224	DSY-SD-AA05-2448
DSY-SD-DUP33-101211[11]		

[11]Field duplicate of DSY-SD-AA01-2448

1/Rinsate blank PAH

DSY-SD-RB13-101211

DSY-24
24/Sediments: PAH

DSY-SD-AA09-0012	DSY-SD-AA09-1224	DSY-SD-AA09-2448
DSY-SD-AA13-0012	DSY-SD-AA13-1224	DSY-SD-AA13-2448
DSY-SD-AA17-0012	DSY-SD-AA17-1224	DSY-SD-AA17-2448
DSY-SD-AA21-0012	DSY-SD-AA21-1224	DSY-SD-AA21-2448
DSY-SD-AA24-0012	DSY-SD-AA24-1224	DSY-SD-AA24-2448
DSY-SD-AA26-0012	DSY-SD-AA26-1224	DSY-SD-AA26-2448
DSY-SD-AA28-0016	DSY-SD-AA30-0012	DSY-SD-AA30-1224

DSY-SD-DUP34-101311[12] DSY-SD-DUP35-101311[13] DSY-SD-G30-0018

[12]Field duplicate of DSY-SD-AA21-2448 [13]Field duplicate of DSY-SD-AA28-0016

1/Rinsate blank PAH

DSY-SD-RB14-101311

Analytical Data Usability Assessment

The analytical data usability assessment was performed to determine if the analytical data reported by the laboratory for these SDGs met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH (polynuclear aromatic hydrocarbons) data set with the following exceptions. The majority of the High Molecular Weight (HMW) PAH compounds were qualified as estimated for select sediment samples in SDGs DSY-9, DSY-11, DSY-18, DSY-19, DSY-20, DSY-21, and DSY-24 due to poor internal standard performance. Pyrene in sediment sample DSY-SD-N28-0012 (in SDG DSY-18), benzo(a)pyrene in sediment sample DSY-SD-N24-0012 (in SDG DSY-18), benzo(a)anthracene, chrysene, fluoranthene, and pyrene for sediment sample DSY-SD-G21-1224 (in SDG DSY-22), and all PAHs in sediment sample DSY-SD-G09-2448 (in SDG DSY-22) were qualified as estimated due to the exceeded extraction holding time criterion; these results may be biased low. Benzo(a)anthracene, chrysene, and pyrene for sediment sample DSY-SD-N26-1224 (in SDG DSY-18), and benzo(a)pyrene for sediment samples DSY-SD-N28-1224, DSY-SD-N30-0012, DSY-SD-N30-1224, and DSY-SD-Q25-0012 (in SDG DSY-18) and for sediment sample DSY-SD-C29-2448 (in SDG DSY-21) were qualified as estimated due to high surrogate recoveries; these results may be biased high. Benzo(a)pyrene for sediment sample DSY-SD-N28-0012 (in SDG DSY-18) was qualified as estimated (J) due to low surrogate recoveries; this result may be biased low. All HMW PAHs for sample DSY-SD-AA09-0012 (in SDG DSY-24) were qualified as estimated due to the low percent solids content. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values which may have a minor impact on data usability.

Indeno(1,2,3-cd)pyrene for all sediment samples in SDGs DSY-9 and DSY-20 and for select sediment samples in SDGs DSY-21, DSY-22, and DSY-24; pyrene for select sediment samples in SDGs DSY-11, DSY-19, DSY-22, and DSY-24; dibenzo(a,h)anthracene in select sediment samples in SDG DSY-20 and SDG DSY-21; benzo(g,h,i)perylene in select sediment samples in SDGs DSY-18, DSY-19, DSY-21, and DSY-22; and fluoranthene for select sediment samples in SDG DSY-22 were qualified as estimated due to instrument calibration nonconformances. Pyrene for sediment sample DSY-SD-AE28-2448 (in SDG DSY-11) and benzo(g,h,i)perylene for sediment sample DSY-SD-C13-2448 (in SDG DSY-21) were qualified as estimated as a result of the low matrix spike/matrix spike duplicate (MS/MSD) recoveries; the results may be biased low. Pyrene was qualified as estimated for sediment sample DSY-SD-N28-2448

(in SDG DSY-18) due to high MS/MSD recoveries; this result may be biased high. There are no Project Action Limits (PALs) established for these individual compounds and the impact of these nonconformances to the concentration of the total HMW PAHs is minimal; thus, the data usability is not impacted. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

Benzo(a)pyrene, analyzed in selected ion monitoring (SIM) mode, was qualified as estimated in sediment sample DSY-SD-G09-2448 (in SDG DSY-22) since the sample was not spiked with the appropriate SIM surrogate compounds. However, appropriate full scan analysis surrogates were spiked and all recovery criteria were met indicating that the extraction efficiency for this sample was adequate. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

Benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene for the rinsate blank DSY-SD-RB04-092611 (in SDG DSY-9), and benzo(a)pyrene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, and pyrene for the rinsate blank samples DSY-SD-RB09-104544 (in SDG DSY-18), DSY-SD-RB10-100511 (in SDG DSY-19), DSY-SD-RB11-100611 (in SDG DSY-20), and DSY-SD-RB12-100711 (in SDG DSY-21) were qualified as estimated due to low laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) recoveries; these results may be biased low. Indeno(1,2,3-cd)pyrene and/or benzo(g,h,i)perylene for the rinsate blank samples DSY-SD-RB10-100511 (in SDG DSY-19), DSY-SD-RB11-100611 (in SDG DSY-20), and DSY-SD-RB12-100711 (in SDG DSY-21); and pyrene for rinsate blank sample DSY-SD-RB14-101311 (in SDG DSY-24) were qualified as estimated due to instrument calibration nonconformances. The data usability is not impacted since there are no PALs established for rinsate blank samples. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exceptions. Benzo(a)pyrene was qualified as estimated for sediment samples DSY-SD-AC28-0012, DSY-SD-DUP14-092811, DSY-SD-AC26-2448, and DSY-SD-DUP13-092811 (in SDG DSY-11), for sediment samples DSY-SD-C25-1224 and DSY-SD-DUP29-100711 (in SDG DSY-20), and for sediment samples DSY-SD-AA21-2448 and DSY-SD-DUP34-101311 (in SDG DSY-24) due to field duplicate imprecision. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values which may have a minor impact on data usability.

Benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were qualified as estimated in the rinsate blank DSY-SD-RB04-092611 (in SDG DSY-9) due to LCS/LCSD imprecision. However, the data usability is not impacted since there are no PALs established for rinsate blank samples. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity were evaluated based on the project action limits (PALs) as they pertain to the reporting of non-detected results [reported at the limit of detection (LOD)]. The LODs for benzo(a)pyrene met the PAL. The laboratory performed SIM mode analyses for benzo(a)pyrene only and not for other HMW PAHs which exceeded the project limit of quantitation (LOQ) goals as stipulated in the sampling and analysis plan. However, the data usability was not adversely affected since the PAL for the total HMW PAHs was met in these instances; thus, data usability is not impacted with regards to sensitivity.

The project goals with respect to laboratory data completeness were met for the PAH data set with the following exceptions. All HMW PAHs except pyrene for sediment sample DSY-SD-N28-0012 (in SDG DSY-18), and benzo(b)fluoranthene, benzo(g,h,i)peryleme, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene for sample DSY-SD-G21-1224 (in SDG DSY-22) were deemed not usable for project decisions as a result of the grossly exceeded extraction holding time criterion. Data usability may be impacted with regards to laboratory data completeness.

It should be noted that the benzo(a)pyrene result in rinsate blank sample DSY-SD-RB11-100611 (in SDG DSY-20) was qualified as rejected by the data validator. The data validator took a conservative approach to qualify this result in this manner since the sample was not spiked with the appropriate SIM surrogate compounds. However, appropriate full scan analysis surrogates were spiked and all recovery criteria were met indicating that the extraction efficiency for this sample was adequate. Therefore, this data point may be considered usable and the data validation action taken by the validator should not impact the data usability with regards to laboratory data completeness.

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-xxxxW

Date: January 31, 2012 c: File G02747-4.10

To: Steve Parker

From: Paula DiMattei (no copy)

Subject: Analytical Data Usability Assessment
SDG: DSY-9, DSY-11, DSY-18, DSY-19, DSY-20, DSY-21, DSY-22, DSY-23, DSY-24
CTO WE61, Derecktor Shipyard, Naval Station (NAVSTA), Newport, RI

Samples: DSY-9
13/Sediment: PCB

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448
DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
DSY-SD-DUP11-092611[1]		

[1]Field duplicate of DSY-SD-AG26-0012

1/Rinsate blank: PCB

DSY-SD-RB04-092611

DSY-11
19/Sediment: PCB

DSY-SD-AC26-0012	DSY-SD-AC26-1224	DSY-SD-AC26-2448
DSY-SD-AC28-0012	DSY-SD-AC28-1224	DSY-SD-AC28-2448
DSY-SD-AE26-0012	DSY-SD-AE26-1224	DSY-SD-AE26-2448
DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448
DSY-SD-AE30-0012	DSY-SD-AE30-1224	DSY-SD-AG30-0012
DSY-SD-AG30-1224	DSY-SD-AG30-2448	DSY-SD-DUP13-092811[2]
DSY-SD-DUP14-092811[3]		

[2]Field duplicate of DSY-SD-AC26-2448 [3]Field duplicate of DSY-SD-AG28-0012

DSY-18
19/Sediments: PCB

DSY-SD-DUP26-100511[4]	DSY-SD-L24-0012	DSY-SD-L24-1224
DSY-SD-L24-2448	DSY-SD-L26-1224	DSY-SD-L26-2448
DSY-SD-N24-0012	DSY-SD-N24-1224	DSY-SD-N24-2448
DSY-SD-N26-0012	DSY-SD-N26-1224	DSY-SD-N26-2448

DSY-SD-N28-0012	DSY-SD-N28-1224	DSY-SD-N28-2448
DSY-SD-N30-0012	DSY-SD-N30-1224	DSY-SD-N30-2448
DSY-SD-Q25-0012		

[4]Field duplicate of DSY-SD-N24-2448

1/Rinsate blank PCB

DSY-SD-RB09-100411

DSY-19
19/Sediments: PCB

DSY-SD-DUP27-100511[5]	DSY-SD-DUP28-100611[6]	DSY-SD-Q25-1224
DSY-SD-Q25-2448	DSY-SD-Q29-0012	DSY-SD-Q29-1224
DSY-SD-Q29-2448	DSY-SD-T25-0012	DSY-SD-T25-1224
DSY-SD-T25-2448	DSY-SD-T29-0012	DSY-SD-T29-1224
DSY-SD-T29-2448	DSY-SD-W24-0012	DSY-SD-W24-1224
DSY-SD-W24-2448	DSY-SD-W26-0012	DSY-SD-W26-1224
DSY-SD-W26-2448		

[5]Field duplicate of DSY-SD-W26-2448 [6]Field duplicate of DSY-SD-W24-0012

1/Rinsate blank PCB

DSY-SD-RB10-100511

DSY-20
19/Sediments: PCB

DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
DSY-SD-C25-0012	DSY-SD-C25-1224	DSY-SD-C25-2448
DSY-SD-DUP29-100711[7]	DSY-SD-W28-0012	DSY-SD-W28-1224
DSY-SD-W28-2448	DSY-SD-W30-0012	DSY-SD-W30-1224
DSY-SD-W30-2448		

[7]Field duplicate of DSY-SD-C25-1224

1/Rinsate blank PCB

DSY-SD-RB11-100611

DSY-21
10/Sediments: PCB

DSY-SD-C13-0012	DSY-SD-C13-1224	DSY-SD-C13-2448
DSY-SD-C17-0012	DSY-SD-C17-1224	DSY-SD-C17-2448
DSY-SD-C29-0012	DSY-SD-C29-1224	DSY-SD-C29-2448
DSY-SD-DUP30-100711[8]		

[8]Field duplicate of DSY-SD-C09-2448 (in SDG DSY-20)

1/Rinsate blank PCB

DSY-SD-RB12-100711

DSY-22
23/Sediments: PCB

DSY-SD-DUP31-101211[9]	DSY-SD-DUP32-101211[10]	DSY-SD-G01-0012
DSY-SD-G01-1224	DSY-SD-G01-2448	DSY-SD-G05-0012
DSY-SD-G05-1224	DSY-SD-G05-2448	DSY-SD-G09-0012
DSY-SD-G09-1224	DSY-SD-G09-2448	DSY-SD-G13-0012
DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-G21-0012
DSY-SD-G21-1224	DSY-SD-G21-2448	DSY-SD-G25-0012
DSY-SD-G25-1224	DSY-SD-G25-2448	

[9]Field duplicate of DSY-SD-G05-2448 [10]Field duplicate of DSY-SD-G17-2448

DSY-23
7/Sediments: PCB

DSY-SD-AA01-0012	DSY-SD-AA01-1224	DSY-SD-AA01-2448
DSY-SD-AA05-0012	DSY-SD-AA05-1224	DSY-SD-AA05-2448
DSY-SD-DUP33-101211[11]		

[11]Field duplicate of DSY-SD-AA01-2448

1/Rinsate blank

DSY-SD-RB13-101211

DSY-24
24/Sediments: PCB

DSY-SD-AA09-0012	DSY-SD-AA09-1224	DSY-SD-AA09-2448
DSY-SD-AA13-0012	DSY-SD-AA13-1224	DSY-SD-AA13-2448
DSY-SD-AA17-0012	DSY-SD-AA17-1224	DSY-SD-AA17-2448
DSY-SD-AA21-0012	DSY-SD-AA21-1224	DSY-SD-AA21-2448
DSY-SD-AA24-0012	DSY-SD-AA24-1224	DSY-SD-AA24-2448
DSY-SD-AA26-0012	DSY-SD-AA26-1224	DSY-SD-AA26-2448
DSY-SD-AA28-0016	DSY-SD-AA30-0012	DSY-SD-AA30-1224

DSY-SD-DUP34-101311[12] DSY-SD-DUP35-101311[13] DSY-SD-G30-0018

[12]Field duplicate of DSY-SD-AA21-2448 [13]Field duplicate of DSY-SD-AA28-0016

1/Rinsate blank PCB

DSY-SD-RB14-101311

Analytical Data Usability Assessment

The analytical data usability assessment was performed to determine if the analytical data reported by the laboratory for these SDGs met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PCB

The project goals with respect to accuracy were met for the PCB (polychlorinated biphenyl) data set with the following exceptions. All Aroclors for all sediment samples in SDGs DSY-9 and DSY-23; and for select samples in SDGs DSY-11, DSY-18, DSY-19, DSY-20, DSY-21, DSY-22, and DSY-24 were qualified as estimated due to the low surrogate recoveries; these results may be biased low. All Aroclors for sample DSY-SD-AA09-0012 (in SDG DSY-24) were qualified as estimated due to the low percent solids content. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values which may have a minor impact on data usability.

Aroclor 1254 for sediment samples DSY-SD-AI26-1224 and DSY-SD-AI26-2448 (in SDG DSY-9), DSY-SD-N28-2448 (in SDG DSY-18), DSY-SD-C21-0012 (in SDG DSY-20), DSY-SD-C29-2448 (in SDG DSY-21), and DSY-SD-G25-1224, DSY-SD-DUP31-101211, DSY-SD-G05-2448, and DSY-SD-G13-2448 (in SDG DSY-22), and DSY-SD-AA17-0012, DSY-SD-AA21-2448, DSY-SD-DUP34-101311, DSY-SD-AA24-2448, DSY-SD-AA26-0012, and DSY-SD-G30-0018 (in SDG DSY-24); and Aroclor 1242 for sediment sample DSY-SD-T29-2448 (in SDG DSY-19) were qualified as estimated due to calibration nonconformances. Aroclor 1254 for sediment samples DSY-SD-AG26-2448 and DSY-SD-AI26-1224 (in SDG DSY-9), DSY-SD-G25-1224 (in SDG DSY-22), and DSY-SD-AA17-0012 (in SDG DSY-24); and Aroclor 1260 for sediment sample DSY-SD-AA30-0012 (in SDG DSY-24) were qualified as estimated since the dual column results exceeded the QC acceptance criterion. Aroclor 1016 for sediment sample DSY-SD-T29-2448 was qualified as estimated due to the low matrix spike/matrix spike duplicate (MS/MSD) recoveries; this result may be biased low. Aroclor 1016 for select sediment samples in SDGs DSY-22 and DSY-24 was qualified as estimated due to the low laboratory control sample (LCS) recovery; these results may be biased low. Aroclor 1254 for sediment samples DSY-SD-G05-2448 and DSY-SD-G25-1224 (in SDG DSY-22) was qualified as estimated due to the low surrogate recoveries; these results may be biased low. There are no Project Action Limits (PALs) established for these individual Aroclors and the concentrations detected are much lower than the PAL for the total PCBs; thus, the data usability

is not impacted. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

All Aroclors for rinsate blank samples DSY-SD-RB12-100711 (in SDG DSY-21) and DSY-SD-RB14-101311 (in SDG DSY-24) were qualified as estimated due to the low surrogate recoveries; these results may be biased low. The data usability is not impacted since there are no PALs established for rinsate blank samples. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PCB data set with the following exceptions. Aroclor 1254 was qualified as estimated in sediment samples DSY-SD-W26-2448 and DSY-SD-DUP27-100511 9in SDG DSY-19) due to field duplicate imprecision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

Aroclor 1254 for sediment samples DSY-SD-AC26-2448, DSY-SD-DUP13-092811, DSY-SD-AC26-2448 and DSY-SD-DUP13-092811 (in SDG DSY-11) and DSY-SD-C25-1224 and DSY-SD-DUP29-100711 (in SDG DSY-20); and Aroclors 1254 and 1260 for sediment samples DSY-SD-N24-2448 and DSY-SD-DUP26-100511 (in SDG DSY-18) were qualified as estimated due to field duplicate imprecision. Aroclor 1016 for sediment samples DSY-SD-G25-0012, DSY-SD-G25-1224, and DSY-SD-G25-2448 (in SDG DSY-22) was qualified as estimated due to the LCS/LCS duplicate (LCSD) imprecision. There are no Project Action Limits (PALs) established for these individual Aroclors and concentrations detected are much lower than the PAL for the total PCBs; thus, the data usability is not impacted. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity were evaluated based on the project action limits (PALs) as they pertain to the reporting of non-detected results [reported at the limit of detection (LOD)]. PALs are not established for the individual Aroclors. The LODs for the individual Aroclors are significantly lower than the PAL established for total PCBs; thus, data usability is not impacted with regards to sensitivity.

The project goals with respect to laboratory data completeness were met for the PCB data set. Data usability is not impacted with regards to laboratory data completeness.

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 13, 2012**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PAH/PCB**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-11

SAMPLES: 19/Sediment/PAH/PCB

DSY-SD-AC26-0012	DSY-SD-AC26-1224	DSY-SD-AC26-2448
DSY-SD-AC28-0012	DSY-SD-AC28-1224	DSY-SD-AC28-2448
DSY-SD-AE26-0012	DSY-SD-AE26-1224	DSY-SD-AE26-2448
DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448
DSY-SD-AE30-0012	DSY-SD-AE30-1224	DSY-SD-AG30-0012
DSY-SD-AG30-1224	DSY-SD-AG30-2448	DSY-SD-DUP13-092811
DSY-SD-DUP14-092811		

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-11 consisted of nineteen (19) sediment environmental samples. All nineteen sediment samples were analyzed for polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyls (PCB). Two field duplicate pairs were included in this sample delivery group (SDG): DSY-SD-DUP13-092811/DSY-SD-AC26-2448 and DSY-SD-DUP14-092811/DSY-SD-AC28-0012.

The samples were collected by Tetra Tech on September 28, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, and 8082 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Instrument Tuning and System Performance
• Initial and Continuing Calibrations
* • Laboratory Method Blank Results
• Surrogate Spike Recoveries
• Internal Standard Areas
• Matrix Spike Sample/Matrix Spike Duplicate Sample Results
• Laboratory Control Sample Results
• Field Duplicate Precision
* • Detection Limits
* • Compound Identification and Quantification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the

documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier III validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

INITIAL AND CONTINUING CALIBRATION

The continuing calibration performed GCMS-U on 11/01/11 @ 15:46 had a Percent Difference (%D) greater than 20% for pyrene. Samples DSY-SD-AE30-0012, DSY-SD-AE30-1224, DSY-SD-AG30-0012, DSY-SD-AG30-1224, and DSY-SD-AG30-2436 were affected. The positive and non-detected results reported for these compounds the affected samples qualified as estimated, (J) and (UJ), respectively.

SURROGATE SPIKE RECOVERIES

The Percent Recoveries (%Rs) for the PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, were below the lower quality control limits on both GC columns for sample DSY-SD-AC28-2448. The sample was not re-extracted or reanalyzed. The positive and non-detected PCB results were qualified as estimated, (J) and (UJ), respectively.

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in samples DSY-SD-AC28-1224, DSY-SD-AC26-1224, DSY-SD-AC26-2448, and DSY-SD-AE26-2448. The positive and non-detected results reported for the PCBs in these samples were qualified as estimated, (J) and (UJ), respectively.

INTERNAL STANDARD RESULTS

The internal standard areas for perylene-d12 were below the lower quality control limit in samples DSY-SD-AC26-0012, DSY-SD-AC26-1224, DSY-SD-AC26-2448, DSY-SD-AC28-0012, DSY-SD-AC28-1224, DSY-SD-AC28-2448, DSY-SD-AE26-0012, DSY-SD-AE26-1224, DSY-SD-AE26-2448, DSY-SD-AE28-2448, DSY-SD-AE30-0012 and DSY-SD-DUP14-092811. In addition, the internal standard areas for chrysene-d12 were below the lower quality control limit in samples DSY-SD-AC26-1224, DSY-SD-AC28-0012, DSY-SD-AC28-1224, DSY-SD-AC28-2448, DSY-SD-AE26-1224, and DSY-SD-AE26-2448. The positive and non-detected results reported for the target PAH compounds associated with these internal standards in the affected samples were qualified as estimated, (J) and (UJ), respectively.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RESULTS

The PAH Matrix Spike/Matrix Spike Duplicate (MS/MSD) %Rs for pyrene were above the upper quality control limit. The positive result reported for pyrene in the parent sample, DSY-SD-AE28-2448, was qualified as estimated, (J).

FIELD DUPLICATE PRECISION

The Relative Percent Difference (RPD) for benzo(a)pyrene in the field duplicate pair SD-DUP14-092811/DSY-SD-AC28-0012 was greater than the 50% quality control criterion. In addition, Aroclor-1254 was detected in the environmental sample above the Limit of Quantitation (LOQ) but not in the field duplicate sample. The difference between the positive and non-detected results for Aroclor-1254 exceeded 2X the LOQ. The positive and non-detected results for benzo(a)pyrene and Aroclor-1254 in the field duplicate pair were qualified as estimated, (J) and (UJ), respectively, for field duplicate imprecision.

The RPDs for benzo(a)pyrene and Aroclor-1254 in the field duplicate pair DSY-SD-DUP13-092811/DSY-SD-AC26-2448 exceeded the 50% quality control limit. The positive results for these compounds were qualified as estimated, (J), in the field duplicate pair.

NOTES

The average %Ds for some continuing calibration verifications in the PCB fraction exceeded 20%. No action was necessary because only one GC column was noncompliant.

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl, were below the lower quality control limit in samples DSY-SD-AC28-0012, DSY-SD-AE28-2448, and DSY-SD-DUP13-092811. No action was taken because only one GC column was outside the quality control limit.

The PAH Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LSCD) had a Relative Percent Difference (RPD) for indeno(1,2,3-cd)pyrene greater than the 30% quality control limit. No action was taken in the affected samples because the %Rs for this compound were acceptable.

Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and fluoranthene were detected below the LOQ in the environmental sample, DSY-SD-AC28-0012, but not in the field duplicate sample, SD-DUP14-092811. In addition, pyrene was detected above the LOQ in one sample and below the LOQ in the other sample. No action was taken for field duplicate imprecision because the differences between the positive and non-detected results or the difference between the positive results were not 2X greater than the LOQ.

Chrysene and pyrene were detected below the LOQ in the field duplicate sample, SD-DUP13-092811, but not in the environmental sample, DSY-SD-AC26-2448. No action necessary for field duplicate imprecision because the differences between the positive and non-detected results were less than 2X the LOQ.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). Samples DSY-SD-AC28-2448 and DSY-SD-AE26-2448 had benzo(a)pyrene results detected above the LOQ in the 8270C full scan, therefore, these samples were not reanalyzed via 8270C SIM.

The 8270C SIM surrogates were not quantified in the SIM analysis. The surrogate spike recovery results from the 8270C full scan were used to evaluate the 8270C SIM data. The surrogate %Rs from the full scan were within the laboratory established quality control limits for all environmental samples.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: A continuing calibration %D was noted in the PAH fraction. A PAH LCS/LCSD RPD was outside of quality control criterion.

Other Factors Affecting Data Quality: Surrogate noncompliances were noted in the PAH and PCB fractions. Internal standard areas were noncompliant in several PAH fraction samples. Field duplicate imprecision was noted in both field duplicate pairs. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082 listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Tetra Tech NUS
Michelle L. Allen
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Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's r < 0.995
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-11 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AC26-0012			DSY-SD-AC26-1224			DSY-SD-AC26-2448			DSY-SD-AC28-0012		
	LAB_ID	SE6389-1			SE6389-2			SE6389-3			SE6389-11		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.6			44.1			75.9			37.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		680	U		550	J	N	320	U		660	UJ	N
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		680	UJ	N	550	UJ	N	320	UJ	N	660	UJ	N
BENZO(G,H,I)PERYLENE		680	UJ	N	550	UJ	N	320	UJ	N	660	UJ	N
BENZO(K)FLUORANTHENE		270	J	PN	500	J	NP	320	UJ	N	660	UJ	N
CHRYSENE		300	J	P	700	J	NP	130	J	P	660	UJ	N
DIBENZO(A,H)ANTHRACENE		680	UJ	N	550	UJ	N	320	UJ	N	660	UJ	N
FLUORANTHENE		350	J	P	410	J	P	140	U		660	U	
INDENO(1,2,3-CD)PYRENE		680	UJ	N	550	UJ	N	320	UJ	N	660	UJ	N
PYRENE		640	J	P	2200	J	N	400	J	P	730	J	PN

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC28-1224			DSY-SD-AC28-2448			DSY-SD-AE26-0012			DSY-SD-AE26-1224		
SDG: DSY-11	LAB_ID	SE6389-12			SE6389-13			SE6389-8			SE6389-9		
FRACTION: OS	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	40.5			44.0			34.0			39.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		740	J	NP	2700	J	N	720	U		270	J	NP
BENZO(A)PYRENE					1600	J	N						
BENZO(B)FLUORANTHENE		410	J	NP	1500	J	N	720	UJ	N	620	UJ	N
BENZO(G,H,I)PERYLENE		600	UJ	N	820	J	N	720	UJ	N	620	UJ	N
BENZO(K)FLUORANTHENE		550	J	NP	1600	J	N	720	UJ	N	350	J	NP
CHRYSENE		690	J	NP	2800	J	N	720	U		400	J	NP
DIBENZO(A,H)ANTHRACENE		600	UJ	N	550	UJ	N	720	UJ	N	620	UJ	N
FLUORANTHENE		1700			3200			720	U		620	U	
INDENO(1,2,3-CD)PYRENE		600	UJ	N	880	J	N	720	UJ	N	620	UJ	N
PYRENE		4200	J	N	8100	J	N	330	J	P	870	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE26-2448			DSY-SD-AE28-0012			DSY-SD-AE28-1224			DSY-SD-AE28-2448		
SDG: DSY-11	LAB_ID	SE6389-10			SE6389-5			SE6389-6			SE6389-7		
FRACTION: OS	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.4			32.4			37.6			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		740	J	N	760	U		650	U		360	U	
BENZO(A)PYRENE		730	J	N									
BENZO(B)FLUORANTHENE		670	J	NP	760	U		650	U		360	UJ	N
BENZO(G,H,I)PERYLENE		500	UJ	N	760	U		650	U		360	UJ	N
BENZO(K)FLUORANTHENE		760	J	N	760	U		350	J	P	360	UJ	N
CHRYSENE		1100	J	N	760	U		320	J	P	360	U	
DIBENZO(A,H)ANTHRACENE		500	UJ	N	760	U		650	U		360	UJ	N
FLUORANTHENE		620	J	P	760	U		650	U		360	U	
INDENO(1,2,3-CD)PYRENE		500	UJ	N	760	U		650	U		360	UJ	N
PYRENE		3400	J	N	760	U		680	J	P	360	J	DP

PROJ_NO: 02747 SDG: DSY-11 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AE30-0012			DSY-SD-AE30-1224			DSY-SD-AG30-0012			DSY-SD-AG30-1224		
	LAB_ID	SE6389-15			SE6389-16			SE6389-18			SE6389-19		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.5			87.7			82.7			84.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		220	J	P	280	U		300	U		290	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		260	J	PN	280	U		300	U		290	U	
BENZO(G,H,I)PERYLENE		330	UJ	N	280	U		300	U		290	U	
BENZO(K)FLUORANTHENE		400	J	PN	280	U		300	U		290	U	
CHRYSENE		380	J	P	280	U		300	U		290	U	
DIBENZO(A,H)ANTHRACENE		330	UJ	N	280	U		300	U		290	U	
FLUORANTHENE		350	J	P	280	U		150	J	P	290	U	
INDENO(1,2,3-CD)PYRENE		330	UJ	N	280	U		300	U		290	U	
PYRENE		820		C	280	UJ	C	130	J	CP	290	UJ	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG30-2436			DSY-SD-DUP13-092811			DSY-SD-DUP14-092811		
SDG: DSY-11	LAB_ID	SE6389-20			SE6389-4			SE6389-14		
FRACTION: OS	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.8			75.9			37.3		
	DUP_OF				DSY-SD-AC26-2448			DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		290	U		320	U		470	J	P
BENZO(A)PYRENE										
BENZO(B)FLUORANTHENE		290	U		320	U		400	J	PN
BENZO(G,H,I)PERYLENE		290	U		320	U		650	UJ	N
BENZO(K)FLUORANTHENE		290	U		320	U		560	J	PN
CHRYSENE		290	U		320	U		520	J	P
DIBENZO(A,H)ANTHRACENE		290	U		320	U		650	UJ	N
FLUORANTHENE		290	U		320	U		540	J	P
INDENO(1,2,3-CD)PYRENE		290	U		320	U		650	UJ	N
PYRENE		290	UJ	C	320	U		1900		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC26-0012			DSY-SD-AC26-1224			DSY-SD-AC26-2448			DSY-SD-AC28-0012		
SDG: DSY-11	LAB_ID	SE6389-1			SE6389-2			SE6389-3			SE6389-11		
FRACTION: PAH	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.6			44.1			75.9			37.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		180			370			66	J	G	130	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC28-1224			DSY-SD-AE26-0012			DSY-SD-AE26-1224			DSY-SD-AE28-0012		
SDG: DSY-11	LAB_ID	SE6389-12			SE6389-8			SE6389-9			SE6389-5		
FRACTION: PAH	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	40.5			34.0			39.4			32.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		310			100			240			130		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE28-1224			DSY-SD-AE28-2448			DSY-SD-AE30-0012			DSY-SD-AE30-1224		
SDG: DSY-11	LAB_ID	SE6389-6			SE6389-7			SE6389-15			SE6389-16		
FRACTION: PAH	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	37.6			68.3			73.5			87.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		200			77			240			5.6	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG30-0012			DSY-SD-AG30-1224			DSY-SD-AG30-2436			DSY-SD-DUP13-092811		
SDG: DSY-11	LAB_ID	SE6389-18			SE6389-19			SE6389-20			SE6389-4		
FRACTION: PAH	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.7			84.6			85.8			75.9		
	DUP_OF										DSY-SD-AC26-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		35			27			12	U		38	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP14-092811		
SDG: DSY-11	LAB_ID	SE6389-14		
FRACTION: PAH	SAMP_DATE	9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	37.3		
	DUP_OF	DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		330	J	G

PROJ_NO: 02747 SDG: DSY-11 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AC26-0012			DSY-SD-AC26-1224			DSY-SD-AC26-2448			DSY-SD-AC28-0012		
	LAB_ID	SE6389-1			SE6389-2			SE6389-3			SE6389-11		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.6			44.1			75.9			37.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		23	U		18	UJ	R	11	UJ	R	21	U	
AROCLOR-1221		23	U		18	UJ	R	11	UJ	R	21	U	
AROCLOR-1232		27	U		21	UJ	R	13	UJ	R	25	U	
AROCLOR-1242		23	U		18	UJ	R	11	UJ	R	21	U	
AROCLOR-1248		23	U		18	UJ	R	11	UJ	R	21	U	
AROCLOR-1254		170			1100	J	R	170	J	GR	120	J	G
AROCLOR-1260		23	U		18	UJ	R	11	UJ	R	21	U	

PROJ_NO: 02747 SDG: DSY-11 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AC28-1224			DSY-SD-AC28-2448			DSY-SD-AE26-0012			DSY-SD-AE26-1224		
	LAB_ID	SE6389-12			SE6389-13			SE6389-8			SE6389-9		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	40.5			44.0			34.0			39.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		20	UJ	R	18	U		25	U		21	U	
AROCLOR-1221		20	UJ	R	18	U		25	U		21	U	
AROCLOR-1232		24	UJ	R	120	J	P	29	U		25	U	
AROCLOR-1242		20	UJ	R	18	U		25	U		21	U	
AROCLOR-1248		20	UJ	R	18	U		25	U		21	U	
AROCLOR-1254		460	J	R	690			25	U		21	U	
AROCLOR-1260		20	UJ	R	18	U		25	U		21	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE26-2448			DSY-SD-AE28-0012			DSY-SD-AE28-1224			DSY-SD-AE28-2448		
SDG: DSY-11	LAB_ID	SE6389-10			SE6389-5			SE6389-6			SE6389-7		
FRACTION: PCB	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.4			32.4			37.6			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		17	UJ	R	26	U		22	U		12	U	
AROCLOR-1221		17	UJ	R	26	U		22	U		12	U	
AROCLOR-1232		20	UJ	R	30	U		26	U		14	U	
AROCLOR-1242		17	UJ	R	26	U		22	U		12	U	
AROCLOR-1248		17	UJ	R	26	U		22	U		12	U	
AROCLOR-1254		860	J	R	26	U		22	U		130		
AROCLOR-1260		530	J	PR	26	U		22	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE30-0012			DSY-SD-AE30-1224			DSY-SD-AG30-0012			DSY-SD-AG30-1224		
SDG: DSY-11	LAB_ID	SE6389-15			SE6389-16			SE6389-18			SE6389-19		
FRACTION: PCB	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.5			87.7			82.7			84.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		9.5	U		10	U		8.9	U	
AROCLOR-1221		11	U		9.5	U		10	U		8.9	U	
AROCLOR-1232		13	U		11	U		12	U		10	U	
AROCLOR-1242		11	U		9.5	U		10	U		8.9	U	
AROCLOR-1248		11	U		9.5	U		10	U		8.9	U	
AROCLOR-1254		60			9.5	U		10	U		8.9	U	
AROCLOR-1260		11	U		9.5	U		10	U		8.9	U	

PROJ_NO: 02747 SDG: DSY-11 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG30-2436			DSY-SD-DUP13-092811			DSY-SD-DUP14-092811		
	LAB_ID	SE6389-20			SE6389-4			SE6389-14		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.8			75.9			37.3		
	DUP_OF				DSY-SD-AC26-2448			DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		8.8	U		11	U		21	U	
AROCLOR-1221		8.8	U		11	U		21	U	
AROCLOR-1232		10	U		13	U		25	U	
AROCLOR-1242		8.8	U		11	U		21	U	
AROCLOR-1248		8.8	U		11	U		21	U	
AROCLOR-1254		8.8	U		74	J	G	21	UJ	G
AROCLOR-1260		8.8	U		11	U		21	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-1
Client ID: DSY-SD-AC26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	680	ug/Kgdrywt	1	330	900	240	680
Benzo(b)fluoranthene	U	680	ug/Kgdrywt	1	330	900	370	680
Benzo(g,h,i)perylene	U	680	ug/Kgdrywt	1	330	900	280	680
Benzo(k)fluoranthene	J	270	ug/Kgdrywt	1	330	900	230	680
Chrysene	J	300	ug/Kgdrywt	1	330	900	260	680
Dibenzo(a,h)anthracene	U	680	ug/Kgdrywt	1	330	900	350	680
Fluoranthene	J	350	ug/Kgdrywt	1	330	900	290	680
Indeno(1,2,3-cd)pyrene	U	680	ug/Kgdrywt	1	330	900	330	680
Pyrene	J	640	ug/Kgdrywt	1	330	900	280	680
Nitrobenzene-d5		25.9	%					
2-Fluorobiphenyl		40.2	%					
Terphenyl-d14		40.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-2
Client ID: DSY-SD-AC26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 44.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	550	ug/Kgdrywt	1	330	740	190	550
Benzo(b)fluoranthene	U	550	ug/Kgdrywt	1	330	740	300	550
Benzo(g,h,i)perylene	U	550	ug/Kgdrywt	1	330	740	230	550
Benzo(k)fluoranthene	J	500	ug/Kgdrywt	1	330	740	180	550
Chrysene	J	700	ug/Kgdrywt	1	330	740	210	550
Dibenzo(a,h)anthracene	U	550	ug/Kgdrywt	1	330	740	290	550
Fluoranthene	J	410	ug/Kgdrywt	1	330	740	240	550
Indeno(1,2,3-cd)pyrene	U	550	ug/Kgdrywt	1	330	740	270	550
Pyrene		2200	ug/Kgdrywt	1	330	740	220	550
Nitrobenzene-d5		47.7	%					
2-Fluorobiphenyl		64.9	%					
Terphenyl-d14		69.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-3
Client ID: DSY-SD-AC26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 76.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	430	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	430	170	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	430	130	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	430	110	320
Chrysene	J	130	ug/Kgdrywt	1	330	430	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	430	160	320
Fluoranthene	U	140	ug/Kgdrywt	1	330	430	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	430	160	320
Pyrene	J	400	ug/Kgdrywt	1	330	430	130	320
Nitrobenzene-d5		40.0	%					
2-Fluorobiphenyl		48.4	%					
Terphenyl-d14		64.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-11
Client ID: DSY-SD-AC28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	660	ug/Kgdrywt	1	330	880	230	660
Benzo(b)fluoranthene	U	660	ug/Kgdrywt	1	330	880	360	660
Benzo(g,h,i)perylene	U	660	ug/Kgdrywt	1	330	880	280	660
Benzo(k)fluoranthene	U	660	ug/Kgdrywt	1	330	880	220	660
Chrysene	U	660	ug/Kgdrywt	1	330	880	250	660
Dibenzo(a,h)anthracene	U	660	ug/Kgdrywt	1	330	880	340	660
Fluoranthene	U	660	ug/Kgdrywt	1	330	880	280	660
Indeno(1,2,3-cd)pyrene	U	660	ug/Kgdrywt	1	330	880	320	660
Pyrene	J	730	ug/Kgdrywt	1	330	880	270	660
Nitrobenzene-d5		25.6	%					
2-Fluorobiphenyl		37.1	%					
Terphenyl-d14		82.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-12
Client ID: DSY-SD-AC28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	740	ug/Kgdrywt	1	330	790	210	600
Benzo(b)fluoranthene	J	410	ug/Kgdrywt	1	330	790	320	600
Benzo(g,h,i)perylene	U	600	ug/Kgdrywt	1	330	790	250	600
Benzo(k)fluoranthene	J	550	ug/Kgdrywt	1	330	790	200	600
Chrysene	J	690	ug/Kgdrywt	1	330	790	230	600
Dibenzo(a,h)anthracene	U	600	ug/Kgdrywt	1	330	790	310	600
Fluoranthene		1700	ug/Kgdrywt	1	330	790	260	600
Indeno(1,2,3-cd)pyrene	U	600	ug/Kgdrywt	1	330	790	290	600
Pyrene		4200	ug/Kgdrywt	1	330	790	240	600
Nitrobenzene-d5		25.7	%					
2-Fluorobiphenyl		35.2	%					
Terphenyl-d14		61.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-13
Client ID: DSY-SD-AC28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 44.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		2700	ug/Kgdrywt	1	330	740	190	550
Benzo(a)pyrene		1600	ug/Kgdrywt	1	330	740	210	550
Benzo(b)fluoranthene		1500	ug/Kgdrywt	1	330	740	300	550
Benzo(g,h,i)perylene		820	ug/Kgdrywt	1	330	740	230	550
Benzo(k)fluoranthene		1600	ug/Kgdrywt	1	330	740	180	550
Chrysene		2800	ug/Kgdrywt	1	330	740	210	550
Dibenzo(a,h)anthracene	U	550	ug/Kgdrywt	1	330	740	280	550
Fluoranthene		3200	ug/Kgdrywt	1	330	740	240	550
Indeno(1,2,3-cd)pyrene		880	ug/Kgdrywt	1	330	740	270	550
Pyrene		8100	ug/Kgdrywt	1	330	740	220	550
Nitrobenzene-d5		49.0	%					
2-Fluorobiphenyl		63.9	%					
Terphenyl-d14		77.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-8
Client ID: DSY-SD-AE26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	U	720	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	330	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		27.6	%					
2-Fluorobiphenyl		37.3	%					
Terphenyl-d14		60.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-9
Client ID: DSY-SD-AE26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	270	ug/Kgdrywt	1	330	830	220	620
Benzo(b)fluoranthene	U	620	ug/Kgdrywt	1	330	830	340	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	830	260	620
Benzo(k)fluoranthene	J	350	ug/Kgdrywt	1	330	830	210	620
Chrysene	J	400	ug/Kgdrywt	1	330	830	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	830	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	830	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	830	300	620
Pyrene		870	ug/Kgdrywt	1	330	830	250	620
Nitrobenzene-d5		34.2	%					
2-Fluorobiphenyl		48.1	%					
Terphenyl-d14		78.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-10
Client ID: DSY-SD-AE26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 48.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		740	ug/Kgdrywt	1	330	670	170	500
Benzo(a)pyrene		730	ug/Kgdrywt	1	330	670	190	500
Benzo(b)fluoranthene	J	670	ug/Kgdrywt	1	330	670	270	500
Benzo(g,h,i)perylene	U	500	ug/Kgdrywt	1	330	670	210	500
Benzo(k)fluoranthene		760	ug/Kgdrywt	1	330	670	170	500
Chrysene		1100	ug/Kgdrywt	1	330	670	190	500
Dibenzo(a,h)anthracene	U	500	ug/Kgdrywt	1	330	670	260	500
Fluoranthene	J	620	ug/Kgdrywt	1	330	670	210	500
Indeno(1,2,3-cd)pyrene	U	500	ug/Kgdrywt	1	330	670	250	500
Pyrene		3400	ug/Kgdrywt	1	330	670	200	500
Nitrobenzene-d5		41.7	%					
2-Fluorobiphenyl		58.0	%					
Terphenyl-d14		85.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-5
Client ID: DSY-SD-AE28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	760	ug/Kgdrywt	1	330	1000	260	760
Benzo(b)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	410	760
Benzo(g,h,i)perylene	U	760	ug/Kgdrywt	1	330	1000	320	760
Benzo(k)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	250	760
Chrysene	U	760	ug/Kgdrywt	1	330	1000	290	760
Dibenzo(a,h)anthracene	U	760	ug/Kgdrywt	1	330	1000	390	760
Fluoranthene	U	760	ug/Kgdrywt	1	330	1000	320	760
Indeno(1,2,3-cd)pyrene	U	760	ug/Kgdrywt	1	330	1000	370	760
Pyrene	U	760	ug/Kgdrywt	1	330	1000	310	760
Nitrobenzene-d5		31.2	%					
2-Fluorobiphenyl		42.5	%					
Terphenyl-d14		52.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-6
Client ID: DSY-SD-AE28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	650	ug/Kgdrywt	1	330	870	230	650
Benzo(b)fluoranthene	U	650	ug/Kgdrywt	1	330	870	350	650
Benzo(g,h,i)perylene	U	650	ug/Kgdrywt	1	330	870	270	650
Benzo(k)fluoranthene	J	350	ug/Kgdrywt	1	330	870	220	650
Chrysene	J	320	ug/Kgdrywt	1	330	870	250	650
Dibenzo(a,h)anthracene	U	650	ug/Kgdrywt	1	330	870	340	650
Fluoranthene	U	650	ug/Kgdrywt	1	330	870	280	650
Indeno(1,2,3-cd)pyrene	U	650	ug/Kgdrywt	1	330	870	320	650
Pyrene	J	680	ug/Kgdrywt	1	330	870	260	650
Nitrobenzene-d5		43.0	%					
2-Fluorobiphenyl		58.3	%					
Terphenyl-d14		72.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-7
Client ID: DSY-SD-AE28-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 68.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	360	ug/Kgdrywt	1	330	480	120	360
Benzo(b)fluoranthene	U	360	ug/Kgdrywt	1	330	480	200	360
Benzo(g,h,i)perylene	U	360	ug/Kgdrywt	1	330	480	150	360
Benzo(k)fluoranthene	U	360	ug/Kgdrywt	1	330	480	120	360
Chrysene	U	360	ug/Kgdrywt	1	330	480	140	360
Dibenzo(a,h)anthracene	U	360	ug/Kgdrywt	1	330	480	190	360
Fluoranthene	U	360	ug/Kgdrywt	1	330	480	150	360
Indeno(1,2,3-cd)pyrene	U	360	ug/Kgdrywt	1	330	480	180	360
Pyrene	J	360	ug/Kgdrywt	1	330	480	150	360
Nitrobenzene-d5		46.9	%					
2-Fluorobiphenyl		58.0	%					
Terphenyl-d14		51.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-15
Client ID: DSY-SD-AE30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	220	ug/Kgdrywt	1	330	440	110	330
Benzo(b)fluoranthene	J	260	ug/Kgdrywt	1	330	440	180	330
Benzo(g,h,i)perylene	U	330	ug/Kgdrywt	1	330	440	140	330
Benzo(k)fluoranthene	J	400	ug/Kgdrywt	1	330	440	110	330
Chrysene	J	380	ug/Kgdrywt	1	330	440	120	330
Dibenzo(a,h)anthracene	U	330	ug/Kgdrywt	1	330	440	170	330
Fluoranthene	J	350	ug/Kgdrywt	1	330	440	140	330
Indeno(1,2,3-cd)pyrene	U	330	ug/Kgdrywt	1	330	440	160	330
Pyrene		820	ug/Kgdrywt	1	330	440	130	330
Nitrobenzene-d5		30.3	%					
2-Fluorobiphenyl		45.7	%					
Terphenyl-d14		87.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-16
Client ID: DSY-SD-AE30-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 88.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	280	ug/Kgdrywt	1	330	370	97.	280
Benzo(b)fluoranthene	U	280	ug/Kgdrywt	1	330	370	150	280
Benzo(g,h,i)perylene	U	280	ug/Kgdrywt	1	330	370	120	280
Benzo(k)fluoranthene	U	280	ug/Kgdrywt	1	330	370	94.	280
Chrysene	U	280	ug/Kgdrywt	1	330	370	110	280
Dibenzo(a,h)anthracene	U	280	ug/Kgdrywt	1	330	370	140	280
Fluoranthene	U	280	ug/Kgdrywt	1	330	370	120	280
Indeno(1,2,3-cd)pyrene	U	280	ug/Kgdrywt	1	330	370	140	280
Pyrene	U	280	ug/Kgdrywt	1	330	370	110	280
Nitrobenzene-d5		52.8	%					
2-Fluorobiphenyl		59.6	%					
Terphenyl-d14		67.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-18
Client ID: DSY-SD-AG30-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 83.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	150	300
Fluoranthene	J	150	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	J	130	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		54.0	%					
2-Fluorobiphenyl		60.5	%					
Terphenyl-d14		69.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-19
Client ID: DSY-SD-AG30-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 84.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	290	ug/Kgdrywt	1	330	390	100	290
Benzo(b)fluoranthene	U	290	ug/Kgdrywt	1	330	390	160	290
Benzo(g,h,i)perylene	U	290	ug/Kgdrywt	1	330	390	120	290
Benzo(k)fluoranthene	U	290	ug/Kgdrywt	1	330	390	98.	290
Chrysene	U	290	ug/Kgdrywt	1	330	390	110	290
Dibenzo(a,h)anthracene	U	290	ug/Kgdrywt	1	330	390	150	290
Fluoranthene	U	290	ug/Kgdrywt	1	330	390	120	290
Indeno(1,2,3-cd)pyrene	U	290	ug/Kgdrywt	1	330	390	140	290
Pyrene	U	290	ug/Kgdrywt	1	330	390	120	290
Nitrobenzene-d5		58.2	%					
2-Fluorobiphenyl		65.3	%					
Terphenyl-d14		81.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-20
Client ID: DSY-SD-AG30-2436
Project: NAVSTA Newport CTO WE(
SDG: DSY-11
Lab File ID: U8286.D

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 86.
Report Date: 12-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	290	ug/Kgdrywt	1	330	380	99.	290
Benzo(b)fluoranthene	U	290	ug/Kgdrywt	1	330	380	150	290
Benzo(g,h,i)perylene	U	290	ug/Kgdrywt	1	330	380	120	290
Benzo(k)fluoranthene	U	290	ug/Kgdrywt	1	330	380	96.	290
Chrysene	U	290	ug/Kgdrywt	1	330	380	110	290
Dibenzo(a,h)anthracene	U	290	ug/Kgdrywt	1	330	380	150	290
Fluoranthene	U	290	ug/Kgdrywt	1	330	380	120	290
Indeno(1,2,3-cd)pyrene	U	290	ug/Kgdrywt	1	330	380	140	290
Pyrene	U	290	ug/Kgdrywt	1	330	380	120	290
Nitrobenzene-d5		56.8	%					
2-Fluorobiphenyl		65.6	%					
Terphenyl-d14		76.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-4
Client ID: DSY-SD-DUP13-092811
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 76.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	430	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	430	180	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	430	140	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	430	110	320
Chrysene	U	320	ug/Kgdrywt	1	330	430	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	430	170	320
Fluoranthene	U	320	ug/Kgdrywt	1	330	430	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	430	160	320
Pyrene	U	320	ug/Kgdrywt	1	330	430	130	320
Nitrobenzene-d5		57.3	%					
2-Fluorobiphenyl		69.3	%					
Terphenyl-d14		67.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-14
Client ID: DSY-SD-DUP14-092811
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	470	ug/Kgdrywt	1	330	870	230	650
Benzo(b)fluoranthene	J	400	ug/Kgdrywt	1	330	870	350	650
Benzo(g,h,i)perylene	U	650	ug/Kgdrywt	1	330	870	270	650
Benzo(k)fluoranthene	J	560	ug/Kgdrywt	1	330	870	220	650
Chrysene	J	520	ug/Kgdrywt	1	330	870	250	650
Dibenzo(a,h)anthracene	U	650	ug/Kgdrywt	1	330	870	340	650
Fluoranthene	J	540	ug/Kgdrywt	1	330	870	280	650
Indeno(1,2,3-cd)pyrene	U	650	ug/Kgdrywt	1	330	870	320	650
Pyrene		1900	ug/Kgdrywt	1	330	870	270	650
Nitrobenzene-d5		34.4	%					
2-Fluorobiphenyl		51.9	%					
Terphenyl-d14		87.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-1
Client ID: DSY-SD-AC26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	55.	9.0	27.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-2
Client ID: DSY-SD-AC26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 44.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		370	ug/Kgdrywt	1	20	45.	7.4	22.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-3
Client ID: DSY-SD-AC26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 76.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		66.	ug/Kgdrywt	1	20	26.	4.3	13.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-11
Client ID: DSY-SD-AC28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		130	ug/Kgdrywt	1	20	53.	8.8	26.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-12
Client ID: DSY-SD-AC28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	48.	7.9	24.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-8
Client ID: DSY-SD-AE26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		100	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-9
Client ID: DSY-SD-AE26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	50.	8.3	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-5
Client ID: DSY-SD-AE28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		130	ug/Kgdrywt	1	20	61.	10.	31.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-6
Client ID: DSY-SD-AE28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	53.	8.7	26.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-7
Client ID: DSY-SD-AE28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 68.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		77.	ug/Kgdrywt	1	20	29.	4.8	14.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-15
Client ID: DSY-SD-AE30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	26.	4.4	13.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-16
Client ID: DSY-SD-AE30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 88.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	5.6	ug/Kgdrywt	1	20	22.	3.7	11.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-18
Client ID: DSY-SD-AG30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 83.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		35.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-19
Client ID: DSY-SD-AG30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 84.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		27.	ug/Kgdrywt	1	20	24.	3.9	12.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-20
Client ID: DSY-SD-AG30-2436
Project: NAVSTA Newport CTO WE(
SDG: DSY-11
Lab File ID: G3738.D

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 86.
Report Date: 12-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	23.	3.8	12.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-4
Client ID: DSY-SD-DUP13-092811
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 76.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		38.	ug/Kgdrywt	1	20	26.	4.3	13.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-14
Client ID: DSY-SD-DUP14-092811
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 03-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 08-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		330	ug/Kgdrywt	1	20	53.	8.7	26.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-1
Client ID: DSY-SD-AC26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	17.	23.
Aroclor-1254		170	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		85.9	%					
Decachlorobiphenyl		87.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-2
Client ID: DSY-SD-AC26-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 44.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1221	U	18.	ug/Kgdrywt	1	17	36.	17.	18.
Aroclor-1232	U	21.	ug/Kgdrywt	1	17	36.	20.	21.
Aroclor-1242	U	18.	ug/Kgdrywt	1	17	36.	12.	18.
Aroclor-1248	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1254		1100	ug/Kgdrywt	1	17	36.	10.	18.
Aroclor-1260	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Tetrachloro-M-Xylene		68.8	%					
Decachlorobiphenyl		77.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-3
Client ID: DSY-SD-AC26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 76.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254		170	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		78.3	%					
Decachlorobiphenyl		77.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-11
Client ID: DSY-SD-AC28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	43.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1254		120	ug/Kgdrywt	1	17	43.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Tetrachloro-M-Xylene		73.4	%					
Decachlorobiphenyl		72.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-12
Client ID: DSY-SD-AC28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	41.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	41.	15.	20.
Aroclor-1254		460	ug/Kgdrywt	1	17	41.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Tetrachloro-M-Xylene		72.9	%					
Decachlorobiphenyl		76.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-13
Client ID: DSY-SD-AC28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 44.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1221	U	18.	ug/Kgdrywt	1	17	36.	17.	18.
Aroclor-1232	J	120	ug/Kgdrywt	1	17	36.	20.	21.
Aroclor-1242	U	18.	ug/Kgdrywt	1	17	36.	12.	18.
Aroclor-1248	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1254		690	ug/Kgdrywt	1	17	36.	10.	18.
Aroclor-1260	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Tetrachloro-M-Xylene	*	38.3	%					
Decachlorobiphenyl	*	39.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-8
Client ID: DSY-SD-AE26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	50.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene		88.0	%					
Decachlorobiphenyl		78.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-9
Client ID: DSY-SD-AE26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	19.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene		86.0	%					
Decachlorobiphenyl		81.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-10
Client ID: DSY-SD-AE26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 19-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 48.
Report Date: 11-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	18.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		860	ug/Kgdrywt	1	17	34.	9.3	17.
Aroclor-1260	J	530	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		64.4	%					
Decachlorobiphenyl		76.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-5
Client ID: DSY-SD-AE28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	52.	24.	26.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	52.	28.	30.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	52.	14.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Tetrachloro-M-Xylene		77.0	%					
Decachlorobiphenyl		74.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-6
Client ID: DSY-SD-AE28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	43.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene		82.8	%					
Decachlorobiphenyl		77.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-7
Client ID: DSY-SD-AE28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 68.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	25.	8.7	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	25.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	25.	14.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	25.	8.4	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	25.	8.9	12.
Aroclor-1254		130	ug/Kgdrywt	1	17	25.	6.8	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	25.	8.7	12.
Tetrachloro-M-Xylene		81.0	%					
Decachlorobiphenyl		78.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-15
Client ID: DSY-SD-AE30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.5	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1254		60.	ug/Kgdrywt	1	17	22.	6.1	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		86.5	%					
Decachlorobiphenyl		83.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-16
Client ID: DSY-SD-AE30-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 88.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.5	ug/Kgdrywt	1	17	19.	6.7	9.5
Aroclor-1221	U	9.5	ug/Kgdrywt	1	17	19.	8.8	9.5
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.5	ug/Kgdrywt	1	17	19.	6.5	9.5
Aroclor-1248	U	9.5	ug/Kgdrywt	1	17	19.	6.8	9.5
Aroclor-1254	U	9.5	ug/Kgdrywt	1	17	19.	5.2	9.5
Aroclor-1260	U	9.5	ug/Kgdrywt	1	17	19.	6.7	9.5
Tetrachloro-M-Xylene		57.0	%					
Decachlorobiphenyl		80.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-18
Client ID: DSY-SD-AG30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 83.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.3	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.8	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.5	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Tetrachloro-M-Xylene		90.3	%					
Decachlorobiphenyl		88.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-19
Client ID: DSY-SD-AG30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 84.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.9	ug/Kgdrywt	1	17	18.	6.3	8.9
Aroclor-1221	U	8.9	ug/Kgdrywt	1	17	18.	8.3	8.9
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.7	10.
Aroclor-1242	U	8.9	ug/Kgdrywt	1	17	18.	6.1	8.9
Aroclor-1248	U	8.9	ug/Kgdrywt	1	17	18.	6.4	8.9
Aroclor-1254	U	8.9	ug/Kgdrywt	1	17	18.	4.9	8.9
Aroclor-1260	U	8.9	ug/Kgdrywt	1	17	18.	6.3	8.9
Tetrachloro-M-Xylene		91.4	%					
Decachlorobiphenyl		88.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-20
Client ID: DSY-SD-AG30-2436
Project: NAVSTA Newport CTO WE(
SDG: DSY-11
Lab File ID: 7EJ490.D

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 86.
Report Date: 12-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.8	ug/Kgdrywt	1	17	18.	6.2	8.8
Aroclor-1221	U	8.8	ug/Kgdrywt	1	17	18.	8.2	8.8
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.6	10.
Aroclor-1242	U	8.8	ug/Kgdrywt	1	17	18.	6.0	8.8
Aroclor-1248	U	8.8	ug/Kgdrywt	1	17	18.	6.3	8.8
Aroclor-1254	U	8.8	ug/Kgdrywt	1	17	18.	4.9	8.8
Aroclor-1260	U	8.8	ug/Kgdrywt	1	17	18.	6.2	8.8
Tetrachloro-M-Xylene		88.1	%					
Decachlorobiphenyl		85.8	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-4
Client ID: DSY-SD-DUP13-092811
Project: NAVSTA Newport CTO WE(
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 76.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254		74.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		80.6	%					
Decachlorobiphenyl		79.8	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6389-14
Client ID: DSY-SD-DUP14-092811
Project: NAVSTA Newport CTO WE
SDG: DSY-11

Sample Date: 28-SEP-11
Received Date: 30-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	43.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	24.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	43.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Tetrachloro-M-Xylene		80.8	%					
Decachlorobiphenyl		80.3	%					

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APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Dercck tor
Reference No. _____ Shipyard

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Ketchikan Analytical Services
Case/Project No. CTO WE61
SDG No. DSY-11
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____
_____
_____
Trip Blank No. _____
Equipment Blank No. _____ DV letter
Bottle Blank No. _____
Field Duplicate Nos. _____ See
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A (Tier II) or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Michelle Allen Company Name TetraTech Phone Number _____

Date Validation Started 12/12/11 Date Validation Completed _____

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets: See DV letter

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	____
VOA/SV-III	INITIAL CALIBRATION	____
VOA/SV-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	____
SV-VI	SV SURROGATE SPIKE RECOVERIES	____
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	____
VOA/SV-XV	SEMIVOLATILE CLEANUP	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	____
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	____
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	____
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	____
Pest/PCB-III	INITIAL CALIBRATION	____
Pest/PCB-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	____
Pest/PCB-VII	PESTICIDE CLEANUP	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
Pest/PCB-XII	COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

I certify that all criteria were met for the worksheets checked above.

Signature:_____ Name:_____

Date: _____

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

N/A

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

See DV letter

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received
N/A		

Validator: Michelle Allen Date: 12/12/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler:_____ Company:_____ Contacted: Yes No Date:_____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

See DV letter

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Michelle Allen

Date: 12/12/11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

N/A

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

see DV letter

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

See DV letter

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Michelle Allem

Date: 12/12/11

EPA-NE - Data Validation Worksheet

VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

See DV letter

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

Validator: Michele Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below. Concentration Level:_____

Sampler: _____ Company: _____ Contacted: Yes No Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

See DV letter

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

N/A

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Michelle Allen Date: 12/12/11

3. Blank Actions - List the maximum concentrations of blank compounds.

see DV letter

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

_____

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

N/A

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Validator:_____ Date:_____

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

See DV letter

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____ See DV letter

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Michelle Allen

Date: 12/12/14

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ See DV letter Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: Michelle Allyn Date: 12/12/14

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____ See DV Letter

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Michelle Allen Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? **Y N**
- Date of Preparation/Analysis: _____ Within 1 year? **Y N**
- Instrument I.D.: _____ Same as samples? **Y N**
- Column I.D.: _____ Same as samples? **Y N**

N/A

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does it contain all target compounds at the method-required QLs? **Y N**
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? **Y N**

N/A

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: _____ Date: _____

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. N/A **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: _____ Date: _____

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

See DV letter

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers see DV letter

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Michelle Allen

Date: 12/12/11

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter. N/A

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria. see DV letter

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

_____

Validator: Michelle Allen

Date: 12/12/11

For hardcopy of Traffic Reports contact:

Steve Stodola, U.S. EPA Region I
TEL: 617-918-8634
EMAIL: stodola.steve@epamail.epa.gov

APPENDIX D

SUPPORT DOCUMENTATION

NAVSTA NEWPORT
SEDIMENT DATA
DSY-11

FRACTION	CHEMICAL	DSY-SD-DUP14-092811	UNITS	DSY-SD-AC28-0012	RPD	D	
OS	BENZO(A)ANTHRACENE	470 J	UG/KG	ND	200.00	470.00	✓
OS	BENZO(B)FLUORANTHENE	400 J	UG/KG	ND	200.00	400.00	✓
OS	BENZO(K)FLUORANTHENE	560 J	UG/KG	ND	200.00	560.00	✓
OS	CHRYSENE	520 J	UG/KG	ND	200.00	520.00	✓
OS	FLUORANTHENE	540 J	UG/KG	ND	200.00	540.00	✓
OS	PYRENE	1900	UG/KG	730 J	88.97	1170.00	✓
PAH	BENZO(A)PYRENE	330	UG/KG	130	86.96	200.00	
PCB	AROCLOR-1254	ND	UG/KG	120	200.00	120.00	

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-11

FRACTION	CHEMICAL	DSY-SD-DUP13-092811	UNITS	DSY-SD-AC26-2448	RPD	D
OS	CHRYSENE	ND	UG/KG	130 J	200.00	130.00
OS	PYRENE	ND	UG/KG	400 J	200.00	400.00
PAH	BENZO(A)PYRENE	38	UG/KG	66	53.85	28.00
PCB	AROCLOR-1254	74	UG/KG	170	78.69	96.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

HOLDTIME

SDG DSY-11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE28-2448	SE6389-007	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-2448	SE6389-003	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-0012	SE6389-011	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-1224	SE6389-012	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-2448	SE6389-013	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-0012	SE6389-008	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-1224	SE6389-009	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-1224	SE6389-002	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-DUP14-092811	SE6389-014	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-2448	SE6389-010	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE30-0012	SE6389-015	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE30-1224	SE6389-016	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-0012	SE6389-018	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-1224	SE6389-019	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-2448	SE6389-020	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-DUP13-092811	SE6389-004	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-0012	SE6389-001	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE28-0012	SE6389-005	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE28-1224	SE6389-006	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
TDS	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TDS	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TOC	UG/GD	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/11/2011	10/11/2011	13	0	13
TOC	UG/GD	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
OS	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
SIM	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
PCB	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/08/2011	10/19/2011	10	11	21
PCB	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/08/2011	10/19/2011	10	11	21
PCB	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

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CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
TENUS	Steve Parker	(978)474-8434	(978)474-8499

Address 250 Andover St. Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61, Dereckter Shipyard Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton / MJH Copies To:

LAB USE ONLY WORK ORDER #: SE6389

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb,Cu,Zn) (Filt. ☐Y ☐N)	TBC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AC26-0012	9/28/11 / 0930	SED	3	X	X	X		X					
	DSY-SD-AC26-1224	/ 0933		2	X	X	X							
	DSY-SD-AC26-2448	/ 0936		2	X	X	X							
	DSY-SD-DUP13-092811	/ —		2	X	X	X							
	DSY-SD-AE28-0012	/ 1035		3	X	X		X	X					
	DSY-SD-AE28-1224	/ 1038		2	X	X		X						
	DSY-SD-AE28-2448	/ 1041		4	X	X		X						
	DSY-SD-AE26-0012	/ 1015		3	X	X	X		X					
	DSY-SD-AE26-1224	/ 1018		2	X	X	X							
	DSY-SD-AE26-2448	/ 1021		2	X	X	X							
	DSY-SD-AC28-0012	/ 1105		3	X	X	X		X					
	DSY-SD-AC28-1224	/ 1108		2	X	X	X							
	DSY-SD-AC28-2448	/ 1111		2	X	X	X							
	DSY-SD-DUP14-092811	/ —		3	X	X	X		X					
	DSY-SD-AE30-0012	/ 1350		3	X	X	X		X					
	DSY-SD-AE30-1224	/ 1353		2	X	X	X							

COMMENTS DSY-SD-AE28-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MJH	9/30/11 1320				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000015

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code
SEE PAGE ONE	SEE PAGE ONE		

Purchase Order #	Proj. Name / No.	Katahdin Quote #
SEE PAGE ONE	CTO WE 61, Dereckton Shipyard	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / [signature]	

LAB USE ONLY WORK ORDER #: SE6789/SE6390

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AG30-0012	9/28/11 / 1330	SED	3	X	X	X	X						
	DSY-SD-AG30-1224	/ 1333		2	X	X		X						
	DSY-SD-AG30-2436	/ 1336		2	X	X		X						
	DSY-SD-AC30-0012	/ 1435		6	X	X	X	X						
	DSY-SD-AC30-1224	/ 1438		2	X	X		X						
	DSY-SD-AC30-2448	/ 1441		2	X	X		X						
	DSY-SD-AD05-0012	9/29/11 / 0840		3	X	X	X		X					
	DSY-SD-AD05-1224	/ 0843		2	X	X			X					
	DSY-SD-AD05-2448	/ 0846		2	X	X			X					
	DSY-SD-AD09-0012	/ 0820		3	X	X	X		X					
	DSY-SD-AD09-1224	/ 0823		2	X	X			X					
	DSY-SD-AD09-2448	/ 0826		2	X	X			X					
	DSY-SD-AD17-0012	/ 0950		3	X	X	X		X					
	DSY-SD-AD17-1224	/ 0953		2	X	X			X					
	DSY-SD-AD17-2448	/ 0956		2	X	X			X					
	DSY-SD-AD13-0012	/ 0925		3	X	X	X		X					

COMMENTS DSY-SD-AC30-0012 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Lori Anderson	9/30/11 1320	Andrew Fecko			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				0000014	

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-11
SE6389

Sample Receipt

The following samples were received on September 30, 2011 and were logged in under Katahdin Analytical Services work order number SE6389 for a hardcopy due date of October 19, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6389-1	DSY-SD-AC26-0012
SE6389-2	DSY-SD-AC26-1224
SE6389-3	DSY-SD-AC26-2448
SE6389-4	DSY-SD-DUP13-092811
SE6389-5	DSY-SD-AE28-0012
SE6389-6	DSY-SD-AE28-1224
SE6389-7	DSY-SD-AE28-2448
SE6389-8	DSY-SD-AE26-0012
SE6389-9	DSY-SD-AE26-1224
SE6389-10	DSY-SD-AE26-2448
SE6389-11	DSY-SD-AC28-0012
SE6389-12	DSY-SD-AC28-1224
SE6389-13	DSY-SD-AC28-2448
SE6389-14	DSY-SD-DUP14-092811
SE6389-15	DSY-SD-AE30-0012
SE6389-16	DSY-SD-AE30-1224
SE6389-18	DSY-SD-AG30-0012
SE6389-19	DSY-SD-AG30-1224
SE6389-20	DSY-SD-AG30-2448 36

10/12/11

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-11 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Sample SE6389-7 was used for the matrix spike (MS) and matrix spike duplicate (MSD) samples, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The samples were spiked only with the 8270-SCAN surrogates and only the 8270-SCAN LCS/LCSD were extracted. The report package for SIM analysis does not have a Form 2 for surrogates or a Form 3 for a LCS/LCSD with one exception. The method blank WG98769-1 and LCS/LCSD WG98769-2 and 3, associated with all of the samples, were spiked with surrogates. The LCS/LCSD were spiked with the SIM target analyte. There is a Form 2 for the method blank and LCS/LCSD and a Form 3 for the LCS/LCSD.

Sample SE6389-2 was manually integrated for the surrogate fluorene-d10 and the internal standards chrysene-d12 and perylene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The Form 7 for the CV's (file G3714 and G3727) had high responses for the surrogate flourene-d10, which resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

8082 Analysis

Surrogate recoveries for the samples and QC, as well as spike recoveries for LCS/LCSD's and MS/MSD's, were evaluated using laboratory established acceptance limits.

Samples SE6389-7 and 10 were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6389-13 had low recoveries for TCX and DCB on both channels, which were outside the laboratory established acceptance limits. Due to analyst oversight, the sample was not reextracted.

Samples SE6389-2, 3, 4, 7, 10, 11, 12, and 16 had low recoveries for TCX and/or DCB on one or both channels, which were outside the laboratory established acceptance limits. Since the recoveries of one or both surrogates were acceptable on one or both channels, no further action was taken.

Sample SE6389-10 had a %RPD for Aroclor 1260 that was outside of the method acceptance limits of 40%. This analyte is flagged with a "J" qualifier on the report of analysis (ROA).

The opening/closing calibration verification standard (CV) (file 7EJ481) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV (files 7EJ497) had a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for TCX was acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CVs (files 7EJ500) had a high response for Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1254 was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EJ605) had a low response for Aroclor 1260 on channel A, as well as low responses for DCB on both channels, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B and the associated sample had an acceptable DCB recovery on channel B, the sample was not reanalyzed.

The MS/MSD WG98853-4 and 5 had high recoveries for Aroclor 1260 that were outside the laboratory established acceptance limits. Since the associated LCS/LCSD had acceptable recoveries, no further action was taken.

8270C SCAN Analysis

All soil samples and associated QC were subjected to the GPC sample clean-up process.

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6389-13 and 15 were manually integrated the target analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6389-2, 3, 7, 8, 9, 10, 11, 12, 13, 14 and 15 and the MSD WG98768-5 had low responses for one or more internal standards, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard.

The CV (file U8282) had a high response for the target analyte pyrene. This response resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-11 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6389-(1-20) were digested for ICP analysis on 10/17/11 (QC Batch BJ17ICS2) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6389-7 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-11 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of copper in the matrix-spiked aliquot of Katahdin Sample Number SE6389-7 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6389-7 is outside the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for copper, lead, and zinc.

The measured recoveries of copper and lead in a post-digestion spike of SE6389-7 are within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6389-7 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all elements.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-11 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
11.11.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-11

Client Sample ID	Lab Sample ID	Col. ID	2FBP	#	NBZ	#	TPH	#
DSY-SD-AC26-0012	SE6389-1		40.2		25.9		40.2	
DSY-SD-AE26-2448	SE6389-10		58.0		41.7		85.5	
DSY-SD-AC28-0012	SE6389-11		37.1		25.6		82.8	
DSY-SD-AC28-1224	SE6389-12		35.2		25.7		61.6	
DSY-SD-AC28-2448	SE6389-13		63.9		49.0		77.1	
DSY-SD-DUP14-092811	SE6389-14		51.9		34.4		87.2	
DSY-SD-AE30-0012	SE6389-15		45.7		30.3		87.8	
DSY-SD-AE30-1224	SE6389-16		59.6		52.8		67.0	
DSY-SD-AG30-0012	SE6389-18		60.5		54.0		69.0	
DSY-SD-AG30-1224	SE6389-19		65.3		58.2		81.1	
DSY-SD-AC26-1224	SE6389-2		64.9		47.7		69.4	
DSY-SD-AG30-2436	SE6389-20		65.6		56.8		76.6	
DSY-SD-AC26-2448	SE6389-3		48.4		40.0		64.2	
DSY-SD-DUP13-092811	SE6389-4		69.3		57.3		67.0	
DSY-SD-AE28-0012	SE6389-5		42.5		31.2		52.9	
DSY-SD-AE28-1224	SE6389-6		58.3		43.0		72.4	
DSY-SD-AE28-2448	SE6389-7		58.0		46.9		51.4	
DSY-SD-AE26-0012	SE6389-8		37.3		27.6		60.2	
DSY-SD-AE26-1224	SE6389-9		48.1		34.2		78.9	
Method Blank Sample	WG98768-1		62.1		55.9		71.6	
Laboratory Control S	WG98768-2		70.7		58.3		82.6	
Laboratory Control S	WG98768-3		66.2		56.6		83.0	
Matrix Spike	WG98768-4		74.8		62.4		102.	
Matrix Spike Duplica	WG98768-5		76.8		67.2		102.	

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-11

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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sales@katahdinlab.com

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): U8253 Date Analyzed: 10/31/11

Instrument ID: GCMS-U Time Analyzed: 1428

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		264811	8.52	962584	11.34	542510	15.48
UPPER LIMIT		529622	9.02	1925168	11.84	1085020	15.98
LOWER LIMIT		132406	8.02	481292	10.84	271255	14.98
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG98768-BLANK	WG98768-1	290609	8.53	1039160	11.34	545102	15.48
02	DSY-SD-DUP13-092811	SE6389-4	316998	8.53	1174660	11.34	618537	15.48
03	DSY-SD-AE28-0012	SE6389-5	281150	8.53	1023201	11.35	546479	15.49
04	DSY-SD-AE28-1224	SE6389-6	324221	8.53	1204077	11.34	649472	15.48
05	DSY-SD-AE28-2448	SE6389-7	323622	8.53	1210478	11.34	641311	15.48
06	DSY-SD-AE28-2448MS	WG98768-4	367249	8.53	1383168	11.34	768267	15.50
07	DSY-SD-AE28-2448MSD	WG98768-5	364508	8.53	1355269	11.35	726300	15.49
08		SSTD050U1101	333413	8.52	1214830	11.34	626588	15.48
09	WG98768-LCS	WG98768-2	338265	8.53	1235357	11.34	656802	15.47
10	WG98768-LCSD	WG98768-3	340900	8.53	1233270	11.34	676532	15.47
11	DSY-SD-AC26-0012	SE6389-1	371312	8.53	1377899	11.33	714491	15.47
12	DSY-SD-AC26-1224	SE6389-2	432269	8.53	1590271	11.34	745188	15.48
13	DSY-SD-AC26-2448	SE6389-3	393020	8.53	1467897	11.33	783433	15.48
14	DSY-SD-AE26-0012	SE6389-8	397453	8.53	1478292	11.33	821834	15.47
15	DSY-SD-AE26-1224	SE6389-9	381526	8.53	1404687	11.33	763101	15.47
16	DSY-SD-AE26-2448	SE6389-10	434388	8.53	1609890	11.34	753530	15.48
17	DSY-SD-AC28-0012	SE6389-11	394570	8.53	1457521	11.33	778637	15.47
18	DSY-SD-AC28-1224	SE6389-12	418679	8.53	1574040	11.33	845667	15.47
19	DSY-SD-AC28-2448	SE6389-13	424662	8.53	1524389	11.34	667371	15.49
20		SSTD050U1101	385993	8.52	1426774	11.33	795130	15.47

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): U8253 Date Analyzed: 10/31/11

Instrument ID: GCMS-U Time Analyzed: 1428

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		264811	8.52	962584	11.34	542510	15.48
UPPER LIMIT		529622	9.02	1925168	11.84	1085020	15.98
LOWER LIMIT		132406	8.02	481292	10.84	271255	14.98
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-AE30-1224	SE6389-16	392017	8.52	1416568	11.33	762313	15.47
02	DSY-SD-AG30-0012	SE6389-18	391073	8.52	1415712	11.33	753309	15.46
03	DSY-SD-AG30-1224	SE6389-19	387621	8.52	1395633	11.34	744187	15.47
04	DSY-SD-AG30-2436	SE6389-20	341700	8.52	1228664	11.33	643598	15.46
05	DSY-SD-DUP14-092811	SE6389-14	470471	8.52	1756491	11.33	984796	15.47
06	DSY-SD-AE30-0012	SE6389-15	459819	8.53	1712304	11.33	944329	15.47
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): U8253 Date Analyzed: 10/31/11

Instrument ID: GCMS-U Time Analyzed: 1428

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		858473	18.95	650554	25.24	393590	28.39
UPPER LIMIT		1716946	19.45	1301108	25.74	787180	28.89
LOWER LIMIT		429237	18.45	325277	24.74	196795	27.89
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG98768-BLANK	WG98768-1	898334	18.93	795275	25.24	635583	28.40
02	DSY-SD-DUP13-092811	SE6389-4	910453	18.93	645430	25.23	344073	28.39
03	DSY-SD-AE28-0012	SE6389-5	866137	18.93	580438	25.23	248999	28.38
04	DSY-SD-AE28-1224	SE6389-6	990832	18.93	534241	25.23	246750	28.39
05	DSY-SD-AE28-2448	SE6389-7	930495	18.94	386799	25.23	167052*	28.39
06	DSY-SD-AE28-2448MS	WG98768-4	1155446	18.95	413682	25.23	201355	28.39
07	DSY-SD-AE28-2448MSD	WG98768-5	1042401	18.95	369993	25.24	153949*	28.39
08		SSTD050U1101	819843	18.93	463379	25.22	215970	28.37
09	WG98768-LCS	WG98768-2	927549	18.93	500579	25.22	220868	28.37
10	WG98768-LCSD	WG98768-3	928111	18.93	534901	25.22	261576	28.37
11	DSY-SD-AC26-0012	SE6389-1	971633	18.92	446791	25.21	209902	28.37
12	DSY-SD-AC26-1224	SE6389-2	757920	18.94	182328*	25.22	104783*	28.37
13	DSY-SD-AC26-2448	SE6389-3	1027386	18.93	346576	25.22	159144*	28.37
14	DSY-SD-AE26-0012	SE6389-8	1168434	18.92	412702	25.21	154669*	28.37
15	DSY-SD-AE26-1224	SE6389-9	1026767	18.93	292135*	25.21	105338*	28.37
16	DSY-SD-AE26-2448	SE6389-10	704350	18.93	105271*	25.22	37217*	28.37
17	DSY-SD-AC28-0012	SE6389-11	1104651	18.92	268095*	25.21	79234*	28.37
18	DSY-SD-AC28-1224	SE6389-12	1081159	18.93	232097*	25.22	83694*	28.37
19	DSY-SD-AC28-2448	SE6389-13	590367	18.94	112480*	25.22	59365*	28.38
20		SSTD050U1101	1086257	18.93	531718	25.21	308811	28.36

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): U8253 Date Analyzed: 10/31/11

Instrument ID: GCMS-U Time Analyzed: 1428

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		858473	18.95	650554	25.24	393590	28.39
UPPER LIMIT		1716946	19.45	1301108	25.74	787180	28.89
LOWER LIMIT		429237	18.45	325277	24.74	196795	27.89
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-AE30-1224	SE6389-16	1162570	18.92	762325	25.21	450606	28.36
02	DSY-SD-AG30-0012	SE6389-18	1113285	18.92	713857	25.21	435234	28.36
03	DSY-SD-AG30-1224	SE6389-19	1080826	18.91	624391	25.20	372819	28.36
04	DSY-SD-AG30-2436	SE6389-20	933433	18.91	600785	25.20	353014	28.36
05	DSY-SD-DUP14-092811	SE6389-14	1366693	18.92	327990	25.21	89979*	28.36
06	DSY-SD-AE30-0012	SE6389-15	1338528	18.92	376198	25.21	120447*	28.36
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : U8260.D
Instrument ID : GCMS-U
Matrix : SL

SDG : DSY-11
Lab Sample ID : WG98768-1
Date Extracted : 07-OCT-11
Date Analyzed : 31-OCT-11
Time Analyzed : 19:38

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-DUP13-092811	SE6389-4	U8261.D	10/31/11	20:22
DSY-SD-AE28-0012	SE6389-5	U8262.D	10/31/11	21:06
DSY-SD-AE28-1224	SE6389-6	U8263.D	10/31/11	21:50
DSY-SD-AE28-2448	SE6389-7	U8264.D	10/31/11	22:34
Matrix Spike	WG98768-4	U8265.D	10/31/11	23:18
Matrix Spike Duplica	WG98768-5	U8266.D	11/01/11	00:02
Laboratory Control S	WG98768-2	U8271.D	11/01/11	05:40
Laboratory Control S	WG98768-3	U8272.D	11/01/11	06:24
DSY-SD-AC26-0012	SE6389-1	U8273.D	11/01/11	07:08
DSY-SD-AC26-1224	SE6389-2	U8274.D	11/01/11	07:53
DSY-SD-AC26-2448	SE6389-3	U8275.D	11/01/11	08:38
DSY-SD-AE26-0012	SE6389-8	U8276.D	11/01/11	09:23
DSY-SD-AE26-1224	SE6389-9	U8277.D	11/01/11	10:08
DSY-SD-AE26-2448	SE6389-10	U8278.D	11/01/11	10:53
DSY-SD-AC28-0012	SE6389-11	U8279.D	11/01/11	11:38
DSY-SD-AC28-1224	SE6389-12	U8280.D	11/01/11	12:22
DSY-SD-AC28-2448	SE6389-13	U8281.D	11/01/11	13:07
DSY-SD-AE30-1224	SE6389-16	U8283.D	11/01/11	16:30
DSY-SD-AG30-0012	SE6389-18	U8284.D	11/01/11	17:15
DSY-SD-AG30-1224	SE6389-19	U8285.D	11/01/11	18:00
DSY-SD-AG30-2436	SE6389-20	U8286.D	11/01/11	18:44
DSY-SD-DUP14-092811	SE6389-14	U8296.D	11/02/11	02:06
DSY-SD-AE30-0012	SE6389-15	U8297.D	11/02/11	02:49

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98768-1
Client ID: Method Blank Sample
Project:
SDG: DSY-11

Sample Date:
Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 08-nov-2011 13:37

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		55.9	%					
2-Fluorobiphenyl		62.1	%					
Terphenyl-d14		71.6	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98768-2
LCSD ID: WG98768-3
Project:
SDG: DSY-11
Report Date: 08-nov-2011 13:35

Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768

Analysis Date: 01-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1000	59.9	1090	65.3	ug/Kgdrywt	9	30	40-100
Benzo(a)pyrene	1670	1160	69.5	1120	67.1	ug/Kgdrywt	4	30	40-100
Benzo(b)fluoranthene	1670	1080	64.7	1230	73.6	ug/Kgdrywt	13	30	40-100
Benzo(g,h,i)perylene	1670	865.	51.8	980.	58.7	ug/Kgdrywt	12	30	40-100
Benzo(k)fluoranthene	1670	1300	77.8	1250	74.8	ug/Kgdrywt	4	30	40-100
Chrysene	1670	1190	71.2	1300	77.8	ug/Kgdrywt	9	30	40-100
Dibenzo(a,h)anthracene	1670	938.	56.2	983.	58.9	ug/Kgdrywt	5	30	40-100
Fluoranthene	1670	1020	61.1	1090	65.3	ug/Kgdrywt	7	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1130	67.7	788.	47.2	ug/Kgdrywt	36*	30	40-100
Pyrene	1670	1310	78.4	1340	80.2	ug/Kgdrywt	2	30	40-100
Nitrobenzene-d5			58.3		56.6				24-81
2-Fluorobiphenyl			70.7		66.2				29-83
Terphenyl-d14			82.6		83.0				24-136

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Katahdin
ANALYTICAL SERVICES

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Cert No E87604

MS/MSD Recovery Report

MS ID: WG98768-4
MSD ID: WG98768-5
Sample ID: SE6389-7
Client ID: DSY-SD-AE28-2448
Project:
SDG: DSY-11

Received Date: 30-SEP-11
Extract Date: 07-oct-0011 00:00
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98768
Report Date: 08-nov-2011 13:35

Analysis Date: 31-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 68.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	2420	2410	ug/Kgdrywt	U360	1900	1800	77.6	72.9	6	30	40-100
Benzo(a)pyrene	2420	2410	ug/Kgdrywt	U360	2000	2000	84.2	81.6	3	30	40-100
Benzo(b)fluoranthene	2420	2410	ug/Kgdrywt	U360	1900	1900	80.1	79.1	2	30	40-100
Benzo(g,h,i)perylene	2420	2410	ug/Kgdrywt	U360	2200	2000	92.9	83.2	11	30	40-100
Benzo(k)fluoranthene	2420	2410	ug/Kgdrywt	U360	1800	1900	76.4	78.7	3	30	40-100
Chrysene	2420	2410	ug/Kgdrywt	U360	2200	2000	89.2	83.6	7	30	40-100
Dibenzo(a,h)anthracene	2420	2410	ug/Kgdrywt	U360	2300	2000	93.3	82.0	13	30	40-100
Fluoranthene	2420	2410	ug/Kgdrywt	U360	1400	1600	59.0	64.2	8	30	40-100
Indeno(1,2,3-cd)pyrene	2420	2410	ug/Kgdrywt	U360	2100	1800	85.4	73.3	16	30	40-100
Pyrene	2420	2410	ug/Kgdrywt	J360	3200	3300	118.*	121.*	2	30	40-100
Nitrobenzene-d5							62.4	67.2			24-81
2-Fluorobiphenyl							74.8	76.8			29-83
Terphenyl-d14							102.	102.			24-136

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: UD707 DFTPP Injection Date: 10/31/11

Instrument ID: GCMS-U DFTPP Injection Time: 1402

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.3
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	40.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	13.8 (80.2)2
442	40.0 - 100.0% of mass 198	88.2
443	17.0 - 23.0% of mass 442	17.2 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1031	U8253	10/31/11	1428
02		SSTD010U1031	U8254	10/31/11	1512
03		SSTD025U1031	U8255	10/31/11	1557
04		SSTD075U1031	U8256	10/31/11	1641
05		SSTD100U1031	U8257	10/31/11	1726
06		SSTD125U1031	U8258	10/31/11	1810
07		8270 IND CHECK	U8259	10/31/11	1854
08	WG98768-BLANK	WG98768-1	U8260	10/31/11	1938
09	DSY-SD-DUP13-092811	SE6389-4	U8261	10/31/11	2022
10	DSY-SD-AE28-0012	SE6389-5	U8262	10/31/11	2106
11	DSY-SD-AE28-1224	SE6389-6	U8263	10/31/11	2150
12	DSY-SD-AE28-2448	SE6389-7	U8264	10/31/11	2234
13	DSY-SD-AE28-2448MS	WG98768-4	U8265	10/31/11	2318
14	DSY-SD-AE28-2448MSD	WG98768-5	U8266	11/01/11	0002
15					
16					
17					
18					
19					
20					

FORM V SV

Katahdin Analytical Services A0000030

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-U Calibration Date(s): 10/31/11 10/31/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1428 1810

LAB FILE ID: RF10: U8254 RF25: U8255 RF50: U8253
RF75: U8256 RF100: U8257 RF125: U8258

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	1.005	0.952	0.943	0.837	0.780	0.788	AVRG	0.88428802	10.728	30.000
Pyrene	1.228	1.190	1.257	1.201	1.390	1.359	AVRG	1.27110487	6.612	15.000
Benzo(a)anthracene	0.963	0.945	0.957	0.898	0.890	0.861	AVRG	0.91896112	4.532	15.000
Chrysene	0.945	0.870	0.830	0.801	0.776	0.753	AVRG	0.82904420	8.426	15.000
Benzo(b)fluoranthene	1.006	0.980	1.071	1.030	1.100	1.010	AVRG	1.03292943	4.311	15.000
Benzo(k)fluoranthene	1.199	1.154	1.161	1.192	1.203	1.096	AVRG	1.16749959	3.468	15.000
Benzo(a)pyrene	0.915	0.890	0.966	0.907	0.933	0.890	AVRG	0.91699776	3.162	30.000
Indeno(1,2,3-cd)pyrene	0.548	0.474	0.575	0.511	0.495	0.554	AVRG	0.52634758	7.409	15.000
Dibenzo(a,h)anthracene	0.608	0.530	0.605	0.534	0.507	0.566	AVRG	0.55855188	7.485	15.000
Benzo(g,h,i)perylene	0.611	0.532	0.609	0.554	0.533	0.597	AVRG	0.57286188	6.491	15.000
Nitrobenzene-D5	0.337	0.329	0.338	0.323	0.322	0.314	AVRG	0.32716514	2.791	15.000
2-Fluorobiphenyl	1.244	1.157	1.118	1.062	1.011	0.965	AVRG	1.09300911	9.292	15.000
Terphenyl-D14	0.774	0.757	0.804	0.775	0.899	0.881	AVRG	0.81486868	7.400	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: UD708 DFTPP Injection Date: 11/01/11

Instrument ID: GCMS-U DFTPP Injection Time: 0438

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.3 (0.9)1
69	Less than 100.0% of mass 198	38.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	49.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	23.0
365	1.0 - 100.0% of mass 198	3.2
441	0.0 - 100.0% of mass 443	15.4 (79.1)2
442	40.0 - 100.0% of mass 198	99.5
443	17.0 - 23.0% of mass 442	19.5 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1101	U8270	11/01/11	0456
02	WG98768-LCS	WG98768-2	U8271	11/01/11	0540
03	WG98768-LCSD	WG98768-3	U8272	11/01/11	0624
04	DSY-SD-AC26-0012	SE6389-1	U8273	11/01/11	0708
05	DSY-SD-AC26-1224	SE6389-2	U8274	11/01/11	0753
06	DSY-SD-AC26-2448	SE6389-3	U8275	11/01/11	0838
07	DSY-SD-AE26-0012	SE6389-8	U8276	11/01/11	0923
08	DSY-SD-AE26-1224	SE6389-9	U8277	11/01/11	1008
09	DSY-SD-AE26-2448	SE6389-10	U8278	11/01/11	1053
10	DSY-SD-AC28-0012	SE6389-11	U8279	11/01/11	1138
11	DSY-SD-AC28-1224	SE6389-12	U8280	11/01/11	1222
12	DSY-SD-AC28-2448	SE6389-13	U8281	11/01/11	1307
13					
14					
15					
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18					
19					
20					

Katahdin Analytical Services A0000031

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-U Calibration Date: 11/01/11 Time: 0456

Lab File ID: U8270 Init. Calib. Date(s): 10/31/11 10/31/11

Init. Calib. Times: 1428 1810

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8840000	0.8071200	0.01	-8.70	20.01	AVRG
Pyrene	1.2710000	1.4241000	0.01	12.05	20.00	AVRG
Benzo(a)anthracene	0.9190000	0.9276600	0.01	0.94	20.00	AVRG
Chrysene	0.8290000	0.8651000	0.01	4.35	20.00	AVRG
Benzo(b)fluoranthene	1.0330000	1.0522000	0.01	1.86	20.00	AVRG
Benzo(k)fluoranthene	1.1680000	1.2859000	0.01	10.09	20.00	AVRG
Benzo(a)pyrene	0.9170000	0.9180600	0.01	0.12	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.5260000	0.4301300	0.01	-18.23	20.00	AVRG
Dibenzo(a,h)anthracene	0.5580000	0.5205500	0.01	-6.71	20.00	AVRG
Benzo(g,h,i)perylene	0.5730000	0.5058400	0.01	-11.72	20.00	AVRG
Nitrobenzene-D5	0.3270000	0.3317700	0.01	1.46	20.00	AVRG
2-Fluorobiphenyl	1.0930000	1.1680000	0.01	6.86	20.00	AVRG
Terphenyl-D14	0.8150000	0.9248400	0.01	13.48	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: UD709 DFTPP Injection Date: 11/01/11

Instrument ID: GCMS-U DFTPP Injection Time: 1526

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.1
68	Less than 2.0% of mass 69	0.2 (0.6)1
69	Less than 100.0% of mass 198	40.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.5 (78.9)2
442	40.0 - 100.0% of mass 198	70.5
443	17.0 - 23.0% of mass 442	13.3 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1101	U8282	11/01/11	1546
02	DSY-SD-AE30-1224	SE6389-16	U8283	11/01/11	1630
03	DSY-SD-AG30-0012	SE6389-18	U8284	11/01/11	1715
04	DSY-SD-AG30-1224	SE6389-19	U8285	11/01/11	1800
05	DSY-SD-AG30-2436	SE6389-20	U8286	11/01/11	1844
06	DSY-SD-DUP14-092811	SE6389-14	U8296	11/02/11	0206
07	DSY-SD-AE30-0012	SE6389-15	U8297	11/02/11	0249
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-U Calibration Date: 11/01/11 Time: 1546

Lab File ID: U8282 Init. Calib. Date(s): 10/31/11 10/31/11

Init. Calib. Times: 1428 1810

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8840000	0.7612600	0.01	-13.88	20.01	AVRG	
Pyrene	1.2710000	1.5563000	0.01	22.45	20.00	AVRG	<-
Benzo(a)anthracene	0.9190000	0.9326500	0.01	1.48	20.00	AVRG	
Chrysene	0.8290000	0.8603100	0.01	3.78	20.00	AVRG	
Benzo(b)fluoranthene	1.0330000	1.0092000	0.01	-2.30	20.00	AVRG	
Benzo(k)fluoranthene	1.1680000	1.1479000	0.01	-1.72	20.00	AVRG	
Benzo(a)pyrene	0.9170000	0.8987200	0.01	-1.99	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.5260000	0.4752000	0.01	-9.66	20.00	AVRG	
Dibenzo(a,h)anthracene	0.5580000	0.4820300	0.01	-13.62	20.00	AVRG	
Benzo(g,h,i)perylene	0.5730000	0.5032700	0.01	-12.17	20.00	AVRG	
Nitrobenzene-D5	0.3270000	0.3314000	0.01	1.34	20.00	AVRG	
2-Fluorobiphenyl	1.0930000	1.0781000	0.01	-1.36	20.00	AVRG	
Terphenyl-D14	0.8150000	0.9546200	0.01	17.13	20.00	AVRG	

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-11

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
DSY-SD-AC26-0012	SE6389-1		0.00	*	0.00	*	0.00	*
DSY-SD-AC28-0012	SE6389-11		0.00	*	0.00	*	0.00	*
DSY-SD-AC28-1224	SE6389-12		0.00	*	0.00	*	0.00	*
DSY-SD-DUP14-092811	SE6389-14		0.00	*	0.00	*	0.00	*
DSY-SD-AE30-0012	SE6389-15		0.00	*	0.00	*	0.00	*
DSY-SD-AE30-1224	SE6389-16		0.00	*	0.00	*	0.00	*
DSY-SD-AG30-0012	SE6389-18		0.00	*	0.00	*	0.00	*
DSY-SD-AG30-1224	SE6389-19		0.00	*	0.00	*	0.00	*
DSY-SD-AC26-1224	SE6389-2		0.00	*	0.00	*	0.00	*
DSY-SD-AG30-2436	SE6389-20		0.00	*	0.00	*	0.00	*
DSY-SD-AC26-2448	SE6389-3		0.00	*	0.00	*	0.00	*
DSY-SD-DUP13-092811	SE6389-4		0.00	*	0.00	*	0.00	*
DSY-SD-AE28-0012	SE6389-5		0.00	*	0.00	*	0.00	*
DSY-SD-AE28-1224	SE6389-6		0.00	*	0.00	*	0.00	*
DSY-SD-AE28-2448	SE6389-7		0.00	*	0.00	*	0.00	*
DSY-SD-AE26-0012	SE6389-8		0.00	*	0.00	*	0.00	*
DSY-SD-AE26-1224	SE6389-9		0.00	*	0.00	*	0.00	*
Method Blank Sample	WG98769-1		51.7		62.6		69.0	
Laboratory Control S	WG98769-2		51.4		62.7		65.6	
Laboratory Control S	WG98769-3		53.6		63.1		67.4	

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-11

PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
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sales@katahdinlab.com

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1020	40824	9.11	98293	12.06	58834	16.38
02	WG98769-BLANK	WG98769-1	43141	9.11	120972	12.06	61598	16.38
03	WG98769-LCS	WG98769-2	44996	9.11	121920	12.06	59348	16.38
04	WG98769-LCSD	WG98769-3	47756	9.11	121524	12.06	61272	16.38
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64726	20.09	32119	26.71	23689	30.04
UPPER LIMIT		129452	20.63	64238	27.25	47378	30.58
LOWER LIMIT		32363	19.55	16060	26.17	11845	29.50
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1020	78252	20.00	33496	26.61	25078	29.94
02	WG98769-BLANK	WG98769-1	92248	20.00	49975	26.61	36464	29.94
03	WG98769-LCS	WG98769-2	85258	19.99	42623	26.61	30568	29.94
04	WG98769-LCSD	WG98769-3	85111	19.99	47684	26.61	34563	29.94
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		36243		8.92		123776		11.87		61148		16.18	
UPPER LIMIT		72486		9.46		247552		12.41		122296		16.72	
LOWER LIMIT		18122		8.38		61888		11.33		30574		15.64	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1103		39171		8.88		134288		11.84		67428		16.15	
02	DSY-SD-AC26-0012	SE6389-1		32581		8.88		120676		11.84		64030		16.15	
03	DSY-SD-AC26-1224	SE6389-2		36108		8.88		118418		11.85		75501		16.18	
04	DSY-SD-AC26-2448	SE6389-3		33049		8.88		124260		11.85		74198		16.15	
05	DSY-SD-DUP13-092811	SE6389-4		32436		8.88		122552		11.85		67176		16.15	
06	DSY-SD-AE28-0012	SE6389-5		34499		8.88		117086		11.85		65325		16.15	
07	DSY-SD-AE28-1224	SE6389-6		34657		8.88		125969		11.85		73275		16.15	
08		SSTD1.00G1103		36404		8.87		119609		11.83		60545		16.13	
09	DSY-SD-AE28-2448	SE6389-7		37809		8.88		125319		11.83		73258		16.14	
10	DSY-SD-AE26-0012	SE6389-8		34877		8.88		119563		11.83		62915		16.13	
11	DSY-SD-AE26-1224	SE6389-9		35665		8.88		128833		11.83		69346		16.13	
12	DSY-SD-AC28-0012	SE6389-11		36168		8.88		130286		11.83		70730		16.13	
13	DSY-SD-AC28-1224	SE6389-12		38141		8.88		133632		11.83		93725		16.14	
14	DSY-SD-DUP14-092811	SE6389-14		34548		8.88		125244		11.83		69496		16.13	
15	DSY-SD-AE30-0012	SE6389-15		37533		8.88		140187		11.83		74399		16.13	
16	DSY-SD-AE30-1224	SE6389-16		33496		8.88		123143		11.83		66976		16.14	
17	DSY-SD-AG30-0012	SE6389-18		38279		8.88		127752		11.83		67346		16.13	
18	DSY-SD-AG30-1224	SE6389-19		36221		8.88		133161		11.83		72119		16.13	
19	DSY-SD-AG30-2436	SE6389-20		37977		8.88		131068		11.83		67320		16.13	
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		83246	19.80	43673	26.39	30900	29.71
UPPER LIMIT		166492	20.34	87346	26.93	61800	30.25
LOWER LIMIT		41623	19.26	21837	25.85	15450	29.17
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1103	94201	19.76	66490	26.36	52057	29.68
02	DSY-SD-AC26-0012	SE6389-1	100115	19.76	45788	26.36	22917	29.68
03	DSY-SD-AC26-1224	SE6389-2	119127	19.80	53121	26.42	33624	29.74
04	DSY-SD-AC26-2448	SE6389-3	109547	19.77	56028	26.39	34657	29.70
05	DSY-SD-DUP13-092811	SE6389-4	101900	19.77	50762	26.38	31217	29.69
06	DSY-SD-AE28-0012	SE6389-5	103969	19.76	44424	26.38	25273	29.68
07	DSY-SD-AE28-1224	SE6389-6	113556	19.77	50304	26.38	29109	29.69
08		SSTD1.00G1103	80956	19.75	47707	26.36	34673	29.68
09	DSY-SD-AE28-2448	SE6389-7	108238	19.76	55604	26.38	33387	29.69
10	DSY-SD-AE26-0012	SE6389-8	99704	19.75	51203	26.36	28116	29.68
11	DSY-SD-AE26-1224	SE6389-9	109707	19.76	57637	26.36	32740	29.68
12	DSY-SD-AC28-0012	SE6389-11	109595	19.76	52416	26.36	26123	29.68
13	DSY-SD-AC28-1224	SE6389-12	120574	19.76	61246	26.38	41892	29.69
14	DSY-SD-DUP14-092811	SE6389-14	117773	19.76	56382	26.36	32240	29.68
15	DSY-SD-AE30-0012	SE6389-15	115450	19.75	57419	26.36	32428	29.68
16	DSY-SD-AE30-1224	SE6389-16	105981	19.76	50457	26.38	26547	29.68
17	DSY-SD-AG30-0012	SE6389-18	109168	19.74	55149	26.36	32353	29.68
18	DSY-SD-AG30-1224	SE6389-19	109502	19.76	52868	26.36	26087	29.68
19	DSY-SD-AG30-2436	SE6389-20	107315	19.76	53667	26.38	28772	29.69
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G3407.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-11
Lab Sample ID : WG98769-1
Date Extracted : 07-OCT-11
Date Analyzed : 20-OCT-11
Time Analyzed : 06:33

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG98769-2	G3408.D	10/20/11	07:18
Laboratory Control S	WG98769-3	G3409.D	10/20/11	08:02
DSY-SD-AC26-0012	SE6389-1	G3721.D	11/03/11	10:08
DSY-SD-AC26-1224	SE6389-2	G3722.D	11/03/11	10:52
DSY-SD-AC26-2448	SE6389-3	G3723.D	11/03/11	11:37
DSY-SD-DUP13-092811	SE6389-4	G3724.D	11/03/11	12:22
DSY-SD-AE28-0012	SE6389-5	G3725.D	11/03/11	13:07
DSY-SD-AE28-1224	SE6389-6	G3726.D	11/03/11	13:51
DSY-SD-AE28-2448	SE6389-7	G3728.D	11/03/11	16:29
DSY-SD-AE26-0012	SE6389-8	G3729.D	11/03/11	17:14
DSY-SD-AE26-1224	SE6389-9	G3730.D	11/03/11	17:59
DSY-SD-AC28-0012	SE6389-11	G3731.D	11/03/11	18:43
DSY-SD-AC28-1224	SE6389-12	G3732.D	11/03/11	19:28
DSY-SD-DUP14-092811	SE6389-14	G3733.D	11/03/11	20:12
DSY-SD-AE30-0012	SE6389-15	G3734.D	11/03/11	20:57
DSY-SD-AE30-1224	SE6389-16	G3735.D	11/03/11	21:41
DSY-SD-AG30-0012	SE6389-18	G3736.D	11/03/11	22:25
DSY-SD-AG30-1224	SE6389-19	G3737.D	11/03/11	23:10
DSY-SD-AG30-2436	SE6389-20	G3738.D	11/03/11	23:54

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98769-1
Client ID: Method Blank Sample
Project:
SDG: DSY-11

Sample Date:
Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 20-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 09-nov-2011 09:29

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		51.7	%					
Fluorene-D10		62.6	%					
Pyrene-D10		69.0	%					

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http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98769-2
LCSD ID: WG98769-3
Project:
SDG: DSY-11
Report Date: 09-nov-2011 09:29

Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG98769

Analysis Date: 20-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	66.7	37.3	55.9	36.2	54.3	ug/Kgdrywt	3	50	52-113
2-Methylnaphthalene-D10			51.4		53.6				19-94
Fluorene-D10			62.7		63.1				20-96
Pyrene-D10			65.6		67.4				31-128

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
08					
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14					
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16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: GD894 DFTPP Injection Date: 10/20/11

Instrument ID: GCMS-G DFTPP Injection Time: 0530

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.0
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	41.2
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	58.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.1
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	7.6 (65.1)2
442	40.0 - 100.0% of mass 198	56.8
443	17.0 - 23.0% of mass 442	11.7 (20.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1020	G3406	10/20/11	0549
02	WG98769-BLANK	WG98769-1	G3407	10/20/11	0633
03	WG98769-LCS	WG98769-2	G3408	10/20/11	0718
04	WG98769-LCSD	WG98769-3	G3409	10/20/11	0802
05					
06					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-G Calibration Date: 10/20/11 Time: 0549

Lab File ID: G3406 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2279000	0.01	-12.36	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	0.9464300	0.01	-15.19	20.00	AVRG
Fluorene-D10	0.8720000	0.7611000	0.01	-12.72	20.00	AVRG
Pyrene-D10	1.2360000	1.2654000	0.01	2.38	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: GD911 DFTPP Injection Date: 11/02/11

Instrument ID: GCMS-G DFTPP Injection Time: 0601

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.7 (1.6)1
69	Less than 100.0% of mass 198	42.5
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	13.3 (76.3)2
442	40.0 - 100.0% of mass 198	90.3
443	17.0 - 23.0% of mass 442	17.5 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1102	G3691	11/02/11	0619
02		SSTD8.00G1102	G3692	11/02/11	0703
03		SSTD5.00G1102	G3693	11/02/11	0746
04		SSTD2.00G1102	G3694	11/02/11	0831
05		SSTD0.50G1102	G3695	11/02/11	0915
06		SSTD0.20G1102	G3696	11/02/11	1000
07		SIM IND CHECK	G3697	11/02/11	1045
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Katahdin Analytical Services A0000064

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-G Calibration Date(s): 11/02/11 11/02/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0619 1000

LAB FILE ID: RF0.2: G3696 RF0.5: G3695 RF1: G3691
RF2: G3694 RF5: G3693 RF8: G3692

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.620	1.399	1.287	1.098	1.207	1.178	AVRG	1.29808638	14.471	15.000
2-Methylnaphthalene-D10	1.192	1.243	1.194	1.027	1.139	1.106	AVRG	1.15011689	6.680	15.000
Fluorene-D10	1.002	0.968	1.136	0.953	1.100	1.068	AVRG	1.03794548	7.181	15.000
Pyrene-D10	1.245	1.208	1.434	1.143	1.321	1.283	AVRG	1.27238392	7.894	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: GD913 DFTPP Injection Date: 11/03/11

Instrument ID: GCMS-G DFTPP Injection Time: 0438

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	42.1
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	55.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	4.5
441	0.0 - 100.0% of mass 443	13.6 (73.6)2
442	40.0 - 100.0% of mass 198	97.2
443	17.0 - 23.0% of mass 442	18.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1103	G3714	11/03/11	0457
02	DSY-SD-AC26-0012	SE6389-1	G3721	11/03/11	1008
03	DSY-SD-AC26-1224	SE6389-2	G3722	11/03/11	1052
04	DSY-SD-AC26-2448	SE6389-3	G3723	11/03/11	1137
05	DSY-SD-DUP13-092811	SE6389-4	G3724	11/03/11	1222
06	DSY-SD-AE28-0012	SE6389-5	G3725	11/03/11	1307
07	DSY-SD-AE28-1224	SE6389-6	G3726	11/03/11	1351
08					
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20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-G Calibration Date: 11/03/11 Time: 0457

Lab File ID: G3714 Init. Calib. Date(s): 11/02/11 11/02/11

Init. Calib. Times: 0619 1000

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Benzo(a)pyrene	1.2980000	1.2762000	0.01	-1.68	20.01	AVRG	
2-Methylnaphthalene-D10	1.1500000	1.1636000	0.01	1.18	20.00	AVRG	
Fluorene-D10	1.0380000	1.5124000	0.01	45.70	20.00	AVRG	<-
Pyrene-D10	1.2720000	1.1612000	0.01	-8.71	20.00	AVRG	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Lab File ID: GD914 DFTPP Injection Date: 11/03/11

Instrument ID: GCMS-G DFTPP Injection Time: 1524

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.5
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.8
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	24.2
365	1.0 - 100.0% of mass 198	3.9
441	0.0 - 100.0% of mass 443	13.5 (75.5)2
442	40.0 - 100.0% of mass 198	93.7
443	17.0 - 23.0% of mass 442	17.9 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1103	G3727	11/03/11	1543
02	DSY-SD-AE28-2448	SE6389-7	G3728	11/03/11	1629
03	DSY-SD-AE26-0012	SE6389-8	G3729	11/03/11	1714
04	DSY-SD-AE26-1224	SE6389-9	G3730	11/03/11	1759
05	DSY-SD-AC28-0012	SE6389-11	G3731	11/03/11	1843
06	DSY-SD-AC28-1224	SE6389-12	G3732	11/03/11	1928
07	DSY-SD-DUP14-092811	SE6389-14	G3733	11/03/11	2012
08	DSY-SD-AE30-0012	SE6389-15	G3734	11/03/11	2057
09	DSY-SD-AE30-1224	SE6389-16	G3735	11/03/11	2141
10	DSY-SD-AG30-0012	SE6389-18	G3736	11/03/11	2225
11	DSY-SD-AG30-1224	SE6389-19	G3737	11/03/11	2310
12	DSY-SD-AG30-2436	SE6389-20	G3738	11/03/11	2354
13					
14					
15					
16					
17					
18					
19					
20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-11

Instrument ID: GCMS-G Calibration Date: 11/03/11 Time: 1543

Lab File ID: G3727 Init. Calib. Date(s): 11/02/11 11/02/11

Init. Calib. Times: 0619 1000

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Benzo(a)pyrene	1.2980000	1.3794000	0.01	6.27	20.01	AVRG	
2-Methylnaphthalene-D10	1.1500000	1.1530000	0.01	0.26	20.00	AVRG	
Fluorene-D10	1.0380000	1.5101000	0.01	45.48	20.00	AVRG	<-
Pyrene-D10	1.2720000	1.2656000	0.01	-0.50	20.00	AVRG	

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm) GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98764-BLANK	WG98764-1	78	82	107	89			0
02	WG98764-LCS	WG98764-2	86	93	116	95			0
03	WG98764-LCSD	WG98764-3	76	80	113	94			0
04	DSY-SD-AC28-0012	SE6389-11	59	73	54*	73			1
05	DSY-SD-AC28-1224	SE6389-12	53*	73	57*	76			2
06	DSY-SD-AC28-2448	SE6389-13	21*	38*	23*	40*			4
07	DSY-SD-DUP14-092811	SE6389-14	68	81	71	80			0
08	DSY-SD-AE30-0012	SE6389-15	67	86	68	84			0
09	DSY-SD-AE30-1224	SE6389-16	51*	57	75	80			1
10	DSY-SD-AG30-0012	SE6389-18	88	90	84	89			0
11	DSY-SD-AG30-1224	SE6389-19	79	91	77	88			0
12	DSY-SD-AG30-2436	SE6389-20	78	88	82	85			0
13	WG98853-BLANK	WG98853-1	88	90	97	92			0
14	WG98853-LCS	WG98853-2	94	95	104	93			0
15	WG98853-LCSD	WG98853-3	95	96	103	92			0
16	DSY-SD-AE28-2448MS	WG98853-4	66	86	72	87			0
17	DSY-SD-AE28-2448MSD	WG98853-5	58	81	60	83			0
18	DSY-SD-AC26-0012	SE6389-1	70	86	76	87			0
19	DSY-SD-AC26-1224	SE6389-2	46*	69	46*	77			2
20	DSY-SD-AC26-2448	SE6389-3	52*	78	52*	78			2
21	DSY-SD-DUP13-092811	SE6389-4	61	80	58*	80			1
22	DSY-SD-AE28-0012	SE6389-5	65	77	61	74			0
23	DSY-SD-AE28-1224	SE6389-6	68	83	60	77			0
24	DSY-SD-AE28-2448	SE6389-7	58	81	65*	78			1
25	DSY-SD-AE26-0012	SE6389-8	70	88	62	78			0
26	DSY-SD-AE26-1224	SE6389-9	70	86	63	81			0
27	DSY-SD-AE26-2448	SE6389-10	41*	64	41*	76			2
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98764-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Lab Sample ID: WG98764-1 Lab File ID: 7EJ455

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/07/11

Date Analyzed (1): 10/16/11 Date Analyzed (2): 10/16/11

Time Analyzed (1): 1333 Time Analyzed (2): 1333

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98764-LCS	WG98764-2	7EJ456	10/16/11	10/16/11
02	WG98764-LCSD	WG98764-3	7EJ457	10/16/11	10/16/11
03	DSY-SD-AC28-0012	SE6389-11	7EJ477	10/16/11	10/16/11
04	DSY-SD-AC28-1224	SE6389-12	7EJ478	10/16/11	10/16/11
05	DSY-SD-AC28-2448	SE6389-13	7EJ479	10/16/11	10/16/11
06	DSY-SD-DUP14-092811	SE6389-14	7EJ485	10/17/11	10/17/11
07	DSY-SD-AE30-0012	SE6389-15	7EJ486	10/17/11	10/17/11
08	DSY-SD-AE30-1224	SE6389-16	7EJ487	10/17/11	10/17/11
09	DSY-SD-AG30-0012	SE6389-18	7EJ488	10/17/11	10/17/11
10	DSY-SD-AG30-1224	SE6389-19	7EJ489	10/17/11	10/17/11
11	DSY-SD-AG30-2436	SE6389-20	7EJ490	10/17/11	10/17/11
12					
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24					

COMMENTS: _____

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98764-1
Client ID: Method Blank Sample
Project:
SDG: DSY-11

Sample Date:
Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		82.6	%					
Decachlorobiphenyl		107.	%					

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98764-2
LCSD ID: WG98764-3
Project:
SDG: DSY-11
Report Date: 09-NOV-11

Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3540
Lab Prep Batch: WG98764

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	154.	92.2	148.	88.6	ug/Kgdrywt	4	50	53-123
Aroclor-1260	167.	163.	97.6	158.	94.6	ug/Kgdrywt	3	50	58-120
Tetrachloro-M-Xylene			92.8		80.5				56-115
Decachlorobiphenyl			116.		113.				59-124

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FORM 4

PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98853-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Lab Sample ID: WG98853-1 Lab File ID: 7EJ502

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/08/11

Date Analyzed (1): 10/17/11 Date Analyzed (2): 10/17/11

Time Analyzed (1): 1312 Time Analyzed (2): 1312

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98853-LCS	WG98853-2	7EJ503	10/17/11	10/17/11
02	WG98853-LCSD	WG98853-3	7EJ504	10/17/11	10/17/11
03	DSY-SD-AE28-2448MS	WG98853-4	7EJ505	10/17/11	10/17/11
04	DSY-SD-AE28-2448MSD	WG98853-5	7EJ506	10/17/11	10/17/11
05	DSY-SD-AC26-0012	SE6389-1	7EJ533	10/18/11	10/18/11
06	DSY-SD-AC26-1224	SE6389-2	7EJ534	10/18/11	10/18/11
07	DSY-SD-AC26-2448	SE6389-3	7EJ535	10/18/11	10/18/11
08	DSY-SD-DUP13-092811	SE6389-4	7EJ536	10/18/11	10/18/11
09	DSY-SD-AE28-0012	SE6389-5	7EJ537	10/18/11	10/18/11
10	DSY-SD-AE28-1224	SE6389-6	7EJ538	10/18/11	10/18/11
11	DSY-SD-AE28-2448	SE6389-7	7EJ539	10/18/11	10/18/11
12	DSY-SD-AE26-0012	SE6389-8	7EJ540	10/18/11	10/18/11
13	DSY-SD-AE26-1224	SE6389-9	7EJ541	10/18/11	10/18/11
14	DSY-SD-AE26-2448	SE6389-10	7EJ602	10/19/11	10/19/11
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

Katahdin Analytical Services A0000118

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98853-1
Client ID: Method Blank Sample
Project:
SDG: DSY-11

Sample Date:
Received Date: 08-OCT-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		90.1	%					
Decachlorobiphenyl		96.7	%					

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ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98853-2
LCSD ID: WG98853-3
Project:
SDG: DSY-11
Report Date: 09-NOV-11

Received Date: 08-OCT-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	158.	94.6	157.	94.0	ug/Kgdrywt	1	50	53-123
Aroclor-1260	167.	157.	94.0	156.	93.4	ug/Kgdrywt	1	50	58-120
Tetrachloro-M-Xylene			94.9		96.4				56-115
Decachlorobiphenyl			104.		103.				59-124

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

MS/MSD Recovery Report

MS ID: WG98853-4
MSD ID: WG98853-5
Sample ID: SE6389-7
Client ID: DSY-SD-AE28-2448
Project:
SDG: DSY-11

Received Date: 30-SEP-11
Extract Date: 08-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG98853
Report Date: 09-NOV-11

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 68.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	244.	244.	ug/Kgdrywt	U12.	220	210	91.7	86.8	6	30	53-123
Aroclor-1260	244.	244.	ug/Kgdrywt	U12.	300	330	122.*	135.*	10	30	58-120
Tetrachloro-M-Xylene							85.8	81.1			56-115
Decachlorobiphenyl							87.3	83.0			59-124

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FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000157

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/16/11	1120	13.33	3.83
02	WG98764-BLAN	WG98764-1	10/16/11	1333	13.34	3.83
03	WG98764-LCS	WG98764-2	10/16/11	1359	13.33	3.83
04	WG98764-LCSD	WG98764-3	10/16/11	1424	13.33	3.83
05		AR1660 2.5	10/16/11	1816✓	13.33	3.83
06		AR1254 1.0	10/16/11	1934✓		
07	DSY-SD-AC28-	SE6389-11	10/16/11	2258	13.33	3.83
08	DSY-SD-AC28-	SE6389-12	10/16/11	2324	13.33	3.83
09	DSY-SD-AC28-	SE6389-13	10/16/11	2349	13.34	3.84
10		AR1660 1.0	10/17/11	0040✓	13.33	3.83
11		AR1254 1.0	10/17/11	0157✓		
12	DSY-SD-DUP14	SE6389-14	10/17/11	0223	13.33	3.83
13	DSY-SD-AE30-	SE6389-15	10/17/11	0248	13.32	3.83
14	DSY-SD-AE30-	SE6389-16	10/17/11	0314	13.33	3.83
15	DSY-SD-AG30-	SE6389-18	10/17/11	0339	13.33	3.83
16	DSY-SD-AG30-	SE6389-19	10/17/11	0405	13.33	3.83
17	DSY-SD-AG30-	SE6389-20	10/17/11	0431	13.33	3.83
18		AR1660 2.5	10/17/11	0730✓	13.33	3.83
19		AR1254 1.0	10/17/11	0848		
20	WG98853-BLAN	WG98853-1	10/17/11	1312	13.34	3.83

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000159

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG98853-LCS	WG98853-2	10/17/11	1338	13.34	3.83
02	WG98853-LCSD	WG98853-3	10/17/11	1404	13.34	3.83
03	DSY-SD-AE28-	WG98853-4	10/17/11	1430	13.33	3.83
04	DSY-SD-AE28-	WG98853-5	10/17/11	1456	13.33	3.83
05		AR1660 1.0	10/17/11	1757	13.33	3.83
06		AR1660 0.25	10/18/11	0022	13.34	3.83
07		AR1254 1.0	10/18/11	0139		
08	DSY-SD-AC26-	SE6389-1	10/18/11	0230	13.33	3.83
09	DSY-SD-AC26-	SE6389-2	10/18/11	0256	13.33	3.83
10	DSY-SD-AC26-	SE6389-3	10/18/11	0321	13.33	3.83
11	DSY-SD-DUP13	SE6389-4	10/18/11	0347	13.33	3.83
12	DSY-SD-AE28-	SE6389-5	10/18/11	0412	13.33	3.83
13	DSY-SD-AE28-	SE6389-6	10/18/11	0438	13.32	3.83
14	DSY-SD-AE28-	SE6389-7	10/18/11	0503	13.33	3.83
15	DSY-SD-AE26-	SE6389-8	10/18/11	0529	13.33	3.83
16	DSY-SD-AE26-	SE6389-9	10/18/11	0554	13.32	3.83
17		AR1660 1.0	10/18/11	0646	13.33	3.83
18		AR1254 1.0	10/18/11	0804		
19		AR1660 1.0	10/19/11	0710	13.33	3.84
20		AR1254 1.0	10/19/11	0828		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000160

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AE26-	SE6389-10	10/19/11	1804	13.33	3.84
02		AR1660 1.0	10/19/11	1922	13.33	3.83
03		AR1254 1.0	10/19/11	2039		
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000161

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+009	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0658000	1.0000000	32100000	0.001	6.58	20.00	2RDR
(2)	1.0970000	1.0000000	19280000	0.001	9.70	20.00	2RDR
(3)	0.8812600	1.0000000	45680000	0.001	-11.87	20.00	2RDR
(4)	0.9684200	1.0000000	28902000	0.001	-3.16	20.00	2RDR
(5)	0.8576800	1.0000000	23536000	0.001	-14.23	20.00	2RDR
Average %D: -2.600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1120

Lab File ID: 7EJ451 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3161000	1.0000000	41965000	0.001	31.61	20.00	2RDR	<-
(2)	1.1550000	1.0000000	21628000	0.001	15.50	20.00	2RDR	
(3)	1.2227000	1.0000000	60797000	0.001	22.27	20.00	2RDR	<-
(4)	1.1352000	1.0000000	33624000	0.001	13.52	20.00	2RDR	
(5)	1.0760000	1.0000000	28546000	0.001	7.60	20.00	2RDR	
Average %D: 18.100								
Aroclor-1260	1.1450000	1.0000000	58186000	0.001	14.50	20.00	2RDR	
(2)	1.1601000	1.0000000	75934000	0.001	16.01	20.00	2RDR	
(3)	1.2545000	1.0000000	60343000	0.001	25.45	20.00	2RDR	<-
(4)	1.1506000	1.0000000	54986000	0.001	15.06	20.00	2RDR	
(5)	1.2980000	1.0000000	40711000	0.001	29.80	20.00	2RDR	<-
Average %D: 20.160								
Decachlorobiphenyl	2.4e-002	2.e-002	726290000	0.001	20.00	20.00	2RDR	
Tetrachloro-m-xylene	2.29e-002	2.e-002	1.34e+009	0.001	14.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1816

Lab File ID: 7EJ466 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.6618000	2.5000000	33416000	0.001	6.47	20.00	2RDR
(2)	2.5359000	2.5000000	18686000	0.001	1.44	20.00	2RDR
(3)	2.5494000	2.5000000	52344000	0.001	1.98	20.00	2RDR
(4)	2.3473000	2.5000000	28187000	0.001	-6.11	20.00	2RDR
(5)	2.0577000	2.5000000	22338000	0.001	-17.69	20.00	2RDR
Average %D: -2.784							
Aroclor-1260	2.0260000	2.5000000	42283000	0.001	-18.96	20.00	2RDR
(2)	2.1308000	2.5000000	56489000	0.001	-14.77	20.00	2RDR
(3)	2.2267000	2.5000000	44346000	0.001	-10.93	20.00	2RDR
(4)	2.0523000	2.5000000	40339000	0.001	-17.91	20.00	2RDR
(5)	2.3398000	2.5000000	30220000	0.001	-6.41	20.00	2RDR
Average %D: -13.79							
Decachlorobiphenyl	4.03e-002	5.e-002	497960000	0.001	-19.40	20.00	2RDR
Tetrachloro-m-xylene	5.28e-002	5.e-002	1.26e+009	0.001	5.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1934

Lab File ID: 7EJ469 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9479300	1.0000000	38725000	0.001	-5.21	20.00	2RDR
(2)	0.9724200	1.0000000	48648000	0.001	-2.76	20.00	2RDR
(3)	0.9638100	1.0000000	31451000	0.001	-3.62	20.00	2RDR
(4)	0.9917700	1.0000000	35460000	0.001	-0.82	20.00	2RDR
(5)	1.0847000	1.0000000	39970000	0.001	8.47	20.00	2RDR
Average %D: -0.790							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0040

Lab File ID: 7EJ481 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1610000	1.0000000	37073000	0.001	16.10	20.00	2RDR	
(2)	1.0483000	1.0000000	19646000	0.001	4.83	20.00	2RDR	
(3)	1.0380000	1.0000000	51222000	0.001	3.80	20.00	2RDR	
(4)	0.8887000	1.0000000	26158000	0.001	-11.13	20.00	2RDR	
(5)	0.8064700	1.0000000	21142000	0.001	-19.35	20.00	2RDR	
Average %D: -1.150								
Aroclor-1260	0.7892900	1.0000000	39352000	0.001	-21.07	20.00	2RDR	<-
(2)	0.8293400	1.0000000	53436000	0.001	-17.07	20.00	2RDR	
(3)	0.9154500	1.0000000	43190000	0.001	-8.46	20.00	2RDR	
(4)	0.7987700	1.0000000	37458000	0.001	-20.12	20.00	2RDR	<-
(5)	0.9202200	1.0000000	28496000	0.001	-7.98	20.00	2RDR	
Average %D: -14.94						Y- OK		
Decachlorobiphenyl	1.55e-002	2.e-002	458640000	0.001	-22.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.17e-002	2.e-002	1.26e+009	0.001	8.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0157

Lab File ID: 7EJ484 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9222800	1.0000000	37627000	0.001	-7.77	20.00	2RDR
(2)	0.9536400	1.0000000	47647000	0.001	-4.64	20.00	2RDR
(3)	0.9459000	1.0000000	30825000	0.001	-5.41	20.00	2RDR
(4)	0.9631600	1.0000000	34387000	0.001	-3.68	20.00	2RDR
(5)	1.0752000	1.0000000	39590000	0.001	7.52	20.00	2RDR
Average %D: -2.800							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0730

Lab File ID: 7EJ497 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	3.1001000	2.5000000	38700000	0.001	24.00	20.00	2RDR	<-
(2)	3.0080000	2.5000000	22025000	0.001	20.32	20.00	2RDR	<-
(3)	3.0695000	2.5000000	63595000	0.001	22.78	20.00	2RDR	<-
(4)	2.9326000	2.5000000	35337000	0.001	17.30	20.00	2RDR	
(5)	2.8161000	2.5000000	30924000	0.001	12.64	20.00	2RDR	
Average %D: 19.412					~ 19.41			
Aroclor-1260	2.6047000	2.5000000	55058000	0.001	4.19	20.00	2RDR	
(2)	2.7264000	2.5000000	72304000	0.001	9.06	20.00	2RDR	
(3)	2.8015000	2.5000000	56696000	0.001	12.06	20.00	2RDR	
(4)	2.5949000	2.5000000	51655000	0.001	3.80	20.00	2RDR	
(5)	2.9323000	2.5000000	38482000	0.001	17.29	20.00	2RDR	
Average %D: 9.2800								
Decachlorobiphenyl	4.95e-002	5.e-002	618740000	0.001	-1.00	20.00	2RDR	
Tetrachloro-m-xylene	6.1e-002	5.e-002	1.47e+009	0.001	22.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0848

Lab File ID: 7EJ500 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1409000	1.0000000	47003000	0.001	14.09	20.00	2RDR	
(2)	1.1920000	1.0000000	60382000	0.001	19.20	20.00	2RDR	
(3)	1.2093000	1.0000000	40068000	0.001	20.93	20.00	2RDR	<-
(4)	1.2351000	1.0000000	44611000	0.001	23.51	20.00	2RDR	<-
(5)	1.3629000	1.0000000	51121000	0.001	36.29	20.00	2RDR	<-
Average %D: 22.810					$\bar{X}$= 22.80			

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1757

Lab File ID: 7EJ513 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2650000	1.0000000	40358000	0.001	26.50	20.00	2RDR	<-
(2)	1.2157000	1.0000000	22753000	0.001	21.57	20.00	2RDR	<-
(3)	1.1055000	1.0000000	54713000	0.001	10.55	20.00	2RDR	
(4)	1.0516000	1.0000000	31090000	0.001	5.16	20.00	2RDR	
(5)	0.9291700	1.0000000	24508000	0.001	-7.08	20.00	2RDR	
Average %D: 11.340								
Aroclor-1260	0.9790200	1.0000000	49373000	0.001	-2.10	20.00	2RDR	
(2)	0.9908600	1.0000000	64440000	0.001	-0.91	20.00	2RDR	
(3)	1.0834000	1.0000000	51659000	0.001	8.34	20.00	2RDR	
(4)	0.9986200	1.0000000	47390000	0.001	-0.14	20.00	2RDR	
(5)	1.0984000	1.0000000	34232000	0.001	9.84	20.00	2RDR	
Average %D: 3.0100								
Decachlorobiphenyl	1.99e-002	2.e-002	597160000	0.001	-0.50	20.00	2RDR	
Tetrachloro-m-xylene	2.21e-002	2.e-002	1.29e+009	0.001	10.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0022

Lab File ID: 7EJ528 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2647600	0.2500000	33352000	0.001	5.90	20.00	2RDR
(2)	0.2695300	0.2500000	19856000	0.001	7.81	20.00	2RDR
(3)	0.2197000	0.2500000	37222000	0.001	-12.12	20.00	2RDR
(4)	0.2325200	0.2500000	25323000	0.001	-6.99	20.00	2RDR
(5)	0.2167400	0.2500000	20305000	0.001	-13.30	20.00	2RDR
Average %D: -3.720							
Aroclor-1260	0.2228400	0.2500000	39024000	0.001	-10.86	20.00	2RDR
(2)	0.2274300	0.2500000	48627000	0.001	-9.03	20.00	2RDR
(3)	0.2404200	0.2500000	38804000	0.001	-3.83	20.00	2RDR
(4)	0.2303100	0.2500000	38203000	0.001	-7.88	20.00	2RDR
(5)	0.2666900	0.2500000	31380000	0.001	6.68	20.00	2RDR
Average %D: -5.000							
Decachlorobiphenyl	4.43e-003	5.e-003	485310000	0.001	-11.40	20.00	2RDR
Tetrachloro-m-xylene	5.49e-003	5.e-003	1.23e+009	0.001	9.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0139

Lab File ID: 7EJ531 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9325700	1.0000000	38068000	0.001	-6.74	20.00	2RDR
(2)	0.9551300	1.0000000	47727000	0.001	-4.49	20.00	2RDR
(3)	0.9610600	1.0000000	31355000	0.001	-3.89	20.00	2RDR
(4)	1.0395000	1.0000000	37252000	0.001	3.95	20.00	2RDR
(5)	1.0911000	1.0000000	40225000	0.001	9.11	20.00	2RDR
Average %D: -0.410							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3368000	1.0000000	42616000	0.001	33.68	20.00	2RDR	<-
(2)	1.2505000	1.0000000	23397000	0.001	25.05	20.00	2RDR	<-
(3)	1.1700000	1.0000000	58060000	0.001	17.00	20.00	2RDR	
(4)	1.0804000	1.0000000	31961000	0.001	8.04	20.00	2RDR	
(5)	0.9378400	1.0000000	24746000	0.001	-6.22	20.00	2RDR	
Average %D: 15.510								
Aroclor-1260	0.9655200	1.0000000	48658000	0.001	-3.45	20.00	2RDR	
(2)	0.9873200	1.0000000	64198000	0.001	-1.27	20.00	2RDR	
(3)	1.0827000	1.0000000	51622000	0.001	8.27	20.00	2RDR	
(4)	0.9683400	1.0000000	45880000	0.001	-3.17	20.00	2RDR	
(5)	1.0657000	1.0000000	33176000	0.001	6.57	20.00	2RDR	
Average %D: 1.3900								
Decachlorobiphenyl	1.86e-002	2.e-002	556320000	0.001	-7.00	20.00	2RDR	
Tetrachloro-m-xylene	2.39e-002	2.e-002	1.39e+009	0.001	19.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0804

Lab File ID: 7EJ546 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9323200	1.0000000	38057000	0.001	-6.77	20.00	2RDR
(2)	0.9770200	1.0000000	48893000	0.001	-2.30	20.00	2RDR
(3)	0.9865400	1.0000000	32246000	0.001	-1.35	20.00	2RDR
(4)	1.0281000	1.0000000	36822000	0.001	2.81	20.00	2RDR
(5)	1.1109000	1.0000000	41015000	0.001	11.09	20.00	2RDR
Average %D: 0.7000							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0602000	1.0000000	33878000	0.001	6.02	20.00	2RDR
(2)	1.0917000	1.0000000	20453000	0.001	9.17	20.00	2RDR
(3)	0.9251200	1.0000000	45391000	0.001	-7.49	20.00	2RDR
(4)	0.9812400	1.0000000	28959000	0.001	-1.88	20.00	2RDR
(5)	0.9144800	1.0000000	24104000	0.001	-8.55	20.00	2RDR
Average %D: -0.540							
Aroclor-1260	0.9013000	1.0000000	45262000	0.001	-9.87	20.00	2RDR
(2)	0.9066200	1.0000000	58705000	0.001	-9.34	20.00	2RDR
(3)	0.9532600	1.0000000	45092000	0.001	-4.67	20.00	2RDR
(4)	0.9146200	1.0000000	43207000	0.001	-8.54	20.00	2RDR
(5)	1.1244000	1.0000000	35070000	0.001	12.44	20.00	2RDR
Average %D: -4.000							
Decachlorobiphenyl	1.85e-002	2.e-002	553140000	0.001	-7.50	20.00	2RDR
Tetrachloro-m-xylene	2.13e-002	2.e-002	1.24e+009	0.001	6.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0828

Lab File ID: 7EJ592 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	___ RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9650200	1.0000000	39457000	0.001	-3.50	20.00	2RDR
(2)	1.0011000	1.0000000	50178000	0.001	0.11	20.00	2RDR
(3)	1.0324000	1.0000000	33852000	0.001	3.24	20.00	2RDR
(4)	1.1305000	1.0000000	40671000	0.001	13.05	20.00	2RDR
(5)	1.1890000	1.0000000	44136000	0.001	18.90	20.00	2RDR
Average %D: 6.3600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 1922

Lab File ID: 7EJ605 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8972600	1.0000000	28696000	0.001	-10.27	20.00	2RDR	
(2)	0.9243600	1.0000000	17333000	0.001	-7.56	20.00	2RDR	
(3)	0.8117100	1.0000000	39548000	0.001	-18.83	20.00	2RDR	
(4)	0.7953500	1.0000000	23333000	0.001	-20.46	20.00	2RDR	<-
(5)	0.6839200	1.0000000	17789000	0.001	-31.61	20.00	2RDR	<-
Average %D: -17.75								
Aroclor-1260	0.6688300	1.0000000	33018000	0.001	-33.12	20.00	2RDR	<-
(2)	0.6881700	1.0000000	43794000	0.001	-31.18	20.00	2RDR	<-
(3)	0.7440100	1.0000000	34603000	0.001	-25.60	20.00	2RDR	<-
(4)	0.6803200	1.0000000	31602000	0.001	-31.97	20.00	2RDR	<-
(5)	0.7655100	1.0000000	23554000	0.001	-23.45	20.00	2RDR	<-
Average %D: -29.06								
Decachlorobiphenyl	1.26e-002	2.e-002	370980000	0.001	-37.00	20.00	2RDR	<-
Tetrachloro-m-xylene	1.88e-002	2.e-002	1.09e+009	0.001	-6.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 2039

Lab File ID: 7EJ608 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.7790800	1.0000000	31508000	0.001	-22.09	20.00	2RDR	<-
(2)	0.8203300	1.0000000	40568000	0.001	-17.97	20.00	2RDR	
(3)	0.8146300	1.0000000	26250000	0.001	-18.54	20.00	2RDR	
(4)	0.8841000	1.0000000	31426000	0.001	-11.59	20.00	2RDR	
(5)	0.9539400	1.0000000	34775000	0.001	-4.61	20.00	2RDR	
Average %D: -14.96								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000158

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.09 TCX: 4.33

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/16/11	1120	17.09	4.33
02	WG98764-BLAN	WG98764-1	10/16/11	1333	17.10	4.33
03	WG98764-LCS	WG98764-2	10/16/11	1359	17.10	4.33
04	WG98764-LCSD	WG98764-3	10/16/11	1424	17.09	4.33
05		AR1660 2.5	10/16/11	1816	17.09	4.32
06		AR1254 1.0	10/16/11	1934		
07	DSY-SD-AC28-	SE6389-11	10/16/11	2258	17.09	4.33
08	DSY-SD-AC28-	SE6389-12	10/16/11	2324	17.09	4.33
09	DSY-SD-AC28-	SE6389-13	10/16/11	2349	17.10	4.33
10		AR1660 1.0	10/17/11	0040	17.09	4.33
11		AR1254 1.0	10/17/11	0157		
12	DSY-SD-DUP14	SE6389-14	10/17/11	0223	17.09	4.33
13	DSY-SD-AE30-	SE6389-15	10/17/11	0248	17.08	4.33
14	DSY-SD-AE30-	SE6389-16	10/17/11	0314	17.09	4.33
15	DSY-SD-AG30-	SE6389-18	10/17/11	0339	17.09	4.33
16	DSY-SD-AG30-	SE6389-19	10/17/11	0405	17.09	4.33
17	DSY-SD-AG30-	SE6389-20	10/17/11	0431	17.09	4.33
18		AR1660 2.5	10/17/11	0730	17.09	4.33
19		AR1254 1.0	10/17/11	0848		
20	WG98853-BLAN	WG98853-1	10/17/11	1312	17.09	4.33

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000162

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.09 TCX: 4.33

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG98853-LCS	WG98853-2	10/17/11	1338	17.09	4.33
02	WG98853-LCSD	WG98853-3	10/17/11	1404	17.10	4.33
03	DSY-SD-AE28-	WG98853-4	10/17/11	1430	17.09	4.33
04	DSY-SD-AE28-	WG98853-5	10/17/11	1456	17.09	4.33
05		AR1660 1.0	10/17/11	1757	17.09	4.33
06		AR1660 0.25	10/18/11	0022	17.09	4.33
07		AR1254 1.0	10/18/11	0139		
08	DSY-SD-AC26-	SE6389-1	10/18/11	0230	17.09	4.33
09	DSY-SD-AC26-	SE6389-2	10/18/11	0256	17.09	4.33
10	DSY-SD-AC26-	SE6389-3	10/18/11	0321	17.09	4.33
11	DSY-SD-DUP13	SE6389-4	10/18/11	0347	17.09	4.33
12	DSY-SD-AE28-	SE6389-5	10/18/11	0412	17.08	4.33
13	DSY-SD-AE28-	SE6389-6	10/18/11	0438	17.09	4.33
14	DSY-SD-AE28-	SE6389-7	10/18/11	0503	17.08	4.33
15	DSY-SD-AE26-	SE6389-8	10/18/11	0529	17.09	4.33
16	DSY-SD-AE26-	SE6389-9	10/18/11	0554	17.08	4.33
17		AR1660 1.0	10/18/11	0646	17.08	4.33
18		AR1254 1.0	10/18/11	0804		
19		AR1660 1.0	10/19/11	0710	17.08	4.33
20		AR1254 1.0	10/19/11	0828		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000163

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.09 TCX: 4.33

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AE26-	SE6389-10	10/19/11	1804	17.08	4.33
02		AR1660 1.0	10/19/11	1922	17.08	4.33
03		AR1254 1.0	10/19/11	2039		
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000164

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM VI PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9705700	1.0000000	3399000.0	0.001	-2.94	20.00	2RDR
(2)	1.0071000	1.0000000	5842700.0	0.001	0.71	20.00	2RDR
(3)	1.0262000	1.0000000	10245000	0.001	2.62	20.00	2RDR
(4)	1.0064000	1.0000000	5347400.0	0.001	0.64	20.00	2RDR
(5)	0.9700600	1.0000000	4751700.0	0.001	-2.99	20.00	2RDR
Average %D: -0.390							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9965300	1.0000000	6853900.0	0.001	-0.35	20.00	2RDR
(2)	1.0256000	1.0000000	8164500.0	0.001	2.56	20.00	2RDR
(3)	1.1584000	1.0000000	6365500.0	0.001	15.84	20.00	2RDR
(4)	0.9072000	1.0000000	4974600.0	0.001	-9.28	20.00	2RDR
(5)	0.9577900	1.0000000	5124100.0	0.001	-4.22	20.00	2RDR
Average %D: 0.9100							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1120

Lab File ID: 7EJ451 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8876000	1.0000000	3100200.0	0.001	-11.24	20.00	2RDR
(2)	1.1113000	1.0000000	6367300.0	0.001	11.13	20.00	2RDR
(3)	1.0872000	1.0000000	11265000	0.001	8.72	20.00	2RDR
(4)	1.0707000	1.0000000	5893800.0	0.001	7.07	20.00	2RDR
(5)	1.0617000	1.0000000	5217200.0	0.001	6.17	20.00	2RDR
Average %D: 4.3700							
Aroclor-1260	1.0838000	1.0000000	7616000.0	0.001	8.38	20.00	2RDR
(2)	1.0944000	1.0000000	9313700.0	0.001	9.44	20.00	2RDR
(3)	1.1037000	1.0000000	6573200.0	0.001	10.37	20.00	2RDR
(4)	1.0843000	1.0000000	6195300.0	0.001	8.43	20.00	2RDR
(5)	1.0939000	1.0000000	6243500.0	0.001	9.39	20.00	2RDR
Average %D: 9.2000							
Decachlorobiphenyl	2.1e-002	2.e-002	101140000	0.001	5.00	20.00	2RDR
Tetrachloro-m-xylene	2.18e-002	2.e-002	236910000	0.001	9.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1816

Lab File ID: 7EJ466 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.3053000	2.5000000	3190300.0	0.001	-7.79	20.00	2RDR
(2)	2.3172000	2.5000000	5247000.0	0.001	-7.31	20.00	2RDR
(3)	2.2830000	2.5000000	9423300.0	0.001	-8.68	20.00	2RDR
(4)	2.2157000	2.5000000	4896500.0	0.001	-11.37	20.00	2RDR
(5)	2.1835000	2.5000000	4298600.0	0.001	-12.66	20.00	2RDR
Average %D: -9.564							
Aroclor-1260	2.2049000	2.5000000	6210600.0	0.001	-11.80	20.00	2RDR
(2)	2.2190000	2.5000000	7611200.0	0.001	-11.24	20.00	2RDR
(3)	2.2591000	2.5000000	5443000.0	0.001	-9.64	20.00	2RDR
(4)	2.1930000	2.5000000	5041000.0	0.001	-12.28	20.00	2RDR
(5)	2.2229000	2.5000000	5153000.0	0.001	-11.08	20.00	2RDR
Average %D: -11.20							
Decachlorobiphenyl	4.2e-002	5.e-002	81182000	0.001	-16.00	20.00	2RDR
Tetrachloro-m-xylene	4.77e-002	5.e-002	208160000	0.001	-4.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1934

Lab File ID: 7EJ469 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9478300	1.0000000	3838300.0	0.001	-5.22	20.00	2RDR
(2)	0.9451800	1.0000000	6238400.0	0.001	-5.48	20.00	2RDR
(3)	0.9322000	1.0000000	6978600.0	0.001	-6.78	20.00	2RDR
(4)	0.9444900	1.0000000	8902100.0	0.001	-5.55	20.00	2RDR
(5)	0.9948600	1.0000000	5605600.0	0.001	-0.51	20.00	2RDR
Average %D: -4.710							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0040

Lab File ID: 7EJ481 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8574800	1.0000000	2995800.0	0.001	-14.25	20.00	2RDR
(2)	1.0688000	1.0000000	6126500.0	0.001	6.88	20.00	2RDR
(3)	1.0204000	1.0000000	10573000	0.001	2.04	20.00	2RDR
(4)	0.9955400	1.0000000	5476800.0	0.001	-0.45	20.00	2RDR
(5)	0.9579400	1.0000000	4706000.0	0.001	-4.21	20.00	2RDR
Average %D: -2.000							
Aroclor-1260	1.0012000	1.0000000	7032900.0	0.001	0.12	20.00	2RDR
(2)	1.0139000	1.0000000	8619200.0	0.001	1.39	20.00	2RDR
(3)	1.0412000	1.0000000	6194400.0	0.001	4.12	20.00	2RDR
(4)	0.9887500	1.0000000	5643600.0	0.001	-1.12	20.00	2RDR
(5)	1.0296000	1.0000000	5868200.0	0.001	2.96	20.00	2RDR
Average %D: 1.5000							
Decachlorobiphenyl	1.86e-002	2.e-002	89368000	0.001	-7.00	20.00	2RDR
Tetrachloro-m-xylene	2.15e-002	2.e-002	233220000	0.001	7.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0157

Lab File ID: 7EJ484 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9631300	1.0000000	3900300.0	0.001	-3.69	20.00	2RDR
(2)	0.9665900	1.0000000	6380000.0	0.001	-3.34	20.00	2RDR
(3)	0.9530200	1.0000000	7136100.0	0.001	-4.70	20.00	2RDR
(4)	0.9820000	1.0000000	9263600.0	0.001	-1.80	20.00	2RDR
(5)	1.0423000	1.0000000	5881900.0	0.001	4.23	20.00	2RDR
Average %D: -1.860							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0730

Lab File ID: 7EJ497 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.5656000	2.5000000	3545100.0	0.001	2.62	20.00	2RDR
(2)	2.5003000	2.5000000	5651900.0	0.001	0.01	20.00	2RDR
(3)	2.4707000	2.5000000	10188000	0.001	-1.17	20.00	2RDR
(4)	2.4010000	2.5000000	5307200.0	0.001	-3.96	20.00	2RDR
(5)	2.3869000	2.5000000	4699900.0	0.001	-4.52	20.00	2RDR
Average %D: -1.404							
Aroclor-1260	2.3970000	2.5000000	6752200.0	0.001	-4.12	20.00	2RDR
(2)	2.3934000	2.5000000	8214300.0	0.001	-4.26	20.00	2RDR
(3)	2.4597000	2.5000000	5933400.0	0.001	-1.61	20.00	2RDR
(4)	2.4007000	2.5000000	5521500.0	0.001	-3.97	20.00	2RDR
(5)	2.4361000	2.5000000	5658700.0	0.001	-2.56	20.00	2RDR
Average %D: -3.304							
Decachlorobiphenyl	4.6e-002	5.e-002	88782000	0.001	-8.00	20.00	2RDR
Tetrachloro-m-xylene	5.16e-002	5.e-002	225670000	0.001	3.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0848

Lab File ID: 7EJ500 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1018000	1.0000000	4462500.0	0.001	10.18	20.00	2RDR
(2)	1.1217000	1.0000000	7405300.0	0.001	12.17	20.00	2RDR
(3)	1.0927000	1.0000000	8192700.0	0.001	9.27	20.00	2RDR
(4)	1.1080000	1.0000000	10478000	0.001	10.80	20.00	2RDR
(5)	1.1762000	1.0000000	6661800.0	0.001	17.62	20.00	2RDR
Average %D: 12.010							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1757

Lab File ID: 7EJ513 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.7731400	1.0000000	2703200.0	0.001	-22.69	20.00	2RDR	<-
(2)	1.1173000	1.0000000	6401000.0	0.001	11.73	20.00	2RDR	
(3)	1.0631000	1.0000000	11016000	0.001	6.31	20.00	2RDR	
(4)	1.0387000	1.0000000	5716500.0	0.001	3.87	20.00	2RDR	
(5)	1.0183000	1.0000000	5003400.0	0.001	1.83	20.00	2RDR	
Average %D: 0.2100								
Aroclor-1260	1.0682000	1.0000000	7505700.0	0.001	6.82	20.00	2RDR	
(2)	1.0782000	1.0000000	9173600.0	0.001	7.82	20.00	2RDR	
(3)	1.1027000	1.0000000	6567000.0	0.001	10.27	20.00	2RDR	
(4)	1.0751000	1.0000000	6142200.0	0.001	7.51	20.00	2RDR	
(5)	1.1032000	1.0000000	6297400.0	0.001	10.32	20.00	2RDR	
Average %D: 8.5500								
Decachlorobiphenyl	2.08e-002	2.e-002	99790000	0.001	4.00	20.00	2RDR	
Tetrachloro-m-xylene	2.21e-002	2.e-002	240210000	0.001	10.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0022

Lab File ID: 7EJ528 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2400300	0.2500000	3388700.0	0.001	-3.99	20.00	2RDR
(2)	0.2430800	0.2500000	5657000.0	0.001	-2.77	20.00	2RDR
(3)	0.2188000	0.2500000	8824900.0	0.001	-12.48	20.00	2RDR
(4)	0.2164200	0.2500000	4609200.0	0.001	-13.43	20.00	2RDR
(5)	0.2215400	0.2500000	4310700.0	0.001	-11.38	20.00	2RDR
Average %D: -8.800							
Aroclor-1260	0.2265900	0.2500000	6236600.0	0.001	-9.36	20.00	2RDR
(2)	0.2202600	0.2500000	7099200.0	0.001	-11.90	20.00	2RDR
(3)	0.2333100	0.2500000	5225600.0	0.001	-6.68	20.00	2RDR
(4)	0.2329800	0.2500000	5131000.0	0.001	-6.81	20.00	2RDR
(5)	0.2320200	0.2500000	4948200.0	0.001	-7.19	20.00	2RDR
Average %D: -8.400							
Decachlorobiphenyl	4.67e-003	5.e-003	88119000	0.001	-6.60	20.00	2RDR
Tetrachloro-m-xylene	4.89e-003	5.e-003	209500000	0.001	-2.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0139

Lab File ID: 7EJ531 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9534900	1.0000000	3861200.0	0.001	-4.65	20.00	2RDR
(2)	0.9734200	1.0000000	6425200.0	0.001	-2.66	20.00	2RDR
(3)	0.9263300	1.0000000	6934200.0	0.001	-7.37	20.00	2RDR
(4)	0.9403400	1.0000000	8862000.0	0.001	-5.97	20.00	2RDR
(5)	1.0039000	1.0000000	5658400.0	0.001	0.39	20.00	2RDR
Average %D: -4.050							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8264500	1.0000000	2888200.0	0.001	-17.36	20.00	2RDR
(2)	1.1661000	1.0000000	6677000.0	0.001	16.61	20.00	2RDR
(3)	1.1096000	1.0000000	11498000	0.001	10.96	20.00	2RDR
(4)	1.0682000	1.0000000	5880300.0	0.001	6.82	20.00	2RDR
(5)	1.0515000	1.0000000	5167200.0	0.001	5.15	20.00	2RDR
Average %D: 4.4400							
Aroclor-1260	1.1030000	1.0000000	7751500.0	0.001	10.30	20.00	2RDR
(2)	1.1154000	1.0000000	9495100.0	0.001	11.54	20.00	2RDR
(3)	1.1417000	1.0000000	6803700.0	0.001	14.17	20.00	2RDR
(4)	1.1010000	1.0000000	6291700.0	0.001	10.10	20.00	2RDR
(5)	1.1315000	1.0000000	6462800.0	0.001	13.15	20.00	2RDR
Average %D: 11.850							
Decachlorobiphenyl	2.08e-002	2.e-002	99996000	0.001	4.00	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	258390000	0.001	19.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0804

Lab File ID: 7EJ546 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9935100	1.0000000	4023400.0	0.001	-0.65	20.00	2RDR
(2)	0.9926500	1.0000000	6552400.0	0.001	-0.74	20.00	2RDR
(3)	0.9645800	1.0000000	7223600.0	0.001	-3.54	20.00	2RDR
(4)	0.9857500	1.0000000	9299800.0	0.001	-1.42	20.00	2RDR
(5)	1.0447000	1.0000000	5895600.0	0.001	4.47	20.00	2RDR
Average %D: -0.380							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845600	1.0000000	3436100.0	0.001	-1.54	20.00	2RDR
(2)	0.9908000	1.0000000	5684400.0	0.001	-0.92	20.00	2RDR
(3)	0.9189900	1.0000000	9519600.0	0.001	-8.10	20.00	2RDR
(4)	0.8800800	1.0000000	4836200.0	0.001	-11.99	20.00	2RDR
(5)	0.9111300	1.0000000	4475300.0	0.001	-8.89	20.00	2RDR
Average %D: -6.290							
Aroclor-1260	0.9209600	1.0000000	6466000.0	0.001	-7.90	20.00	2RDR
(2)	0.9206300	1.0000000	7814300.0	0.001	-7.94	20.00	2RDR
(3)	0.9603500	1.0000000	5703900.0	0.001	-3.96	20.00	2RDR
(4)	0.9609000	1.0000000	5482800.0	0.001	-3.91	20.00	2RDR
(5)	0.9512200	1.0000000	5410800.0	0.001	-4.88	20.00	2RDR
Average %D: -5.720							
Decachlorobiphenyl	1.89e-002	2.e-002	90640000	0.001	-5.50	20.00	2RDR
Tetrachloro-m-xylene	2.e-002	2.e-002	217370000	0.001	0.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0828

Lab File ID: 7EJ592 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0609000	1.0000000	4296500.0	0.001	6.09	20.00	2RDR
(2)	1.0928000	1.0000000	7214700.0	0.001	9.28	20.00	2RDR
(3)	1.0402000	1.0000000	7795400.0	0.001	4.02	20.00	2RDR
(4)	1.0446000	1.0000000	9867300.0	0.001	4.46	20.00	2RDR
(5)	1.1272000	1.0000000	6375900.0	0.001	12.72	20.00	2RDR
Average %D: 7.3100							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 1922

Lab File ID: 7EJ605 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8649400	1.0000000	3021700.0	0.001	-13.51	20.00	2RDR	
(2)	0.8415500	1.0000000	4836800.0	0.001	-15.84	20.00	2RDR	
(3)	0.8077100	1.0000000	8362300.0	0.001	-19.23	20.00	2RDR	
(4)	0.7762900	1.0000000	4260300.0	0.001	-22.37	20.00	2RDR	<-
(5)	0.7825400	1.0000000	3841700.0	0.001	-21.75	20.00	2RDR	<-
Average %D: -18.54								
Aroclor-1260	0.8241700	1.0000000	5782400.0	0.001	-17.58	20.00	2RDR	
(2)	0.8160100	1.0000000	6911700.0	0.001	-18.40	20.00	2RDR	
(3)	0.8622200	1.0000000	5109300.0	0.001	-13.78	20.00	2RDR	OK
(4)	0.8306200	1.0000000	4730800.0	0.001	-16.94	20.00	2RDR	
(5)	0.8414800	1.0000000	4771600.0	0.001	-15.85	20.00	2RDR	
Average %D: -16.51								
Decachlorobiphenyl	1.56e-002	2.e-002	75058000	0.001	-22.00	20.00	2RDR	<-
Tetrachloro-m-xylene	1.8e-002	2.e-002	195670000	0.001	-10.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-11

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 2039

Lab File ID: 7EJ608 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8634500	1.0000000	3496200.0	0.001	-13.66	20.00	2RDR
(2)	0.9024300	1.0000000	5955600.0	0.001	-9.76	20.00	2RDR
(3)	0.8661000	1.0000000	6478300.0	0.001	-13.39	20.00	2RDR
(4)	0.8798700	1.0000000	8278800.0	0.001	-12.01	20.00	2RDR
(5)	0.9499400	1.0000000	5344100.0	0.001	-5.01	20.00	2RDR
Average %D: -10.76							

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C26-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-1 Date(s) Analyzed: 10/18/11 10/18/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	98.6		
Aroclor-1254	2	6.52	6.45	6.59	162		
	3	6.88	6.82	6.96	180		
COLUMN 1	4	7.72	7.66	7.80	196		
	5	8.20	8.14	8.28	223	172	
	1	6.41	6.34	6.48	158		
	2	7.39	7.32	7.46	139		
	3	7.67	7.60	7.74	136		
COLUMN 2	4	8.50	8.44	8.58	160		
	5	10.22	10.16	10.30	221	163	5.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-2 Date(s) Analyzed: 10/18/11 10/18/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	542		
Aroclor-1254	2	6.52	6.45	6.59	820		
	3	6.88	6.82	6.96	1120		
COLUMN 1	4	7.72	7.66	7.80	1050		
	5	8.19	8.14	8.28	1110	928	
	1	6.41	6.34	6.48	931		
	2	7.39	7.32	7.46	1020		
	3	7.67	7.60	7.74	1120		
COLUMN 2	4	8.50	8.44	8.58	1090		
	5	10.22	10.16	10.30	1430	1120	18.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-3 Date(s) Analyzed: 10/18/11 10/18/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	98.6		
Aroclor-1254	2	6.52	6.45	6.59	115		
	3	6.88	6.82	6.96	138		
COLUMN 1	4	7.73	7.66	7.80	117		
	5	8.19	8.14	8.28	119	118	
	1	6.41	6.34	6.48	251		
	2	7.39	7.32	7.46	163		
	3	7.67	7.60	7.74	135		
COLUMN 2	4	8.50	8.44	8.58	150		
	5	10.22	10.16	10.30	138	167	34.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
E26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-10 Date(s) Analyzed: 10/19/11 10/19/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	356		
Aroclor-1254	2	6.51	6.45	6.59	546		
	3	6.88	6.82	6.96	825		
COLUMN 1	4	7.73	7.67	7.81	841		
	5	8.20	8.14	8.28	916	697	
	1	6.41	6.34	6.48	586		
	2	7.38	7.31	7.45	664		
	3	7.67	7.61	7.75	806		
COLUMN 2	4	8.50	8.44	8.58	793		
	5	10.21	10.16	10.30	1460	863	21.3
	1	7.30	7.23	7.37	407		
Aroclor-1260	2	7.73	7.66	7.80	476		
	3	8.21	8.14	8.28	~~27.6~~		
COLUMN 1	4	8.38	8.32	8.46	221	337	
	5	10.30	10.22	10.36	245	~~275~~	
	1	8.87	8.81	8.95	583		
	2	9.32	9.26	9.40	624		
	3	10.22	10.15	10.29	~~11.1~~		45.0
COLUMN 2	4	11.24	11.18	11.32	476	533	
	5	13.08	13.03	13.17	451	~~429~~	~~43.8~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

PL 11/14/11

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C28-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-11 Date(s) Analyzed: 10/16/11 10/16/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	60.5		
Aroclor-1254	2	6.52	6.45	6.59	104		
	3	6.88	6.81	6.95	112		
COLUMN 1	4	7.72	7.66	7.80	140		
	5	8.19	8.14	8.28	165	116	
	1	6.42	6.34	6.48	72.2		
	2	7.39	7.32	7.46	80.9		
	3	7.68	7.61	7.75	66.7		
COLUMN 2	4	8.51	8.44	8.58	71.9		
	5	10.22	10.16	10.30	155	89.3	26.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C28-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-12 Date(s) Analyzed: 10/16/11 10/16/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	248		
Aroclor-1254	2	6.51	6.45	6.59	353		
	3	6.88	6.81	6.95	432		
COLUMN 1	4	7.72	7.66	7.80	436		
	5	8.19	8.14	8.28	554	404	
	1	6.41	6.34	6.48	402		
	2	7.39	7.32	7.46	411		
	3	7.68	7.61	7.75	416		
COLUMN 2	4	8.51	8.44	8.58	460		
	5	10.22	10.16	10.30	634	465	14.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A C28-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-13 Date(s) Analyzed: 10/16/11 10/16/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	334		
Aroclor-1254	2	6.51	6.45	6.59	470		
	3	6.88	6.81	6.95	678		
COLUMN 1	4	7.72	7.66	7.80	580		
	5	8.19	8.14	8.28	630	538	
	1	6.42	6.34	6.48	680		
	2	7.39	7.32	7.46	663		
	3	7.68	7.61	7.75	690		
COLUMN 2	4	8.51	8.44	8.58	616		
	5	10.23	10.16	10.30	799	690	24.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A E28-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-7 Date(s) Analyzed: 10/18/11 10/18/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	73.0		
Aroclor-1254	2	6.52	6.45	6.59	112		
	3	6.88	6.82	6.96	132		
COLUMN 1	4	7.72	7.66	7.80	139		
	5	8.19	8.14	8.28	155	122	
	1	6.41	6.34	6.48	93.3		
	2	7.39	7.32	7.46	117		
	3	7.67	7.60	7.74	134		
COLUMN 2	4	8.50	8.44	8.58	121		
	5	10.22	10.16	10.30	182	129	5.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A E30-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-15 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	35.8		
Aroclor-1254	2	6.52	6.45	6.59	58.0		
	3	6.88	6.81	6.95	61.2		
COLUMN 1	4	7.76	7.66	7.80	77.8		
	5	8.19	8.14	8.28	65.7	59.7	
	1	6.41	6.34	6.48	35.8		
	2	7.39	7.32	7.46	43.3		
	3	7.67	7.61	7.75	42.2		
COLUMN 2	4	8.50	8.44	8.58	44.3		
	5	10.22	10.16	10.30	62.2	45.6	26.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P13-092811

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: SE6389-4 Date(s) Analyzed: 10/18/11 10/18/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	49.2		
Aroclor-1254	2	6.52	6.45	6.59	68.7		
	3	6.88	6.82	6.96	78.2		
COLUMN 1	4	7.77	7.66	7.80	104		
	5	8.20	8.14	8.28	72.6	74.5	
	1	6.41	6.34	6.48	82.9		
	2	7.39	7.32	7.46	75.2		
	3	7.67	7.60	7.74	66.2		
COLUMN 2	4	8.50	8.44	8.58	67.4		
	5	10.22	10.16	10.30	75.9	73.5	1.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: WG98764-LCS

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98764-2 Date(s) Analyzed: 10/16/11 10/16/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.55	4.48	4.62	161		
Aroclor-1016	2	4.78	4.71	4.85	155		
	3	5.11	5.02	5.16	147		
COLUMN 1	4	5.26	5.18	5.32	154		
	5	5.73	5.65	5.79	151	154	
	1	4.89	4.82	4.96	152		
	2	5.39	5.32	5.46	157		
	3	6.00	5.92	6.06	151		
COLUMN 2	4	6.17	6.10	6.24	145		
	5	6.78	6.71	6.85	151	151	2.0
	1	7.30	7.22	7.36	158		
Aroclor-1260	2	7.73	7.65	7.79	154		
	3	8.22	8.13	8.27	156		
COLUMN 1	4	8.39	8.31	8.45	162		
	5	10.26	10.17	10.31	183	163	
	1	8.89	8.81	8.95	148		
	2	9.34	9.26	9.40	146		
	3	10.23	10.15	10.29	138		
COLUMN 2	4	11.26	11.19	11.33	157		
	5	13.12	13.03	13.17	152	148	9.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: WG98764-LCSD

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98764-3 Date(s) Analyzed: 10/16/11 10/16/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.55	4.48	4.62	153		
Aroclor-1016	2	4.78	4.71	4.85	148		
	3	5.11	5.02	5.16	142		
COLUMN 1	4	5.26	5.18	5.32	152		
	5	5.73	5.65	5.79	148	148	
	1	4.89	4.82	4.96	139		
	2	5.39	5.32	5.46	148		
	3	6.00	5.92	6.06	146		
COLUMN 2	4	6.17	6.10	6.24	142		
	5	6.78	6.71	6.85	148	144	2.7
	1	7.30	7.22	7.36	151		
Aroclor-1260	2	7.73	7.65	7.79	148		
	3	8.22	8.13	8.27	151		
COLUMN 1	4	8.39	8.31	8.45	159		
	5	10.28	10.17	10.31	177	158	
	1	8.89	8.81	8.95	145		
	2	9.34	9.26	9.40	142		
	3	10.24	10.15	10.29	140		
COLUMN 2	4	11.26	11.19	11.33	154		
	5	13.12	13.03	13.17	147	146	7.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: WG98853-LCS

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98853-2 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.56	4.48	4.62	169		
Aroclor-1016	2	4.78	4.71	4.85	162		
	3	5.10	5.03	5.17	154		
COLUMN 1	4	5.26	5.19	5.33	156		
	5	5.73	5.66	5.80	150	158	
	1	4.89	4.82	4.96	153		
	2	5.39	5.32	5.46	154		
	3	5.99	5.92	6.06	149		
COLUMN 2	4	6.17	6.10	6.24	141		
	5	6.78	6.71	6.85	144	148	6.5
	1	7.30	7.22	7.36	148		
Aroclor-1260	2	7.73	7.65	7.79	150		
	3	8.22	8.13	8.27	156		
COLUMN 1	4	8.39	8.31	8.45	152		
	5	10.26	10.17	10.31	178	157	
	1	8.89	8.81	8.95	143		
	2	9.34	9.26	9.40	145		
	3	10.23	10.15	10.29	146		
COLUMN 2	4	11.26	11.18	11.32	154		
	5	13.12	13.03	13.17	153	148	5.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: WG98853-LCSD

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98853-3 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.56	4.48	4.62	166		
Aroclor-1016	2	4.78	4.71	4.85	164		
	3	5.10	5.03	5.17	150		
COLUMN 1	4	5.26	5.19	5.33	154		
	5	5.73	5.66	5.80	148	157	
	1	4.89	4.82	4.96	155		
	2	5.39	5.32	5.46	154		
	3	6.00	5.92	6.06	149		
COLUMN 2	4	6.17	6.10	6.24	144		
	5	6.78	6.71	6.85	144	149	5.2
	1	7.30	7.22	7.36	147		
Aroclor-1260	2	7.74	7.65	7.79	151		
	3	8.22	8.13	8.27	157		
COLUMN 1	4	8.39	8.31	8.45	152		
	5	10.27	10.17	10.31	174	156	
	1	8.89	8.81	8.95	143		
	2	9.34	9.26	9.40	144		
	3	10.23	10.15	10.29	144		
COLUMN 2	4	11.26	11.18	11.32	153		
	5	13.12	13.03	13.17	152	147	5.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-AE 28-2448MS

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98853-4 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.55	4.48	4.62	165		
Aroclor-1016	2	4.78	4.71	4.85	148		
	3	5.10	5.03	5.17	165		
COLUMN 1	4	5.25	5.19	5.33	149		
	5	5.73	5.66	5.80	185	162	
	1	4.89	4.82	4.96	230		
	2	5.39	5.32	5.46	207		
	3	5.99	5.92	6.06	220		
COLUMN 2	4	6.17	6.10	6.24	211		
	5	6.78	6.71	6.85	252	224	32.1
	1	7.30	7.22	7.36	214		
Aroclor-1260	2	7.72	7.65	7.79	236		
	3	8.19	8.13	8.27	296		
COLUMN 1	4	8.38	8.31	8.45	172		
	5	10.23	10.17	10.31	232	230	
	1	8.88	8.81	8.95	281		
	2	9.33	9.26	9.40	294		
	3	10.22	10.15	10.29	372		
COLUMN 2	4	11.26	11.18	11.32	241		
	5	13.10	13.03	13.17	295	297	25.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-AE 28-2448MSD

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-11

Lab Sample ID: WG98853-5 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.55	4.48	4.62	141		
Aroclor-1016	2	4.78	4.71	4.85	124		
	3	5.09	5.03	5.17	153		
COLUMN 1	4	5.25	5.19	5.33	141		
	5	5.73	5.66	5.80	185	149	
	1	4.89	4.82	4.96	207		
	2	5.39	5.32	5.46	187		
	3	5.99	5.92	6.06	211		
COLUMN 2	4	6.17	6.10	6.24	192		
	5	6.78	6.71	6.85	261	212	34.9
	1	7.30	7.22	7.36	230		
Aroclor-1260	2	7.72	7.65	7.79	257		
	3	8.19	8.13	8.27	342		
COLUMN 1	4	8.38	8.31	8.45	169		
	5	10.23	10.17	10.31	226	245	
	1	8.88	8.81	8.95	306		
	2	9.33	9.26	9.40	332		
	3	10.22	10.15	10.29	448		
COLUMN 2	4	11.26	11.18	11.32	261		
	5	13.10	13.03	13.17	298	329	29.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE: DECEMBER 19, 2011**

FROM: **A. COGNETTI** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: SELECT SVOC/SELECT PAH/PCB**
CTO WE61, NAVSTA NEWPORT- DERECKTOR SHIPYARD
SAMPLE DELIVERY GROUP (SDG) – DSY-18

SAMPLES: 19/Sediment/Select SVOC/SELECT PAH/PCB

DSY-SD-DUP26-100511	DSY-SD-L24-0012	DSY-SD-L24-1224
DSY-SD-L24-2448	DSY-SD-L26-1224	DSY-SD-L26-2448
DSY-SD-N24-0012	DSY-SD-N24-1224	DSY-SD-N24-2448
DSY-SD-N26-0012	DSY-SD-N26-1224	DSY-SD-N26-2448
DSY-SD-N28-0012	DSY-SD-N28-1224	DSY-SD-N28-2448
DSY-SD-N30-0012	DSY-SD-N30-1224	DSY-SD-N30-2448
DSY-SD-Q25-0012		

1/Aqueous/Select SVOC/Select PAH/PCB

DSY-SD-RB09-100411

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-18 consists of nineteen (19) environmental sediment samples and a rinsate blank. All samples were analyzed for select semivolatile organic compounds (SVOC), select polycyclic aromatic hydrocarbon (PAH) and polychlorinated biphenyls (PCBs). The select SVOCs are benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene and pyrene. The select PAH is benzo(a)pyrene. There is one (1) field duplicate pair contained within this SDG: DSY-SD-N24-2448 and DSY-SD-DUP26-100511.

The samples were collected on October 4 and 5, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270D for SVOCs, 8270D SIM for PAH, and 8082A for PCB analytical and reporting protocol. A Tier 2 data validation was performed on the analyses.

The data contained in this SDG were validated with regard to the following parameters:

*	• Data Completeness
	• Holding Times
*	• GC/MS Tuning
	• Initial and Continuing Calibration
*	• Laboratory Method and/or Field Quality Control Blanks
	• Surrogate Spike Recoveries
	• Laboratory Control Spike / Laboratory Control Spike Duplicate Recoveries
	• Internal Standards Performance
	• Matrix Spike/Matrix Spike Duplicate Results
*	• Detection Limits
	• Field Duplicate Precision

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

HOLDING TIMES

The extraction SVOC holding time was exceeded for sample DSY-SD-N28-0012 which was re-extracted (re-extracted 46 days after collection) due to surrogate recovery noncompliances. The positive and nondetected results were qualified as estimated (J) and (UR), respectively.

The extraction PAH holding time was exceeded for sample DSY-SD-N24-0012. The positive benzo(a)pyrene result was qualified as estimated (J) in sample DSY-SD-N24-0012.

CALIBRATIONS

The continuing calibration percent difference (%D) for benzo(g,h,i)perylene was greater than the 20% quality control limit on November 15, 2011 @7:54 on instrument GCMS-U. The nondetected benzo(g,h,i)perylene results were qualified as estimated (UJ) in the affected samples DSY-SD-N28-2448, DSY-SD-N30-0012, DSY-SD-N30-1224, DSY-SD-N30-2448 and DSY-SD-Q25-0012.

The continuing calibration %D for Aroclor 1254 was greater than the 20% quality control limit on November 23, 2011 @ 1:43 on both columns. The positive Aroclor 1254 result in the re-analyzed sample DSY-SD-N28-2448 was qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The percent recoveries (%Rs) of all three base/neutral surrogates were greater than the upper quality control limit in the SVOC fraction for sample DSY-SD-N26-1224. The positive results in sample DSY-SD-N26-122 were qualified as estimated (J).
The %Rs of SVOC surrogates 2-fluorobiphenyl and terphenyl-d14 were less than the lower quality control limit in sample DSY-SD-N28-0012. The %R of nitrobenzene-d5 was less than 10%. The sample was re-extracted and re-analyzed. The re-extracted sample had %Rs of all surrogate within quality control limits.

The re-extracted sample DSY-SD-N28-0012 was used for validation and reporting purposes.

Several samples in the PAH fraction had base/neutral surrogate %Rs outside quality control limits. The following table outlines the surrogate recovery noncompliances and the resulting validation action.

Sample	Surrogate Recoveries	Qualification
DSY-SD-L26-1224	+ (1)	No action
DSY-SD-DUP26-100511	+ (1)	No action
DSY-SD-N26-0012	+ (1)	No action
DSY-SD-N26-1224	+ (1)	No action
DSY-SD-N26-2448	+ (1)	No action
DSY-SD-N28-0012	X (2), sample re-extracted	J
DSY-SD-N28-0012 RE	X (3 <10%)	No action; not used for validation and reporting purposes.
DSY-SD-N28-1224	+ (2)	J
DSY-SD-N30-0012	+ (2)	J
DSY-SD-N30-1224	+ (2)	J
DSY-SD-L26-2448	+ (1)	No action
DSY-SD-Q25-0012	+ (2)	J
DSY-SD-L24-2448	+ (1)	No action
DSY-SD-N24-0012	+ (1)	No action
DSY-SD-N24-1224	+ (1)	No action
DSY-SD-RB09-100411	Recoveries quantified in full scan analysis	No action

Surrogate Recoveries: + Recovery greater than upper limit
X Recovery less than lower limit
Number of noncompliant surrogate recoveries noted in ( ).

NA No action

Several samples in the PCB fraction had surrogate %Rs outside quality control limits. The following table outlines the surrogate recovery noncompliances and the resulting validation action.

Sample	Column 1	Column 2	Qualification
DSY-SD-RB09-100411	TCX <LL	Ok	No action
DSY-SD-L24-0012	TCX, DCB <LL	DCB <LL	J, UJ
DSY-SD-L24-1224	TCX, DCB <LL	Ok	No action, Positive results from column 2
DSY-SD-L24-2448	TCX, DCB <LL	Ok	No action
DSY-SD-N24-0012	TCX, DCB <LL	DCB <LL	J,UJ
DSY-SD-N24-1224	TCX, DCB <LL	Ok	No action, Positive results from column 2
DSY-SD-N24-2448	DCB <LL	Ok	No action
DSY-SD-DUP26-100511	TCX, DCB <LL	DCB <LL	J, UJ
DSY-SD-N26-0012	TCX, DCB <LL	TCX, DCB <LL	J, UJ
DSY-SD-N26-1224	TCX, DCB <LL	Ok	No action, Positive results from column 2
DSY-SD-N26-2448	DCB <LL	Ok	No action

Sample	Column 1	Column 2	Qualification
DSY-SD-N28-0012	DCB <LL	Ok	No action
DSY-SD-N28-1224	DCB <LL	Ok	No action
DSY-SD-N28-2448	TCX, DCB <10%	TCX, DCB <10%	Sample was re-extracted and re-analyzed.
DSY-SD-N28-2448RE	TCX, DCB <LL	Ok	No action, Positive results from column 2
DSY-SD-N30-0012	DCB <LL	DCB <LL	J, UJ
DSY-SD-N30-1224	TCX, DCB <LL	TCX, DCB <LL	J, UJ
DSY-SD-Q25-0012	TCX, DCB <LL	TCX <LL	J, UJ

LL – Lower Limit

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

The SVOC laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) %Rs of benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were less than the lower quality control limit in batch WG98966 affecting the rinsate blank. The nondetected benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were qualified as estimated (UJ) in sample DSY-SD-RB09-104511. In addition, the LCSD %Rs of benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were less than the quality control limit. The LCS %Rs and relative percent differences (RPDs) for benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were within quality control limits. No action was taken.

The SVOC LCS %Rs of benzo(g,h,i)perylene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were less than the lower quality control limit in batch WG101417. The relative percent differences (RPDs) for benzo(g,h,i)perylene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were greater than the quality control limit. No action was taken because sample results were qualified for a more severe noncompliance.

The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB09-104511. The benzo(a)pyrene result was qualified as estimated (J).

INTERNAL STANDARDS

Several samples in the SVOC fraction had internal standard areas outside of quality control limits. A copy of the continuing calibration raw data is included in Appendix D. The following table outlines the internal standard noncompliances and the resulting validation action to target analytes quantified using these internal standards.

Sample	Internal Standard Noncompliance	Qualification
DSY-SD-RB09-100411	Perylene-d12 >UL	No action
DSY-SD-L24-2448	Chrysene-d12, perylene-d12 < LL	J, UJ
DSY-SD-L24-1224	Chrysene-d12, perylene-d12 < LL	J, UJ
DSY-SD-N24-1224	Chrysene-d12, perylene-d12 < LL	J, UJ
DSY-SD-N26-1224	Chrysene-d12, perylene-d12 < LL	J, UJ
DSY-SD-N28-2448	Perylene-d12 <LL	UJ
DSY-SD-N30-0012	Perylene-d12 <LL	J, UJ
DSY-SD-N30-1224	Perylene-d12 <LL	J, UJ
DSY-SD-Q25-0012	Perylene-d12 <LL	J, UJ

Several samples in the PAH fraction had internal standard areas of perylene-d12 less than the lower quality control limit. A copy of the continuing calibration raw data is included in Appendix D. The samples were DSY-SD-L24-0012, DSY-SD-L24-1224, DSY-SD-N26-0012, DSY-SD-N26-1224, DSY-SD-N28-1224, DSY-SD-N28-2448, DSY-SD-N30-0012, DSY-SD-N30-1224, DSY-SD-N30-2448 and DSY-SD-Q25-0012. The positive and nondetected benzo(a)pyrene results in the affected samples were qualified as estimated (J) and (UJ), respectively. Samples DSY-SD-L24-1224, DSY-SD-N26-1224 and DSY-SD-Q25-0012 also had internal standard areas of chrysene-d12 less than the lower quality control limit. No further validation action was taken.

MATRIX SPIKE/ MATRIX SPIKE DUPLICATE RESULTS

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of pyrene were greater than the upper quality control limit in sample DSY-SD-N28-2448. The positive pyrene result in sample DSY-SD-N28-2448 was qualified as estimated (J).

FIELD DUPLICATE PRECISION

Field duplicate imprecision was noted in the field duplicate pair DSY-SD-N24-2448 and DSY-SD-DUP26-100511 for Aroclor 1254 and Aroclor 1260. The positive and nondetected Arcolor 1254 and Aroclor 1260 results were qualified as estimated (J) and (UJ), respectively.

ADDITIONAL COMMENTS

The RPD for indeno(1,2,3-cd)pyrene was greater than the upper quality control limit in batches WG99340 and WG99420. The LSC/LSCD %Rs of indeno(1,2,3-cd)pyrene were within quality control limits. No action was taken.

The continuing calibration %Ds for Aroclor 1016 and Aroclor 1260 were greater than the 20% quality control limit on column 1 on November 2, 2011 @ 17:23. No action was taken on the nondetected Aroclor 1016 and Aroclor 1260 results in the affected samples. Positive Aroclor 1260 results in the affected samples were taken from column 2.

The continuing calibration %D for Aroclor 1260 was greater than the 20% quality control limit on column 1 on November 2, 2011 @ 23:53. No action was taken on the nondetected Aroclor 1260 results in the affected samples. Positive Aroclor 1260 results in the affected samples were taken from column 2.

The continuing calibration %D for Aroclor 1260 was greater than the 20% quality control limit on column 1 on November 22, 2011 @ 17:55 and November 23, 2011 @ 00;@%. No action was taken on the positive Aroclor 1260 result in the affected sample DSY-SD-2448 RE because the result was taken from column 2. In addition, the continuing calibration %D for Aroclor 1016 was greater than the 20% quality control limit on column 2 on November 23, 2011 @ 00:25. No action was taken on the nondetected Aroclor 1016 result in the affected sample DSY-SD-2448 RE.

The PCB LCS associated with batch WG98971 had a %R of Aroclor 1016 less than the lower quality control limit. The %R of Aroclor 1016 in the LCSD and the RPD were within quality control limits. No action was taken on the Aroclor 1016 results in the affected rinse blank.

According to the SAP for Derecktor Shipyard, August 2011, Total High Molecular Weight PAHs and Total PCBs were to be reported by the laboratory. The laboratory did not report them.

According to Worksheet #15 of the SAP, the laboratory first will analyze the samples in full scan mode. If the value associated with any J-flagged sample result or U-flagged (non-detected) sample result for any HMW PAH is above the project LOQ goal, the laboratory will reanalyze the sample for that PAH in SIM mode. The laboratory only analyzed benzo(a)pyrene for all samples in the SIM mode. Several samples had PAH results in the full scan mode that were greater than the project limit of quantitation (LOQ).

Positive results reported at concentrations greater than the method detection limit (MDL) but less than the Reporting Limit (RL) were qualified as estimated (J).

Nondetected results were reported at the limit of detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: Extraction holding times were exceeded for sample DSY-SD-N28-0012 in the SVOC fraction and sample DSY-SD-N24-0012 in the PAH fraction. Continuing calibration noncompliances in the SVOC and PCB fractions resulted in the qualification of data. The percent recoveries of surrogates were outside quality control limits in the SVOC, PAH and PCB fractions resulting in the qualification of data. The percent recoveries of several analytes in the LCS and LCSD were outside quality control limits in the SVOC fraction. The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB09-100411. Internal standard noncompliances were noted in the SVOC and PAH fractions.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted in the field duplicate pair DSY-SD-N24-2448 and DSY-SD-DUP26-100511 for Aroclor 1254 and Aroclor 1260. The MS/MSD %Rs of pyrene were greater than the upper quality control limit in sample DSY-SD-N28-2448.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96), and the Department of Defense (DoD) document entitled, "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

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Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB09-100411		
SDG: DSY-18	LAB_ID	SE6617-6		
FRACTION: OS	SAMP_DATE	10/4/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.1	UJ	E
BENZO(B)FLUORANTHENE		7.1	U	
BENZO(G,H,I)PERYLENE		7.1	U	
BENZO(K)FLUORANTHENE		7.1	UJ	E
CHRYSENE		7.1	UJ	E
DIBENZO(A,H)ANTHRACENE		7.1	U	
FLUORANTHENE		7.1	U	
INDENO(1,2,3-CD)PYRENE		7.1	UJ	E
PYRENE		7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-L24-0012			DSY-SD-L24-1224			DSY-SD-L24-2448		
SDG: DSY-18	LAB_ID	SE6617-10			SE6617-3			SE6617-4			SE6617-5		
FRACTION: OS	SAMP_DATE	10/5/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.9			41.5			47.8			70.5		
	DUP_OF	DSY-SD-N24-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		570	U		480	J	NP	460	J	NP
BENZO(B)FLUORANTHENE		300	U		570	U		410	J	NP	380	J	NP
BENZO(G,H,I)PERYLENE		300	U		570	U		500	UJ	N	350	UJ	N
BENZO(K)FLUORANTHENE		300	U		570	U		430	J	NP	340	J	NP
CHRYSENE		300	U		570	U		620	J	NP	540	J	N
DIBENZO(A,H)ANTHRACENE		300	U		570	U		500	UJ	N	350	UJ	N
FLUORANTHENE		300	U		570	U		760			820		
INDENO(1,2,3-CD)PYRENE		300	U		570	U		500	UJ	N	350	UJ	N
PYRENE		300	U		570	U		2600	J	N	2000	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-L26-1224			DSY-SD-L26-2448			DSY-SD-N24-0012			DSY-SD-N24-1224		
SDG: DSY-18	LAB_ID	SE6617-1			SE6617-2			SE6617-7			SE6617-8		
FRACTION: OS	SAMP_DATE	10/4/2011			10/4/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.0			75.4			41.5			44.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		320	U		230	J	P	500	J	NP
BENZO(B)FLUORANTHENE		300	U		320	U		590	U		700	J	NP
BENZO(G,H,I)PERYLENE		300	U		320	U		590	U		550	UJ	N
BENZO(K)FLUORANTHENE		300	U		320	U		400	J	P	580	J	NP
CHRYSENE		300	U		320	U		380	J	P	700	J	NP
DIBENZO(A,H)ANTHRACENE		300	U		320	U		590	U		550	UJ	N
FLUORANTHENE		300	U		320	U		300	J	P	400	J	P
INDENO(1,2,3-CD)PYRENE		300	U		320	U		590	U		550	UJ	N
PYRENE		300	U		160	J	P	710	J	P	3500	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-N24-2448			DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2448		
SDG: DSY-18	LAB_ID	SE6617-9			SE6617-11			SE6617-12			SE6617-13		
FRACTION: OS	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.3			38.0			56.0			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		310	U		400	J	P	390	J	NPR	340	U	
BENZO(B)FLUORANTHENE		310	U		570	J	P	430	UJ	N	340	U	
BENZO(G,H,I)PERYLENE		310	U		640	U		430	UJ	N	340	U	
BENZO(K)FLUORANTHENE		310	U		560	J	P	430	UJ	N	340	U	
CHRYSENE		310	U		530	J	P	460	J	NPR	340	U	
DIBENZO(A,H)ANTHRACENE		310	U		640	U		430	UJ	N	340	U	
FLUORANTHENE		310	U		450	J	P	750	J	R	340	U	
INDENO(1,2,3-CD)PYRENE		310	U		640	U		430	UJ	N	340	U	
PYRENE		190	J	P	1400			2000	J	NR	340	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-N28-0012RE			DSY-SD-N28-1224			DSY-SD-N28-2448			DSY-SD-N30-0012		
SDG: DSY-18	LAB_ID	SE6617-14RE			SE6617-15			SE6617-16			SE6617-17		
FRACTION: OS	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.3			41.5			62.9			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		620	UR	H	760	J	P	380	U		290	J	P
BENZO(B)FLUORANTHENE		620	UR	H	760	J	P	380	UJ	N	470	J	NP
BENZO(G,H,I)PERYLENE		620	UR	H	580	U		380	UJ	CN	560	UJ	CN
BENZO(K)FLUORANTHENE		620	UR	H	780			380	UJ	N	300	J	NP
CHRYSENE		620	UR	H	900			380	U		400	J	P
DIBENZO(A,H)ANTHRACENE		620	UR	H	580	U		380	UJ	N	560	UJ	N
FLUORANTHENE		620	UR	H	680	J	P	380	U		350	J	P
INDENO(1,2,3-CD)PYRENE		620	UR	H	580	U		380	UJ	N	560	UJ	N
PYRENE		680	J	HP	3200			420	J	DP	950		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012		
SDG: DSY-18	LAB_ID	SE6617-18			SE6617-19			SE6617-20		
FRACTION: OS	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.7			71.8			45.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		600	J	P	200	J	P	320	J	P
BENZO(B)FLUORANTHENE		670	J	NP	340	U		530	UJ	N
BENZO(G,H,I)PERYLENE		580	UJ	CN	340	UJ	C	530	UJ	CN
BENZO(K)FLUORANTHENE		620	J	NP	180	J	P	530	UJ	N
CHRYSENE		680	J	P	190	J	P	440	J	P
DIBENZO(A,H)ANTHRACENE		580	UJ	N	340	U		530	UJ	N
FLUORANTHENE		560	J	P	330	J	P	320	J	P
INDENO(1,2,3-CD)PYRENE		580	UJ	N	340	U		530	UJ	N
PYRENE		2200			780			1600		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-L24-0012			DSY-SD-L24-1224			DSY-SD-L24-2448		
SDG: DSY-18	LAB_ID	SE6617-10			SE6617-3			SE6617-4			SE6617-5		
FRACTION: PAH	SAMP_DATE	10/5/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.9			41.5			47.8			70.5		
	DUP_OF	DSY-SD-N24-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		21	J	P	580	J	N	20	UJ	N	41		

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-1224			DSY-SD-L26-2448			DSY-SD-N24-0012			DSY-SD-N24-1224		
	LAB_ID	SE6617-1			SE6617-2			SE6617-7			SE6617-8DL		
	SAMP_DATE	10/4/2011			10/4/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.0			75.4			41.5			44.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		13	J	P	57			290	J	H	500		

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-N24-2448			DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2448		
	LAB_ID	SE6617-9			SE6617-11			SE6617-12			SE6617-13		
	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.3			38.0			56.0			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		38			450	J	N	300	J	N	20	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-N28-0012			DSY-SD-N28-1224			DSY-SD-N28-2448			DSY-SD-N30-0012		
SDG: DSY-18	LAB_ID	SE6617-14			SE6617-15			SE6617-16			SE6617-17		
FRACTION: PAH	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.3			41.5			62.9			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		68	J	R	710	J	NR	64	J	N	310	J	NR

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012		
	LAB_ID	SE6617-18			SE6617-19			SE6617-20		
	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.7			71.8			45.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		580	J	NR	140	J	N	300	J	NR

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PAH MEDIA: WATER	NSAMPLE	DSY-SD-RB09-100411		
	LAB_ID	SE6617-6		
	SAMP_DATE	10/4/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.14	J	EP

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB09-100411		
SDG: DSY-18	LAB_ID	SE6617-6		
FRACTION: PCB	SAMP_DATE	10/4/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.25	U	
AROCLOR-1221		0.25	U	
AROCLOR-1232		0.25	U	
AROCLOR-1242		0.25	U	
AROCLOR-1248		0.25	U	
AROCLOR-1254		0.25	U	
AROCLOR-1260		0.25	U	

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-L24-0012			DSY-SD-L24-1224			DSY-SD-L24-2448		
	LAB_ID	SE6617-10			SE6617-3			SE6617-4			SE6617-5		
	SAMP_DATE	10/5/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.9			41.5			47.8			70.5		
	DUP_OF	DSY-SD-N24-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	R	18	UJ	R	16	U		11	U	
AROCLOR-1221		10	UJ	R	18	UJ	R	16	U		11	U	
AROCLOR-1232		12	UJ	R	21	UJ	R	19	U		13	U	
AROCLOR-1242		10	UJ	R	18	UJ	R	16	U		11	U	
AROCLOR-1248		10	UJ	R	18	UJ	R	16	U		11	U	
AROCLOR-1254		53	J	GR	1200	J	R	2000			11	U	
AROCLOR-1260		10	UJ	GR	510	J	R	760			11	U	

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-1224			DSY-SD-L26-2448			DSY-SD-N24-0012			DSY-SD-N24-1224		
	LAB_ID	SE6617-1			SE6617-2			SE6617-7			SE6617-8		
	SAMP_DATE	10/4/2011			10/4/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.0			75.4			41.5			44.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		9.5	U		19	UJ	R	19	U	
AROCLOR-1221		10	U		9.5	U		19	UJ	R	19	U	
AROCLOR-1232		12	U		11	U		23	UJ	R	22	U	
AROCLOR-1242		10	U		9.5	U		19	UJ	R	19	U	
AROCLOR-1248		10	U		9.5	U		19	UJ	R	19	U	
AROCLOR-1254		10	U		46			100	J	R	710		
AROCLOR-1260		10	U		9.5	U		92	J	R	280		

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-N24-2448			DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2448		
	LAB_ID	SE6617-9			SE6617-11			SE6617-12			SE6617-13		
	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.3			38.0			56.0			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.2	U		21	UJ	R	14	U		12	U	
AROCLOR-1221		9.2	U		21	UJ	R	14	U		12	U	
AROCLOR-1232		11	U		25	UJ	R	17	U		14	U	
AROCLOR-1242		9.2	U		21	UJ	R	14	U		12	U	
AROCLOR-1248		9.2	U		21	UJ	R	14	U		12	U	
AROCLOR-1254		120	J	G	110	J	R	580			12	U	
AROCLOR-1260		88	J	G	21	UJ	R	250			12	U	

PROJ_NO: 02747 SDG: DSY-18 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-N28-0012			DSY-SD-N28-1224			DSY-SD-N28-2448RE			DSY-SD-N30-0012		
	LAB_ID	SE6617-14			SE6617-15			SE6617-16RE			SE6617-17		
	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.3			41.5			62.9			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		20	U		20	U		13	U		20	UJ	R
AROCLOR-1221		20	U		20	U		13	U		20	UJ	R
AROCLOR-1232		23	U		23	U		16	U		24	UJ	R
AROCLOR-1242		20	U		20	U		13	U		20	UJ	R
AROCLOR-1248		20	U		20	U		13	U		20	UJ	R
AROCLOR-1254		100			740			520	J	C	74	J	R
AROCLOR-1260		20	U		220			250			20	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012		
SDG: DSY-18	LAB_ID	SE6617-18			SE6617-19			SE6617-20		
FRACTION: PCB	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.7			71.8			45.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		20	UJ	R	12	U		18	UJ	R
AROCLOR-1221		20	UJ	R	12	U		18	UJ	R
AROCLOR-1232		24	UJ	R	14	U		21	UJ	R
AROCLOR-1242		20	UJ	R	12	U		18	UJ	R
AROCLOR-1248		20	UJ	R	12	U		18	UJ	R
AROCLOR-1254		86	J	R	76			260	J	R
AROCLOR-1260		20	UJ	R	12	U		150	J	R

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-10
Client ID: DSY-SD-DUP26-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 81.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		68.1	%					
2-Fluorobiphenyl	*	83.3	%					
Terphenyl-d14		90.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-3
Client ID: DSY-SD-L24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 41.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	570	ug/Kgdrywt	1	330	760	200	570
Benzo(b)fluoranthene	U	570	ug/Kgdrywt	1	330	760	310	570
Benzo(g,h,i)perylene	U	570	ug/Kgdrywt	1	330	760	240	570
Benzo(k)fluoranthene	U	570	ug/Kgdrywt	1	330	760	190	570
Chrysene	U	570	ug/Kgdrywt	1	330	760	220	570
Dibenzo(a,h)anthracene	U	570	ug/Kgdrywt	1	330	760	300	570
Fluoranthene	U	570	ug/Kgdrywt	1	330	760	240	570
Indeno(1,2,3-cd)pyrene	U	570	ug/Kgdrywt	1	330	760	280	570
Pyrene	U	570	ug/Kgdrywt	1	330	760	230	570
Nitrobenzene-d5		66.5	%					
2-Fluorobiphenyl		74.3	%					
Terphenyl-d14		63.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-4
Client ID: DSY-SD-L24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 48.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	480	ug/Kgdrywt	1	330	670	170	500
Benzo(b)fluoranthene	J	410	ug/Kgdrywt	1	330	670	270	500
Benzo(g,h,i)perylene	U	500	ug/Kgdrywt	1	330	670	210	500
Benzo(k)fluoranthene	J	430	ug/Kgdrywt	1	330	670	170	500
Chrysene	J	620	ug/Kgdrywt	1	330	670	190	500
Dibenzo(a,h)anthracene	U	500	ug/Kgdrywt	1	330	670	260	500
Fluoranthene		760	ug/Kgdrywt	1	330	670	220	500
Indeno(1,2,3-cd)pyrene	U	500	ug/Kgdrywt	1	330	670	250	500
Pyrene		2600	ug/Kgdrywt	1	330	670	200	500
Nitrobenzene-d5		47.9	%					
2-Fluorobiphenyl		69.2	%					
Terphenyl-d14		133.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-5
Client ID: DSY-SD-L24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 70.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	460	ug/Kgdrywt	1	330	460	120	350
Benzo(b)fluoranthene	J	380	ug/Kgdrywt	1	330	460	190	350
Benzo(g,h,i)perylene	U	350	ug/Kgdrywt	1	330	460	150	350
Benzo(k)fluoranthene	J	340	ug/Kgdrywt	1	330	460	120	350
Chrysene		540	ug/Kgdrywt	1	330	460	130	350
Dibenzo(a,h)anthracene	U	350	ug/Kgdrywt	1	330	460	180	350
Fluoranthene		820	ug/Kgdrywt	1	330	460	150	350
Indeno(1,2,3-cd)pyrene	U	350	ug/Kgdrywt	1	330	460	170	350
Pyrene		2000	ug/Kgdrywt	1	330	460	140	350
Nitrobenzene-d5		59.1	%					
2-Fluorobiphenyl		68.5	%					
Terphenyl-d14		94.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-1
Client ID: DSY-SD-L26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 80.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		62.7	%					
2-Fluorobiphenyl		70.6	%					
Terphenyl-d14		71.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-2
Client ID: DSY-SD-L26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 75.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	430	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	430	180	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	430	140	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	430	110	320
Chrysene	U	320	ug/Kgdrywt	1	330	430	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	430	170	320
Fluoranthene	U	320	ug/Kgdrywt	1	330	430	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	430	160	320
Pyrene	J	160	ug/Kgdrywt	1	330	430	130	320
Nitrobenzene-d5		69.4	%					
2-Fluorobiphenyl		78.1	%					
Terphenyl-d14		68.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-7
Client ID: DSY-SD-N24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 41.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	230	ug/Kgdrywt	1	330	780	200	590
Benzo(b)fluoranthene	U	590	ug/Kgdrywt	1	330	780	320	590
Benzo(g,h,i)perylene	U	590	ug/Kgdrywt	1	330	780	250	590
Benzo(k)fluoranthene	J	400	ug/Kgdrywt	1	330	780	200	590
Chrysene	J	380	ug/Kgdrywt	1	330	780	230	590
Dibenzo(a,h)anthracene	U	590	ug/Kgdrywt	1	330	780	300	590
Fluoranthene	J	300	ug/Kgdrywt	1	330	780	250	590
Indeno(1,2,3-cd)pyrene	U	590	ug/Kgdrywt	1	330	780	290	590
Pyrene	J	710	ug/Kgdrywt	1	330	780	240	590
Nitrobenzene-d5		61.0	%					
2-Fluorobiphenyl		72.0	%					
Terphenyl-d14		66.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-8
Client ID: DSY-SD-N24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 44.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	500	ug/Kgdrywt	1	330	730	190	550
Benzo(b)fluoranthene	J	700	ug/Kgdrywt	1	330	730	300	550
Benzo(g,h,i)perylene	U	550	ug/Kgdrywt	1	330	730	230	550
Benzo(k)fluoranthene	J	580	ug/Kgdrywt	1	330	730	180	550
Chrysene	J	700	ug/Kgdrywt	1	330	730	210	550
Dibenzo(a,h)anthracene	U	550	ug/Kgdrywt	1	330	730	280	550
Fluoranthene	J	400	ug/Kgdrywt	1	330	730	240	550
Indeno(1,2,3-cd)pyrene	U	550	ug/Kgdrywt	1	330	730	270	550
Pyrene		3500	ug/Kgdrywt	1	330	730	220	550
Nitrobenzene-d5		76.8	%					
2-Fluorobiphenyl	*	94.9	%					
Terphenyl-d14		133.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-9
Client ID: DSY-SD-N24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 77.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	420	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	420	150	310
Pyrene	J	190	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		28.8	%					
2-Fluorobiphenyl		48.8	%					
Terphenyl-d14		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-11
Client ID: DSY-SD-N26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	400	ug/Kgdrywt	1	330	850	220	640
Benzo(b)fluoranthene	J	570	ug/Kgdrywt	1	330	850	340	640
Benzo(g,h,i)perylene	U	640	ug/Kgdrywt	1	330	850	270	640
Benzo(k)fluoranthene	J	560	ug/Kgdrywt	1	330	850	210	640
Chrysene	J	530	ug/Kgdrywt	1	330	850	240	640
Dibenzo(a,h)anthracene	U	640	ug/Kgdrywt	1	330	850	330	640
Fluoranthene	J	450	ug/Kgdrywt	1	330	850	270	640
Indeno(1,2,3-cd)pyrene	U	640	ug/Kgdrywt	1	330	850	310	640
Pyrene		1400	ug/Kgdrywt	1	330	850	260	640
Nitrobenzene-d5		72.8	%					
2-Fluorobiphenyl		79.5	%					
Terphenyl-d14		111.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-12
Client ID: DSY-SD-N26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 56.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	390	ug/Kgdrywt	1	330	570	150	430
Benzo(b)fluoranthene	U	430	ug/Kgdrywt	1	330	570	230	430
Benzo(g,h,i)perylene	U	430	ug/Kgdrywt	1	330	570	180	430
Benzo(k)fluoranthene	U	430	ug/Kgdrywt	1	330	570	140	430
Chrysene	J	460	ug/Kgdrywt	1	330	570	160	430
Dibenzo(a,h)anthracene	U	430	ug/Kgdrywt	1	330	570	220	430
Fluoranthene		750	ug/Kgdrywt	1	330	570	180	430
Indeno(1,2,3-cd)pyrene	U	430	ug/Kgdrywt	1	330	570	210	430
Pyrene		2000	ug/Kgdrywt	1	330	570	180	430
Nitrobenzene-d5	*	93.4	%					
2-Fluorobiphenyl	*	97.6	%					
Terphenyl-d14	*	148.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-13
Client ID: DSY-SD-N26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 72.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	340	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	U	340	ug/Kgdrywt	1	330	450	110	340
Chrysene	U	340	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	180	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	450	150	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	170	340
Pyrene	U	340	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		72.6	%					
2-Fluorobiphenyl		80.0	%					
Terphenyl-d14		80.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-14
Client ID: DSY-SD-N28-0012
Project: NAVSTA Newport CTO WEt
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	620	ug/Kgdrywt	1	330	830	220	620
Benzo(b)fluoranthene	U	620	ug/Kgdrywt	1	330	830	340	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	830	260	620
Benzo(k)fluoranthene	U	620	ug/Kgdrywt	1	330	830	210	620
Chrysene	U	620	ug/Kgdrywt	1	330	830	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	830	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	830	270	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	830	310	620
Pyrene	U	620	ug/Kgdrywt	1	330	830	250	620
Nitrobenzene-d5	*	2.70	%					
2-Fluorobiphenyl	*	14.0	%					
Terphenyl-d14	*	22.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-14RE
Client ID: DSY-SD-N28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101417

Analysis Date: 23-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	620	ug/Kgdrywt	1	330	820	210	620
Benzo(b)fluoranthene	U	620	ug/Kgdrywt	1	330	820	330	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	820	260	620
Benzo(k)fluoranthene	U	620	ug/Kgdrywt	1	330	820	210	620
Chrysene	U	620	ug/Kgdrywt	1	330	820	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	820	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	820	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	820	300	620
Pyrene	J	680	ug/Kgdrywt	1	330	820	250	620
Nitrobenzene-d5		39.6	%					
2-Fluorobiphenyl		50.7	%					
Terphenyl-d14		79.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-15
Client ID: DSY-SD-N28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 41.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	760	ug/Kgdrywt	1	330	770	200	580
Benzo(b)fluoranthene	J	760	ug/Kgdrywt	1	330	770	310	580
Benzo(g,h,i)perylene	U	580	ug/Kgdrywt	1	330	770	240	580
Benzo(k)fluoranthene		780	ug/Kgdrywt	1	330	770	190	580
Chrysene		900	ug/Kgdrywt	1	330	770	220	580
Dibenzo(a,h)anthracene	U	580	ug/Kgdrywt	1	330	770	300	580
Fluoranthene	J	680	ug/Kgdrywt	1	330	770	250	580
Indeno(1,2,3-cd)pyrene	U	580	ug/Kgdrywt	1	330	770	280	580
Pyrene		3200	ug/Kgdrywt	1	330	770	230	580
Nitrobenzene-d5		79.4	%					
2-Fluorobiphenyl	*	84.8	%					
Terphenyl-d14		135.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-16
Client ID: DSY-SD-N28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 63.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	380	ug/Kgdrywt	1	330	510	130	380
Benzo(b)fluoranthene	U	380	ug/Kgdrywt	1	330	510	210	380
Benzo(g,h,i)perylene	U	380	ug/Kgdrywt	1	330	510	160	380
Benzo(k)fluoranthene	U	380	ug/Kgdrywt	1	330	510	130	380
Chrysene	U	380	ug/Kgdrywt	1	330	510	150	380
Dibenzo(a,h)anthracene	U	380	ug/Kgdrywt	1	330	510	200	380
Fluoranthene	U	380	ug/Kgdrywt	1	330	510	160	380
Indeno(1,2,3-cd)pyrene	U	380	ug/Kgdrywt	1	330	510	190	380
Pyrene	J	420	ug/Kgdrywt	1	330	510	160	380
Nitrobenzene-d5		24.7	%					
2-Fluorobiphenyl		29.5	%					
Terphenyl-d14		30.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-17
Client ID: DSY-SD-N30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	290	ug/Kgdrywt	1	330	740	190	560
Benzo(b)fluoranthene	J	470	ug/Kgdrywt	1	330	740	300	560
Benzo(g,h,i)perylene	U	560	ug/Kgdrywt	1	330	740	230	560
Benzo(k)fluoranthene	J	300	ug/Kgdrywt	1	330	740	190	560
Chrysene	J	400	ug/Kgdrywt	1	330	740	210	560
Dibenzo(a,h)anthracene	U	560	ug/Kgdrywt	1	330	740	290	560
Fluoranthene	J	350	ug/Kgdrywt	1	330	740	240	560
Indeno(1,2,3-cd)pyrene	U	560	ug/Kgdrywt	1	330	740	270	560
Pyrene		950	ug/Kgdrywt	1	330	740	230	560
Nitrobenzene-d5		69.3	%					
2-Fluorobiphenyl		75.5	%					
Terphenyl-d14		129.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-18
Client ID: DSY-SD-N30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	600	ug/Kgdrywt	1	330	780	200	580
Benzo(b)fluoranthene	J	670	ug/Kgdrywt	1	330	780	320	580
Benzo(g,h,i)perylene	U	580	ug/Kgdrywt	1	330	780	240	580
Benzo(k)fluoranthene	J	620	ug/Kgdrywt	1	330	780	200	580
Chrysene	J	680	ug/Kgdrywt	1	330	780	220	580
Dibenzo(a,h)anthracene	U	580	ug/Kgdrywt	1	330	780	300	580
Fluoranthene	J	560	ug/Kgdrywt	1	330	780	250	580
Indeno(1,2,3-cd)pyrene	U	580	ug/Kgdrywt	1	330	780	290	580
Pyrene		2200	ug/Kgdrywt	1	330	780	240	580
Nitrobenzene-d5		79.9	%					
2-Fluorobiphenyl		80.9	%					
Terphenyl-d14		130.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-19
Client ID: DSY-SD-N30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 72.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	200	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	J	180	ug/Kgdrywt	1	330	450	110	340
Chrysene	J	190	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	170	340
Fluoranthene	J	330	ug/Kgdrywt	1	330	450	140	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	160	340
Pyrene		780	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		50.7	%					
2-Fluorobiphenyl		67.6	%					
Terphenyl-d14		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-20
Client ID: DSY-SD-Q25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 45.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	320	ug/Kgdrywt	1	330	700	180	530
Benzo(b)fluoranthene	U	530	ug/Kgdrywt	1	330	700	280	530
Benzo(g,h,i)perylene	U	530	ug/Kgdrywt	1	330	700	220	530
Benzo(k)fluoranthene	U	530	ug/Kgdrywt	1	330	700	180	530
Chrysene	J	440	ug/Kgdrywt	1	330	700	200	530
Dibenzo(a,h)anthracene	U	530	ug/Kgdrywt	1	330	700	270	530
Fluoranthene	J	320	ug/Kgdrywt	1	330	700	230	530
Indeno(1,2,3-cd)pyrene	U	530	ug/Kgdrywt	1	330	700	260	530
Pyrene		1600	ug/Kgdrywt	1	330	700	220	530
Nitrobenzene-d5		75.5	%					
2-Fluorobiphenyl		81.1	%					
Terphenyl-d14	*	151.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-6
Client ID: DSY-SD-RB09-100411
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.5	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.5	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.5	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.5	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.5	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.5	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.5	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.5	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.5	1.8	7.1
Nitrobenzene-d5		58.7						
2-Fluorobiphenyl		68.3						
Terphenyl-d14		62.6						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-10
Client ID: DSY-SD-DUP26-100511
Project: NAVSTA Newport CTO WE
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 81.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	21.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		79.9	%					
Fluorene-D10	*	97.8	%					
Pyrene-D10		107.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-3
Client ID: DSY-SD-L24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 41.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		580	ug/Kgdrywt	1	20	46.	7.6	23.
2-Methylnaphthalene-D10		81.8	%					
Fluorene-D10		55.7	%					
Pyrene-D10		78.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-4
Client ID: DSY-SD-L24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 48.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	20.	ug/Kgdrywt	1	20	40.	6.7	20.
2-Methylnaphthalene-D10		66.4	%					
Fluorene-D10		50.4	%					
Pyrene-D10		115.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-5
Client ID: DSY-SD-L24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 70.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		41.	ug/Kgdrywt	1	20	28.	4.6	14.
2-Methylnaphthalene-D10		76.1	%					
Fluorene-D10	*	79.0	%					
Pyrene-D10		121.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-1
Client ID: DSY-SD-L26-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 80.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	13.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		73.9	%					
Fluorene-D10	*	114.	%					
Pyrene-D10		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-2
Client ID: DSY-SD-L26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 75.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		57.	ug/Kgdrywt	1	20	26.	4.3	13.
2-Methylnaphthalene-D10		75.2	%					
Fluorene-D10	*	122.	%					
Pyrene-D10		99.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-7
Client ID: DSY-SD-N24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date:
Extracted By: WAS
Extraction Method: SW846 M8270D
Lab Prep Batch: WG99422

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 41.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		290	ug/Kgdrywt	1	20	48.	7.8	24.
2-Methylnaphthalene-D10		69.2	%					
Fluorene-D10	*	79.9	%					
Pyrene-D10		97.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-8DL
Client ID: DSY-SD-N24-1224
Project: NAVSTA Newport CTO WEt
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 44.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		500	ug/Kgdrywt	2	20	89.	15.	44.
2-Methylnaphthalene-D10		74.3	%					
Fluorene-D10	*	78.4	%					
Pyrene-D10		89.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-9
Client ID: DSY-SD-N24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 77.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		38.	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10		41.2	%					
Fluorene-D10		56.3	%					
Pyrene-D10		116.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-11
Client ID: DSY-SD-N26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		450	ug/Kgdrywt	1	20	52.	8.5	26.
2-Methylnaphthalene-D10		75.0	%					
Fluorene-D10	*	79.1	%					
Pyrene-D10		126.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-12
Client ID: DSY-SD-N26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 56.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		300	ug/Kgdrywt	1	20	35.	5.7	17.
2-Methylnaphthalene-D10		63.2	%					
Fluorene-D10		68.8	%					
Pyrene-D10	*	158.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-13
Client ID: DSY-SD-N26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 72.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	20.	ug/Kgdrywt	1	20	28.	4.5	14.
2-Methylnaphthalene-D10		80.5	%					
Fluorene-D10	*	87.4	%					
Pyrene-D10		126.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-14
Client ID: DSY-SD-N28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		68.	ug/Kgdrywt	1	20	50.	8.3	25.
2-Methylnaphthalene-D10	*	11.4	%					
Fluorene-D10		18.4	%					
Pyrene-D10	*	29.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-14RE
Client ID: DSY-SD-N28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101651

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-15
Client ID: DSY-SD-N28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 41.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		710	ug/Kgdrywt	2	20	93.	15.	46.
2-Methylnaphthalene-D10		89.0	%					
Fluorene-D10	*	85.8	%					
Pyrene-D10	*	150.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-16
Client ID: DSY-SD-N28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 63.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		64.	ug/Kgdrywt	1	20	31.	5.1	16.
2-Methylnaphthalene-D10		26.5	%					
Fluorene-D10		27.2	%					
Pyrene-D10		44.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-17
Client ID: DSY-SD-N30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 42.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	45.	7.4	22.
2-Methylnaphthalene-D10		70.7	%					
Fluorene-D10	*	84.7	%					
Pyrene-D10	*	136.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-18
Client ID: DSY-SD-N30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 42.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		580	ug/Kgdrywt	1	20	47.	7.8	24.
2-Methylnaphthalene-D10		81.5	%					
Fluorene-D10	*	91.1	%					
Pyrene-D10	*	137.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-19
Client ID: DSY-SD-N30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 72.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	27.	4.5	14.
2-Methylnaphthalene-D10		62.9	%					
Fluorene-D10		70.7	%					
Pyrene-D10		114.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-20
Client ID: DSY-SD-Q25-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 45.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		300	ug/Kgdrywt	1	20	43.	7.0	21.
2-Methylnaphthalene-D10		80.3	%					
Fluorene-D10	*	84.5	%					
Pyrene-D10	*	151.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-6
Client ID: DSY-SD-RB09-100411
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	0.14	ug/L	1	.2	0.19	0.063	0.095
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-10
Client ID: DSY-SD-DUP26-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 81.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254		53.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		67.6	%					
Decachlorobiphenyl	*	58.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-3
Client ID: DSY-SD-L24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK068.D

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 41.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1221	U	18.	ug/Kgdrywt	1	17	36.	17.	18.
Aroclor-1232	U	21.	ug/Kgdrywt	1	17	36.	20.	21.
Aroclor-1242	U	18.	ug/Kgdrywt	1	17	36.	12.	18.
Aroclor-1248	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1254		1200	ug/Kgdrywt	1	17	36.	10.	18.
Aroclor-1260		510	ug/Kgdrywt	1	17	36.	13.	18.
Tetrachloro-M-Xylene	*	55.1	%					
Decachlorobiphenyl		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-4
Client ID: DSY-SD-L24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK069.D

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 48.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	33.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	33.	18.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	33.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1254		2000	ug/Kgdrywt	1	17	33.	9.0	16.
Aroclor-1260		760	ug/Kgdrywt	1	17	33.	12.	16.
Tetrachloro-M-Xylene	*	55.6	%					
Decachlorobiphenyl		75.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-5
Client ID: DSY-SD-L24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 70.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	8.0	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.2	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Tetrachloro-M-Xylene		66.4	%					
Decachlorobiphenyl		61.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-1
Client ID: DSY-SD-L26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 01-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 80.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.8	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	12.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.2	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.6	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.8	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Tetrachloro-M-Xylene		93.4	%					
Decachlorobiphenyl		78.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-2
Client ID: DSY-SD-L26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 01-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 75.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.5	ug/Kgdrywt	1	17	19.	6.7	9.5
Aroclor-1221	U	9.5	ug/Kgdrywt	1	17	19.	8.8	9.5
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.5	ug/Kgdrywt	1	17	19.	6.5	9.5
Aroclor-1248	U	9.5	ug/Kgdrywt	1	17	19.	6.8	9.5
Aroclor-1254		46.	ug/Kgdrywt	1	17	19.	5.3	9.5
Aroclor-1260	U	9.5	ug/Kgdrywt	1	17	19.	6.7	9.5
Tetrachloro-M-Xylene		86.6	%					
Decachlorobiphenyl		77.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-7
Client ID: DSY-SD-N24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK071.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 41.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	39.	14.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	39.	18.	19.
Aroclor-1232	U	23.	ug/Kgdrywt	1	17	39.	21.	23.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	39.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	39.	14.	19.
Aroclor-1254		100	ug/Kgdrywt	1	17	39.	11.	19.
Aroclor-1260		92.	ug/Kgdrywt	1	17	39.	14.	19.
Tetrachloro-M-Xylene		57.0	%					
Decachlorobiphenyl	*	43.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-8
Client ID: DSY-SD-N24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK072.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 44.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	37.	13.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	37.	17.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	37.	20.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	37.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	37.	13.	19.
Aroclor-1254		710	ug/Kgdrywt	1	17	37.	10.	19.
Aroclor-1260		280	ug/Kgdrywt	1	17	37.	13.	19.
Tetrachloro-M-Xylene		63.1	%					
Decachlorobiphenyl		62.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-9
Client ID: DSY-SD-N24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK073.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 77.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254		120	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260		88.	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		78.4	%					
Decachlorobiphenyl		66.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-11
Client ID: DSY-SD-N26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 02-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254		110	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene	*	47.1	%					
Decachlorobiphenyl	*	36.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-12
Client ID: DSY-SD-N26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK081.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 56.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	29.	14.	14.
Aroclor-1232	U	17.	ug/Kgdrywt	1	17	29.	16.	17.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Aroclor-1254		580	ug/Kgdrywt	1	17	29.	8.1	14.
Aroclor-1260		250	ug/Kgdrywt	1	17	29.	10.	14.
Tetrachloro-M-Xylene		71.5	%					
Decachlorobiphenyl		69.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-13
Client ID: DSY-SD-N26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 72.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	23.	8.1	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	23.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	23.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	23.	7.9	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	23.	8.3	12.
Aroclor-1254	U	12.	ug/Kgdrywt	1	17	23.	6.4	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	23.	8.1	12.
Tetrachloro-M-Xylene		75.2	%					
Decachlorobiphenyl		68.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-14
Client ID: DSY-SD-N28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	40.	18.	20.
Aroclor-1232	U	23.	ug/Kgdrywt	1	17	40.	22.	23.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	40.	13.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1254		100	ug/Kgdrywt	1	17	40.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Tetrachloro-M-Xylene		81.4	%					
Decachlorobiphenyl		67.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-15
Client ID: DSY-SD-N28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK084.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 41.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	40.	18.	20.
Aroclor-1232	U	23.	ug/Kgdrywt	1	17	40.	22.	23.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1254	J	740	ug/Kgdrywt	1	17	40.	11.	20.
Aroclor-1260		220	ug/Kgdrywt	1	17	40.	14.	20.
Tetrachloro-M-Xylene		73.6	%					
Decachlorobiphenyl		68.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-16
Client ID: DSY-SD-N28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK085.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 63.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	27.	9.5	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	27.	12.	13.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	27.	9.2	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	27.	9.6	13.
Aroclor-1254		57.	ug/Kgdrywt	1	17	27.	7.4	13.
Aroclor-1260		32.	ug/Kgdrywt	1	17	27.	9.5	13.
Tetrachloro-M-Xylene	*	1.88	%					
Decachlorobiphenyl	*	1.92	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-16RE
Client ID: DSY-SD-N28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK781.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 63.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	27.	9.5	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	27.	12.	13.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	27.	9.2	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	27.	9.6	13.
Aroclor-1254		520	ug/Kgdrywt	1	17	27.	7.4	13.
Aroclor-1260		250	ug/Kgdrywt	1	17	27.	9.5	13.
Tetrachloro-M-Xylene		60.5	%					
Decachlorobiphenyl		68.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-17
Client ID: DSY-SD-N30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	40.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	40.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1254		74.	ug/Kgdrywt	1	17	40.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Tetrachloro-M-Xylene		68.8	%					
Decachlorobiphenyl	*	56.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-18
Client ID: DSY-SD-N30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	40.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	40.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Aroclor-1254		86.	ug/Kgdrywt	1	17	40.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	40.	14.	20.
Tetrachloro-M-Xylene	*	55.3	%					
Decachlorobiphenyl	*	52.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-19
Client ID: DSY-SD-N30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 72.
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	23.	8.3	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	23.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	23.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	23.	8.0	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	23.	8.4	12.
Aroclor-1254		76.	ug/Kgdrywt	1	17	23.	6.5	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	23.	8.3	12.
Tetrachloro-M-Xylene		79.5	%					
Decachlorobiphenyl		73.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-20
Client ID: DSY-SD-Q25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-18
Lab File ID: 7EK089.D

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 45.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1221	U	18.	ug/Kgdrywt	1	17	36.	17.	18.
Aroclor-1232	U	21.	ug/Kgdrywt	1	17	36.	20.	21.
Aroclor-1242	U	18.	ug/Kgdrywt	1	17	36.	12.	18.
Aroclor-1248	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1254		260	ug/Kgdrywt	1	17	36.	9.9	18.
Aroclor-1260		150	ug/Kgdrywt	1	17	36.	13.	18.
Tetrachloro-M-Xylene	*	53.6	%					
Decachlorobiphenyl		69.7	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6617-6
Client ID: DSY-SD-RB09-100411
Project: NAVSTA Newport CTO WE(
SDG: DSY-18

Sample Date: 04-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 18-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.25	ug/L	1	.5	0.50	0.15	0.25
Aroclor-1221	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1232	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Aroclor-1242	U	0.25	ug/L	1	.5	0.50	0.18	0.25
Aroclor-1248	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1254	U	0.25	ug/L	1	.5	0.50	0.082	0.25
Aroclor-1260	U	0.25	ug/L	1	.5	0.50	0.17	0.25
Tetrachloro-M-Xylene	*	61.8	%					
Decachlorobiphenyl		61.7	%					

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APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. 112602747
SDG No. DSV-18
No. of Samples/Matrix 19-Sediment

SOW/Method No. 8270D, 8082A
Sampling Date(s) 10/4/11, 10/5/11
Shipping Date(s) _____
Date Rec'd by lab 10/7/11

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. DSV-SD-NZ4-2448 and DSV-SD-DUP26-100511

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier (II) or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name (Ann Cognetti) Company Name TetraTech Phone Number (412)881-7389

Date Validation Started 12-16-11 Date Validation Completed 12-19-11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	✓
VOA/SV-III	INITIAL CALIBRATION	✓
VOA/SV-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	
SV-VI	SV SURROGATE SPIKE RECOVERIES	✓
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	✓
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	✓
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	✓
Pest/PCB-III	INITIAL CALIBRATION	✓
Pest/PCB-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	✓
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above.

Signature: Ann Cognetti Name: Ann Cognetti

Date: December 19, 2011

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		NA			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: 12/19/11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		See data validation report			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: SVOC, PAH, PCB

Missing Information	Date Lab Contacted	Date Received

Validator: Ann Cognetti Date: 12/19/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler: Michael Horton Company: Tetra Tech Contacted: Yes (No) Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action
									See data validation report							

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Ann Cognetti Date: 12-19-11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments: See data validation report							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Ann Cognetta

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments: See data validation report

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet

VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

See data validation report

Validator: Ann Cognetta

Date: 12-19-11

12/96

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:____

Sampler: Michael Horton Company: Tetra Tech

Contacted: Yes (No) Date:____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
		See data validation report				

Validator: Ann Cognetta

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: See Data Validation Report

Validator: Ann Cognetta

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		NA			

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
	See data validation report					

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
		See data validation report						

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
	See data validation report										

Validator: John Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: See data validation report

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Ann Cognetti Date: December 19, 2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? **Y N**
- Date of Preparation/Analysis: _____ Within 1 year? **Y N**
- Instrument I.D.: _____ Same as samples? **Y N**
- Column I.D.: _____ Same as samples? **Y N**

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does it contain all target compounds at the method-required QLs? **Y N**
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? **Y N**

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Ann Cognetta Date: 12-19-11

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y N**
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Ann Cognetti

Date: 12-19-11

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Ann Cognetti

Date: 12-19-11

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Ann Cognetti Date: 12-19-11

APPENDIX D

SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-18
SE6617

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6617 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6617-1	DSY-SD-L26-1224
SE6617-2	DSY-SD-L26-2448
SE6617-3	DSY-SD-L24-0012
SE6617-4	DSY-SD-L24-1224
SE6617-5	DSY-SD-L24-2448
SE6617-6	DSY-SD-RB09-100411
SE6617-7	DSY-SD-N24-0012
SE6617-8	DSY-SD-N24-1224
SE6617-9	DSY-SD-N24-2448
SE6617-10	DSY-SD-DUP26-100511
SE6617-11	DSY-SD-N26-0012
SE6617-12	DSY-SD-N26-1224
SE6617-13	DSY-SD-N26-2448
SE6617-14	DSY-SD-N28-0012
SE6617-15	DSY-SD-N28-1224
SE6617-16	DSY-SD-N28-2448
SE6617-17	DSY-SD-N30-0012
SE6617-18	DSY-SD-N30-1224
SE6617-19	DSY-SD-N30-2448
SE6617-20	DSY-SD-Q25-0012

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-18 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6617-16 was used for the matrix spike (MS) and matrix spike duplicate (MSD) samples, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Samples SE6617-3, 4, 8DL, 9, 12, 15, 16, and 20 were manually integrated for the surrogate fluorene-d10, pyrene-d10, one or more of the internal standards, and/or the analyte benzo(a)pyrene . The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6617-6 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSDs and MS/MSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSDs and MS/MSD.

Sample SE6617-14 had low recoveries for the surrogates pyrene-d10 and 2-methylnaphthalene-d10, which were outside the laboratory established acceptance limits. The sample was reextracted 33 days out of hold time and the reextracted soil sample SE6617-14RE and method blank WG101651-1 were spiked only with the 8270-SCAN surrogates. The results from both extractions are reported.

Samples SE6617-1, 2, 5, 7, 8DL, 10, 11, 13, 15, 17, 18, 20, and the method blank WG101334-1 had high recoveries for the surrogates pyrene-d10 and/or fluorene-d10, which were outside the laboratory established acceptance limits.

The laboratory method blank WG98968-1 had high responses for the internal standards chrysene-d12 and perylene-d12 that resulted in %D's, which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

Samples SE6617-1 and 2 had high responses for the internal standard phenanthrene-d10 that resulted in %D's, which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

Samples SE6617-3, 4, 11, 12, 15, 16, 17, 18, 19, and 20 had low responses for the internal standards chrysene-d12 and/or perylene-d12 that resulted in %D's, which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The CV (file G3923) had a high response for the surrogate fluorene-d10 which resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The LCS and LCSD WG98968-2 and 3 had low recoveries for the compound benzo(a)pyrene, which were outside of the laboratory established acceptance limits. Also, the LCS had a low recovery for one surrogate.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Samples SE6617-8, 11, 15, and 17 were manually integrated for the analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6617-8, 10, 12, 15, 20 and the MS/MSD WG99340-4 and 5 had high recoveries for one or more surrogates, which were outside the laboratory established acceptance limits.

Sample SE6617-14 had recoveries for all three surrogates that were low and outside the laboratory established acceptance limits. The sample was re-extracted 33 days outside of hold time and had acceptable recoveries. The results from both extractions are reported.

Samples SE6617-4, 5, 6, 8, 12, 16, 17, 18, 20, the MS/MSD WG99252-4 and 5, the method blanks WG99420-1, WG99340-1, WG98966-1, and the LCSD WG98966-3 had high and/or low responses for the internal standards naphthalene-d8, acenaphthene-d10, phenanthrene-d10, chyrsene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The initial calibration analyzed on the U instrument on 11/12/11 had a %RSD value for the target analyte indeno(1,2,3-cd)pyrene that exceeded the method acceptance limit of 15%. The analyte failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990, respectively. This compound was calibrated using the average model.

The CV (file U8602) had a low response for the target analyte benzo(g,h,i)perylene which resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCS WG98966-2 and the LCSD WG98966-3 had four and seven spiked target analytes, respectively, with recoveries that were low and outside of the laboratory established acceptance limits. The LCSD also had a low recovery for the surrogate nitrobenzene-d5, which was outside the laboratory established acceptance limits. DoD QSM Version 4.1 Section G.7 lists the acceptance limits of the SW-846 Method 8270 target analytes. If the DoD QSM acceptance limits are applied, the LCS had acceptable recoveries for all of the target analytes. Therefore, no further action was taken.

The LCS WG101417-2 had recoveries for three target analytes that were low and outside the laboratory nominal acceptance limits. Since the LCSD was acceptable and the associated sample is the reextraction of sample SE6617-14RE, no further action was taken.

8082 Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

Samples SE6617-2, 3, 4, 7, 8, 9, 10, 16, 17 and 20 were manually integrated for TCX, DCB, Aroclor 1260 and/or Aroclor 1254. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

All of the soil samples, except samples SE6617-1, 2, 19, had low recoveries for TCX on one or both channels and DCB on one or both channels, which were outside the laboratory established acceptance limits. Every sample had surrogate recovery deviations and the associated QC were acceptable. Since this indicates a matrix effect, the soil samples were not reextracted.

Sample SE6617-16 had low or no recoveries for TCX and DCB on both channels, which were outside the laboratory established acceptance limits. The sample was reextracted 18 days out of hold time. The reextracted sample had low recoveries for TCX and DCB on channel A. The results for both extractions are reported.

Sample SE6617-6, the method blank and LCS/LCSD WG98971-1, 2, and 3 had low recoveries for TCX on one or both channels, which were outside the laboratory established acceptance limits. Since the recoveries for DCB were acceptable, no further action was taken.

Sample SE6617-15 had a %RPD for Aroclor 1254 that was outside of the method acceptance limits of 40%. This analyte is flagged with a "J" qualifier on the report of analysis (ROA).

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

The opening calibration verification (CV) (file 7EK062) had low responses for DCB, Aroclor 1016, and Aroclor 1260 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV (file 7EK077) had low responses for DCB on both channels as well as a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The associated samples may be biased low for the surrogate DCB.

The opening/closing CV (file 7EK777) had low responses for Aroclor 1260 and DCB and a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV's (files 7EZ091 and 7EK795) had high responses for TCX and/or Aroclor 1254 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for TCX and Aroclor 1254 were acceptable on channel B , the associated samples were not reanalyzed.

The closing CV (file 7EK792) had a low response for Aroclor 1260 and a high response for DCB on channel A and low responses for DCB and Aroclor 1016 on channel B, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B and the response for Aroclor 1016 was acceptable on channel A, the associated samples were not reanalyzed. The associated samples may be biased accordingly for the surrogate DCB.

The opening CV (file 7EK761 had low responses for DCB and Aroclor 1260 on channel A which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG98971-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

One of the five peaks that was used to quantitate Aroclor 1260 on the A or B channel had an elevated concentration due to interference from Aroclor 1254 for the following samples: SE6617-3, 4, 8 and 12. The peak was deleted electronically. However, due to software limitations, the average calculated concentration was still based on five peaks. Therefore, the average concentration was manually calculated based on four peaks. The mean concentration was manually calculated based on the correct amount of peaks and was manually corrected on the Form 10. The %RPD was also manually corrected on the Form 10.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-18 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6617-6 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6617-(1-5 and 7-20) were digested for ICP analysis on 10/23/11 (QC Batch BJ23ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6617-16 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-18 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6617-16 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6617-16 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6617-16 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6617-16 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-18 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.02.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Director SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton / MJH	

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT/NUMBER

REMARKS: SEldelle / SEld61

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-L28-1224	10/4/11 / 1338	SED	2	X	X		X						
	DSY-SD-L28-2448	/ 1341		2	X	X		X						
	DSY-SD-DUP25-100411	/ —		2	X	X		X						
DSY-1	DSY-SD-L26-0012	/ 1430		3	X	X	X	X						
	DSY-SD-L26-1224	/ 1433		2	X	X		X						
	DSY-SD-L26-2448	/ 1436		2	X	X		X						
	DSY-SD-L24-0012	/ 1450		3	X	X	X	X						
	DSY-SD-L24-1224	/ 1453		2	X	X		X						
	DSY-SD-L24-2448	/ 1456	↓	2	X	X		X						
	DSY-SD-RB09-100411	↓ / 1610	AQ	5	X	X		X						
	DSY-SD-N24-0012	10/5/11 / 0830	SED	3	X	X	X	X						
	DSY-SD-N24-1224	/ 0833		2	X	X	SB[11]	X						
	DSY-SD-N24-2448	/ 0836		2	X	X		X						
	DSY-SD-DUP26-100511	/ —		2	X	X		X						
	DSY-SD-N26-0012	/ 0850		3	X	X	X	X						
	DSY-SD-N26-1224	↓ / 0853	↓	2	X	X		X						

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MJH	10/7/11 1300	Andrew Hamlin			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000018

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No. CTO WE61 Derecktor SY	Katahdin Quote #

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE1616 17 / SE1616 18

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TAC	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-N26-2448	10/5/11/0856	SED	2	X	X		X						
	DSY-SD-N28-0012	/0945		3	X	X	X	X						
	DSY-SD-N28-1224	/0948		2	X	X		X						
	DSY-SD-N28-2448	/0951		4Z	X	X		X						
	DSY-SD-N30-0012	/1000		3	X	X	X	X						
	DSY-SD-N30-1224	/1003		2	X	X		X						
	DSY-SD-N30-2448	/1006		2	X	X		X						
	DSY-SD-Q25-0012	/1015		3	X	X	X	X						
	DSY-SD-Q25-1224	/1018		2	X	X		X						
	DSY-SD-Q25-2448	/1021		2	X	X		X						
	DSY-SD-W26-0012	/1035		3	X	X	X	X						
	DSY-SD-W26-1224	/1038		2	X	X		X						
	DSY-SD-W26-2448	/1041		2	X	X		X						
	DSY-SD-DUP27-100511	/		2	X	X		X						
	DSY-SD-RB10-100511	/1215	AQ	5	X	X		X						
	DSY-SD-T25-0012	/1055	SED	3	X	X	X	X						

COMMENTS

DSY-SD-N28-2448 is designated as LabQC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					0000019

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Project: Derecktor	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE16616 to SE16620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 1 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.3
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Derecktor	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE6616 to SE6620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 2 of 67 WEW 10/7/11	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000012

Project: Directon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66116 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 3 of 7	Date/Time Rec.: 10/7/11 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9	✓			✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Deracklon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL16 to SEL620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 4 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000014

Project: Directron	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE1011610166620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 5 of 17 10/7/11 WCW	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓	~~✓~~ QP 10.10.11			Temp (°C): 8.2
Samples received at <6 °C w/o freezing?		X			Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?	✓			QP 10.10.11	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container? Received in methanol? Methanol covering soil?				✓ ✓ ✓ ✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9 Cyanide – pH >12	✓			 ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

2 Bags of ice - partially melted
No Temp Blank
called client - temp. was greater than 6°C - Samples in cooler collected on same day as delivery to lab. Cooling process started.
QP 10.10.11

0000015

Project: Directon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 6 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

000016

Client: Tetra Tech NUS			
Project: Directorate	KIMS Entry By: DM	Delivered By: KAS	
KAS Work Order#: SE6616 to SE6620	KIMS Review By:	Received By: DM	
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 10/7/11/1730	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 4.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample ID: DSY-SD-03-2448 labeled time 2 jars 1006, 2 jars 1106
Time on COC = 1106

0000617

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	SUR	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-23	OS	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7DL	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-24	OS	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48
DSY-18	SIM	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-18	SIM	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-20	SIM	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	SIM	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	SIM	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-18	PCB	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	PCB	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-23	PCB	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11
DSY-24	PCB	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-19	PCB	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21

NAVSTA NEWPORT
SEDIMENT DATA
DSY-18

FRACTION	CHEMICAL	DSY-SD-N24-2448	UNITS	DSY-SD-DUP26-100511	RPD	D
PCB	AROCLOR-1254	120	UG/KG	53 J	77.46	67.00
PCB	AROCLOR-1260	88	UG/KG	ND	200.00	88.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-18

FRACTION	CHEMICAL	DSY-SD-N24-2448	UNITS	DSY-SD-DUP26-100611	RPD	D
OS	PYRENE	190 J	UG/KG	ND	200.00	190.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-18

FRACTION	CHEMICAL	DSY-SD-N24-2448	UNITS	DSY-SD-DUP26-100511	RPD	D
PAH	BENZO(A)PYRENE	38	UG/KG	21 J	57.63	17.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: UD722 DFTPP Injection Date: 11/12/11

Instrument ID: GCMS-U DFTPP Injection Time: 0905

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	25.1
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.3 (81.6)2
442	40.0 - 100.0% of mass 198	87.6
443	17.0 - 23.0% of mass 442	16.3 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1112	U8539	11/12/11	0925
02		SSTD010U1112	U8540	11/12/11	1009
03		SSTD025U1112	U8541	11/12/11	1053
04		SSTD075U1112	U8542	11/12/11	1138
05		SSTD100U1112	U8543	11/12/11	1222
06		SSTD125U1112	U8544	11/12/11	1307
07		8270 IND CHECK	U8545	11/12/11	1352
08					
09					
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17					
18					
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20					

Katahdin Analytical Services A0000042

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-U Calibration Date(s): 11/12/11 11/12/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0925 1307

LAB FILE ID: RF10: U8540 RF25: U8541 RF50: U8539B
RF75: U8542 RF100: U8543 RF125: U8544

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	0.846	0.849	0.922	0.854	0.740	0.710	AVRG	0.82028951	9.685	30.000
Pyrene	1.574	1.420	1.691	1.452	1.565	1.802	AVRG	1.58392524	9.095	15.000
Benzo(a)anthracene	0.985	0.989	1.100	1.002	0.938	0.959	AVRG	0.99552486	5.647	15.000
Chrysene	1.020	0.944	1.034	0.914	0.855	0.872	AVRG	0.93981116	7.942	15.000
Benzo(b)fluoranthene	0.866	0.962	1.283	1.148	1.005	1.023	AVRG	1.04784339	14.033	15.000
Benzo(k)fluoranthene	1.618	1.555	1.615	1.468	1.252	1.374	AVRG	1.48031152	9.842	15.000
Benzo(a)pyrene	0.869	1.021	1.149	1.052	0.942	1.017	AVRG	1.00839806	9.484	30.000
Indeno(1,2,3-cd)pyrene	0.650	0.758	0.736	0.751	0.563	0.621	AVRG	0.67995155	11.823	15.000
Dibenzo(a,h)anthracene	0.487	0.624	0.621	0.648	0.715	0.669	AVRG	0.62736016	12.246	15.000
Benzo(g,h,i)perylene	0.533	0.604	0.600	0.639	0.690	0.667	AVRG	0.62216363	9.007	15.000
Nitrobenzene-D5	0.339	0.342	0.376	0.336	0.311	0.322	AVRG	0.33760836	6.558	15.000
2-Fluorobiphenyl	1.308	1.225	1.284	1.200	1.058	1.040	AVRG	1.18601809	9.535	15.000
Terphenyl-D14	0.912	0.843	1.010	0.896	0.954	1.072	AVRG	0.94783144	8.752	15.000

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: UD723 DFTPP Injection Date: 11/13/11

Instrument ID: GCMS-U DFTPP Injection Time: 0933

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.8
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.6
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.2 (79.9)2
442	40.0 - 100.0% of mass 198	90.1
443	17.0 - 23.0% of mass 442	17.7 (19.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1113	U8562	11/13/11	0953
02	WG99420-BLANK	WG99420-1	U8563	11/13/11	1038
03	WG99340-BLANK	WG99340-1	U8564	11/13/11	1122
04	WG98966-BLANK	WG98966-1	U8565	11/13/11	1206
05	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
06	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
07	DSY-SD-RB09-100411	SE6617-6	U8568	11/13/11	1418
08	DSY-SD-L26-1224	SE6617-1	U8569	11/13/11	1502
09	DSY-SD-L26-2448	SE6617-2	U8570	11/13/11	1546
10	DSY-SD-L24-0012	SE6617-3	U8571	11/13/11	1629
11	DSY-SD-L24-2448	SE6617-5	U8572	11/13/11	1713
12	DSY-SD-L24-1224	SE6617-4	U8577	11/13/11	2052
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19					
20					

Katahdin Analytical Services A0000043

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-U Calibration Date: 11/13/11 Time: 0953

Lab File ID: U8562 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8628800	0.01	5.23	20.01	AVRG
Pyrene	1.5840000	1.3117000	0.01	-17.19	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9761800	0.01	-1.99	20.00	AVRG
Chrysene	0.9400000	0.8921600	0.01	-5.09	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0438000	0.01	-0.40	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.3342000	0.01	-9.85	20.00	AVRG
Benzo(a)pyrene	1.0080000	1.0022000	0.01	-0.58	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.5385100	0.01	-13.56	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.6103800	0.01	-2.65	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.5912900	0.01	-4.94	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3131300	0.01	-7.36	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1084000	0.01	-6.54	20.00	AVRG
Terphenyl-D14	0.9480000	0.8075400	0.01	-14.82	20.00	AVRG

FORM 4 CLIENT SAMPLE ID

SEMIVOLATILE METHOD BLANK SUMMARY

WG99420-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: U8563 Lab Sample ID: WG99420-1

Instrument ID: GCMS-U Date Extracted: 10/19/11

Matrix: (soil/water) SOIL Date Analyzed: 11/13/11

Level: (low/med) LOW Time Analyzed: 1038

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG99420-LCS	WG99420-2	U8585	11/14/11	1015
02	WG99420-LCSD	WG99420-3	U8586	11/14/11	1100
03	DSY-SD-N24-0012	SE6617-7	U8588	11/14/11	1229
04					
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COMMENTS:

Katahdin Analytical Services A0000041

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99420-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 18-nov-2011 14:44

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		55.5	%					
2-Fluorobiphenyl		60.2	%					
Terphenyl-d14		65.6	%					

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http://www.katahdinlab.com

FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99340-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: U8564 Lab Sample ID: WG99340-1

Instrument ID: GCMS-U Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/13/11

Level:(low/med) LOW Time Analyzed: 1122

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-L26-1224	SE6617-1	U8569	11/13/11	1502
02	DSY-SD-L26-2448	SE6617-2	U8570	11/13/11	1546
03	DSY-SD-L24-0012	SE6617-3	U8571	11/13/11	1629
04	DSY-SD-L24-2448	SE6617-5	U8572	11/13/11	1713
05	DSY-SD-L24-1224	SE6617-4	U8577	11/13/11	2052
06	WG99340-LCS	WG99340-2	U8583	11/14/11	0845
07	WG99340-LCSD	WG99340-3	U8584	11/14/11	0930
08	DSY-SD-N24-1224	SE6617-8	U8589	11/14/11	1314
09	DSY-SD-N24-2448	SE6617-9	U8590	11/14/11	1359
10	DSY-SD-DUP26-100511	SE6617-10	U8591	11/14/11	1444
11	DSY-SD-N26-0012	SE6617-11	U8592	11/14/11	1528
12	DSY-SD-N26-1224	SE6617-12	U8593	11/14/11	1613
13	DSY-SD-N26-2448	SE6617-13	U8594	11/14/11	1657
14	DSY-SD-N28-0012	SE6617-14	U8595	11/14/11	1742
15	DSY-SD-N28-1224	SE6617-15	U8596	11/14/11	1827
16	DSY-SD-N28-2448	SE6617-16	U8607	11/15/11	1140
17	DSY-SD-N28-2448MS	WG99340-4	U8608	11/15/11	1225
18	DSY-SD-N28-2448MSD	WG99340-5	U8609	11/15/11	1310
19	DSY-SD-N30-0012	SE6617-17	U8610	11/15/11	1355
20	DSY-SD-N30-1224	SE6617-18	U8611	11/15/11	1440
21	DSY-SD-N30-2448	SE6617-19	U8612	11/15/11	1525
22	DSY-SD-Q25-0012	SE6617-20	U8613	11/15/11	1610
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99340-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 18-nov-2011 14:44

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		64.9	%					
2-Fluorobiphenyl		68.9	%					
Terphenyl-d14		68.6	%					

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FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

WG98966-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: U8565 Lab Sample ID: WG98966-1

Instrument ID: GCMS-U Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/13/11

Level: (low/med) LOW Time Analyzed: 1206

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
02	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
03	DSY-SD-RB09-100411	SE6617-6	U8568	11/13/11	1418
04					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000039

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98966-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 18-nov-2011 14:44

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		42.6						
2-Fluorobiphenyl		50.3						
Terphenyl-d14		61.3						

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FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: UD724 DFTPP Injection Date: 11/14/11

Instrument ID: GCMS-U DFTPP Injection Time: 0741

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.7
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	49.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	13.9 (80.0)2
442	40.0 - 100.0% of mass 198	88.4
443	17.0 - 23.0% of mass 442	17.3 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1114	U8582	11/14/11	0801
02	WG99340-LCS	WG99340-2	U8583	11/14/11	0845
03	WG99340-LCSD	WG99340-3	U8584	11/14/11	0930
04	WG99420-LCS	WG99420-2	U8585	11/14/11	1015
05	WG99420-LCSD	WG99420-3	U8586	11/14/11	1100
06	DSY-SD-N24-0012	SE6617-7	U8588	11/14/11	1229
07	DSY-SD-N24-1224	SE6617-8	U8589	11/14/11	1314
08	DSY-SD-N24-2448	SE6617-9	U8590	11/14/11	1359
09	DSY-SD-DUP26-100511	SE6617-10	U8591	11/14/11	1444
10	DSY-SD-N26-0012	SE6617-11	U8592	11/14/11	1528
11	DSY-SD-N26-1224	SE6617-12	U8593	11/14/11	1613
12	DSY-SD-N26-2448	SE6617-13	U8594	11/14/11	1657
13	DSY-SD-N28-0012	SE6617-14	U8595	11/14/11	1742
14	DSY-SD-N28-1224	SE6617-15	U8596	11/14/11	1827
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-U Calibration Date: 11/14/11 Time: 0801

Lab File ID: U8582 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8065200	0.01	-1.64	20.01	AVRG
Pyrene	1.5840000	1.5209000	0.01	-3.98	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9704900	0.01	-2.56	20.00	AVRG
Chrysene	0.9400000	0.9039600	0.01	-3.83	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0841000	0.01	3.44	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.4802000	0.01	0.01	20.00	AVRG
Benzo(a)pyrene	1.0080000	1.0274000	0.01	1.92	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.7419800	0.01	19.10	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.6173900	0.01	-1.53	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.5849200	0.01	-5.96	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3278400	0.01	-3.00	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1427000	0.01	-3.65	20.00	AVRG
Terphenyl-D14	0.9480000	0.9052600	0.01	-4.51	20.00	AVRG

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: UD725 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-U DFTPP Injection Time: 0733

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	13.2 (80.8)2
442	40.0 - 100.0% of mass 198	86.1
443	17.0 - 23.0% of mass 442	16.4 (19.0)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1115	U8602	11/15/11	0754
02	DSY-SD-N28-2448	SE6617-16	U8607	11/15/11	1140
03	DSY-SD-N28-2448MS	WG99340-4	U8608	11/15/11	1225
04	DSY-SD-N28-2448MSD	WG99340-5	U8609	11/15/11	1310
05	DSY-SD-N30-0012	SE6617-17	U8610	11/15/11	1355
06	DSY-SD-N30-1224	SE6617-18	U8611	11/15/11	1440
07	DSY-SD-N30-2448	SE6617-19	U8612	11/15/11	1525
08	DSY-SD-Q25-0012	SE6617-20	U8613	11/15/11	1610
09					
10					
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13					
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16					
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20					

Katahdin Analytical Services A0000045

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-U Calibration Date: 11/15/11 Time: 0754

Lab File ID: U8602 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.6604500	0.01	-19.46	20.01	AVRG	
Pyrene	1.5840000	1.7244000	0.01	8.86	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9291400	0.01	-6.71	20.00	AVRG	
Chrysene	0.9400000	0.8601200	0.01	-8.50	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.0448000	0.01	-0.30	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3734000	0.01	-7.20	20.00	AVRG	
Benzo(a)pyrene	1.0080000	0.9161700	0.01	-9.11	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6230000	0.6212100	0.01	-0.29	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6270000	0.5021200	0.01	-19.92	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.4882800	0.01	-21.50	20.00	AVRG	<-
Nitrobenzene-D5	0.3380000	0.3146100	0.01	-6.92	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.0799000	0.01	-8.95	20.00	AVRG	
Terphenyl-D14	0.9480000	1.0064000	0.01	6.16	20.00	AVRG	

FORM VII PEST

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: UD733 DFTPP Injection Date: 11/23/11

Instrument ID: GCMS-U DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.0
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	38.2
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	22.8
365	1.0 - 100.0% of mass 198	2.4
441	0.0 - 100.0% of mass 443	11.7 (79.9)2
442	40.0 - 100.0% of mass 198	76.3
443	17.0 - 23.0% of mass 442	14.6 (19.1)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1123	U8754	11/23/11	0849
02	WG101417-BLANK	WG101417-1	U8766	11/23/11	1757
03	WG101417-LCS	WG101417-2	U8767	11/23/11	1841
04	WG101417-LCSD	WG101417-3	U8768	11/23/11	1925
05	DSY-SD-N28-0012	SE6617-14RE	U8769	11/23/11	2009
06					
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-U Calibration Date: 11/23/11 Time: 0849

Lab File ID: U8754 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.7391900	0.01	-9.85	20.01	AVRG
Pyrene	1.5840000	1.5143000	0.01	-4.40	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9297400	0.01	-6.65	20.00	AVRG
Chrysene	0.9400000	0.8401800	0.01	-10.62	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0752000	0.01	2.60	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.2846000	0.01	-13.20	20.00	AVRG
Benzo(a)pyrene	1.0080000	0.9247600	0.01	-8.26	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.6077200	0.01	-2.45	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.5158900	0.01	-17.72	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.5106500	0.01	-17.90	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3088700	0.01	-8.62	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.0552000	0.01	-11.03	20.00	AVRG
Terphenyl-D14	0.9480000	0.8692900	0.01	-8.30	20.00	AVRG

FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101417-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: U8766 Lab Sample ID: WG101417-1

Instrument ID: GCMS-U Date Extracted: 11/21/11

Matrix: (soil/water) SOIL Date Analyzed: 11/23/11

Level: (low/med) LOW Time Analyzed: 1757

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG101417-LCS	WG101417-2	U8767	11/23/11	1841
02	WG101417-LCSD	WG101417-3	U8768	11/23/11	1925
03	DSY-SD-N28-0012	SE6617-14RE	U8769	11/23/11	2009
04					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000038

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101417-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101417

Analysis Date: 23-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		49.9	%					
2-Fluorobiphenyl		55.3	%					
Terphenyl-d14		76.9	%					

600 Technology Way
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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-18

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-L26-1224	SE6617-1	70.6		62.7		71.6		0
DSY-SD-DUP26-100511	SE6617-10	83.3	*	68.1		90.2		1
DSY-SD-N26-0012	SE6617-11	79.5		72.8		111.		0
DSY-SD-N26-1224	SE6617-12	97.6	*	93.4	*	148.	*	3
DSY-SD-N26-2448	SE6617-13	80.0		72.6		80.4		0
DSY-SD-N28-0012	SE6617-14	14.0	*	2.70	*	22.2	*	3
DSY-SD-N28-0012	SE6617-14RE	50.7		39.6		79.2		0
DSY-SD-N28-1224	SE6617-15	84.8	*	79.4		135.		1
DSY-SD-N28-2448	SE6617-16	29.5		24.7		30.9		0
DSY-SD-N30-0012	SE6617-17	75.5		69.3		129.		0
DSY-SD-N30-1224	SE6617-18	80.9		79.9		130.		0
DSY-SD-N30-2448	SE6617-19	67.6		50.7		106.		0
DSY-SD-L26-2448	SE6617-2	78.1		69.4		68.5		0
DSY-SD-Q25-0012	SE6617-20	81.1		75.5		151.	*	1
DSY-SD-L24-0012	SE6617-3	74.3		66.5		63.1		0
DSY-SD-L24-1224	SE6617-4	69.2		47.9		133.		0
DSY-SD-L24-2448	SE6617-5	68.5		59.1		94.0		0
DSY-SD-N24-0012	SE6617-7	72.1		60.9		66.7		0
DSY-SD-N24-1224	SE6617-8	94.9	*	76.8		133.		1
DSY-SD-N24-2448	SE6617-9	48.8		28.8		104.		0
Method Blank Sample	WG101417-1	55.3		49.9		76.9		0
Laboratory Control S	WG101417-2	53.2		47.8		69.6		0
Laboratory Control S	WG101417-3	61.8		59.6		83.0		0
Method Blank Sample	WG99340-1	68.9		64.9		68.6		0
Laboratory Control S	WG99340-2	56.5		51.9		68.4		0
Laboratory Control S	WG99340-3	64.2		61.0		69.2		0
Matrix Spike	WG99340-4	83.7	*	79.8		105.		1
Matrix Spike Duplica	WG99340-5	89.4	*	87.9	*	132.		2
Method Blank Sample	WG99420-1	60.2		55.5		65.6		0
Laboratory Control S	WG99420-2	64.6		56.4		65.9		0

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-18

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
Laboratory Control S	WG99420-3	63.3		53.9		67.0		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-18

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB09-100411	SE6617-6	68.3		58.7		62.6		0
Method Blank Sample	WG98966-1	50.3		42.6		61.3		0
Laboratory Control S	WG98966-2	65.0		55.0		58.1		0
Laboratory Control S	WG98966-3	44.8		37.0	*	51.0		1

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98966-2
LCSD ID: WG98966-3
Project:
SDG: DSY-18
Report Date: 18-nov-2011 14:45

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	29.8	59.6*	26.8	53.6*	ug/L	11	30	66-109
Benzo(a)pyrene	50.0	33.8	67.6	28.7	67.4*	ug/L	16	30	63-118
Benzo(b)fluoranthene	50.0	30.5	61.0	26.5	53.0*	ug/L	14	30	60-108
Benzo(k)fluoranthene	50.0	28.8	57.6*	26.1	52.2*	ug/L	10	30	59-125
Benzo(g,h,i)perylene	50.0	34.9	69.8	31.3	62.6	ug/L	11	30	58-115
Chrysene	50.0	33.3	66.6*	29.7	59.4*	ug/L	11	30	68-114
Dibenzo(a,h)anthracene	50.0	31.5	63.0	30.6	61.2	ug/L	3	30	61-111
Fluoranthene	50.0	39.5	79.0	32.0	64.0*	ug/L	21	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	41.7	83.4	37.2	74.4	ug/L	11	30	55-111
Pyrene	50.0	27.2	54.4*	26.1	52.2*	ug/L	4	30	58-135
Nitrobenzene-d5			55.0		37.0*				41-91
2-Fluorobiphenyl			65.0		44.8				43-90
Terphenyl-d14			58.1		51.0				36-156

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99340-2
LCSD ID: WG99340-3
Project:
SDG: DSY-18
Report Date: 18-nov-2011 14:45

Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1070	64.1	1130	67.7	ug/Kgdrywt	5	30	40-100
Benzo(a)pyrene	1670	1160	69.5	1280	76.6	ug/Kgdrywt	10	30	40-100
Benzo(b)fluoranthene	1670	1080	64.7	1210	72.4	ug/Kgdrywt	11	30	40-100
Benzo(g,h,i)perylene	1670	1160	69.5	1160	69.5	ug/Kgdrywt	0	30	40-100
Benzo(k)fluoranthene	1670	1020	61.1	1130	67.7	ug/Kgdrywt	10	30	40-100
Chrysene	1670	1220	73.0	1270	76.0	ug/Kgdrywt	4	30	40-100
Dibenzo(a,h)anthracene	1670	1130	67.7	1080	64.7	ug/Kgdrywt	4	30	40-100
Fluoranthene	1670	1190	71.2	1210	72.4	ug/Kgdrywt	2	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1360	81.4	838.	50.2	ug/Kgdrywt	47*	30	40-100
Pyrene	1670	1180	70.6	1190	71.2	ug/Kgdrywt	1	30	40-100
Nitrobenzene-d5			51.9		61.0				24-81
2-Fluorobiphenyl			56.5		64.2				29-83
Terphenyl-d14			68.4		69.2				24-136

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LCS/LCSD Recovery Report

LCS ID: WG99420-2
LCSD ID: WG99420-3
Project:
SDG: DSY-18
Report Date: 18-nov-2011 14:45

Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1050	62.9	1080	64.7	ug/Kgdrywt	3	30	40-100
Benzo(a)pyrene	1670	1110	66.5	1190	71.2	ug/Kgdrywt	7	30	40-100
Benzo(b)fluoranthene	1670	1140	68.3	1140	68.3	ug/Kgdrywt	0	30	40-100
Benzo(g,h,i)perylene	1670	1120	67.1	1100	65.9	ug/Kgdrywt	2	30	40-100
Benzo(k)fluoranthene	1670	1060	63.5	1100	65.9	ug/Kgdrywt	4	30	40-100
Chrysene	1670	1230	73.6	1280	76.6	ug/Kgdrywt	4	30	40-100
Dibenzo(a,h)anthracene	1670	1040	62.3	998.	59.8	ug/Kgdrywt	4	30	40-100
Fluoranthene	1670	1250	74.8	1250	74.8	ug/Kgdrywt	0	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1450	86.8	832.	49.8	ug/Kgdrywt	54*	30	40-100
Pyrene	1670	1080	64.7	1080	64.7	ug/Kgdrywt	0	30	40-100
Nitrobenzene-d5			56.4		53.9				24-81
2-Fluorobiphenyl			64.6		63.3				29-83
Terphenyl-d14			65.9		67.0				24-136

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MS/MSD Recovery Report

MS ID: WG99340-4
MSD ID: WG99340-5
Sample ID: SE6617-16
Client ID: DSY-SD-N28-2448
Project:
SDG: DSY-18

Received Date: 07-OCT-11
Extract Date: 18-oct-0011 00:00
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG99340
Report Date: 18-nov-2011 14:45

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 63.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	2580	2640	ug/Kgdrywt	U380	1900	2100	72.9	78.1	9	30	40-100
Benzo(b)fluoranthene	2580	2640	ug/Kgdrywt	U380	2000	2200	78.3	83.4	8	30	40-100
Benzo(g,h,i)perylene	2580	2640	ug/Kgdrywt	U380	2200	1900	84.5	73.5	12	30	40-100
Benzo(k)fluoranthene	2580	2640	ug/Kgdrywt	U380	1800	2100	70.2	78.1	13	30	40-100
Chrysene	2580	2640	ug/Kgdrywt	U380	2100	2200	82.2	83.7	4	30	40-100
Dibenzo(a,h)anthracene	2580	2640	ug/Kgdrywt	U380	1900	1700	73.7	63.7	12	30	40-100
Fluoranthene	2580	2640	ug/Kgdrywt	U380	1600	1400	61.3	54.9	8	30	40-100
Indeno(1,2,3-cd)pyrene	2580	2640	ug/Kgdrywt	U380	2600	2300	99.3	86.0	12	30	40-100
Pyrene	2580	2640	ug/Kgdrywt	J420	4000	4900	139.*	171.*	21	30	40-100
Nitrobenzene-d5							79.8	87.9*			24-81
2-Fluorobiphenyl							83.7*	89.4*			29-83
Terphenyl-d14							105.	132.			24-136

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ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG101417-2
LCSD ID: WG101417-3
Project:
SDG: DSY-18
Report Date: 28-NOV-11

Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101417

Analysis Date: 23-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	830.	49.7	999.	59.8	ug/Kgdrywt	18	30	40-100
Benzo(a)pyrene	1670	911.	54.6	1130	67.7	ug/Kgdrywt	21	30	40-100
Benzo(b)fluoranthene	1670	1010	60.5	1230	73.6	ug/Kgdrywt	20	30	40-100
Benzo(g,h,i)perylene	1670	528.	31.6*	796.	47.7	ug/Kgdrywt	40*	30	40-100
Benzo(k)fluoranthene	1670	946.	56.6	1010	60.5	ug/Kgdrywt	6	30	40-100
Chrysene	1670	911.	54.6	1060	63.5	ug/Kgdrywt	15	30	40-100
Dibenzo(a,h)anthracene	1670	518.	31.0*	776.	46.5	ug/Kgdrywt	40*	30	40-100
Fluoranthene	1670	1080	64.7	1140	68.3	ug/Kgdrywt	5	30	40-100
Indeno(1,2,3-cd)pyrene	1670	639.	38.3*	967.	57.9	ug/Kgdrywt	41*	30	40-100
Pyrene	1670	996.	59.6	1300	77.8	ug/Kgdrywt	26	30	40-100
Nitrobenzene-d5			47.8		59.6				24-81
2-Fluorobiphenyl			53.2		61.8				29-83
Terphenyl-d14			69.6		83.0				24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	IS1(DCB) RT #	IS2(NPT) AREA #	IS2(NPT) RT #	IS3(ANT) AREA #	IS3(ANT) RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	307490	8.41	1143270	11.24	599281	15.37
02	WG99420-BLANK	WG99420-1	251055	8.42	921576	11.24	486698	15.36
03	WG99340-BLANK	WG99340-1	295696	8.42	1112105	11.24	590336	15.36
04	WG98966-BLANK	WG98966-1	273283	8.42	1012026	11.23	507801	15.36
05	WG98966-LCS	WG98966-2	259048	8.41	890555	11.23	413905	15.36
06	WG98966-LCSD	WG98966-3	294768	8.41	1044629	11.24	575991	15.36
07	DSY-SD-RB09-100411	SE6617-6	259892	8.41	961901	11.24	484037	15.35
08	DSY-SD-L26-1224	SE6617-1	271262	8.42	992548	11.23	499600	15.35
09	DSY-SD-L26-2448	SE6617-2	309728	8.42	1179722	11.23	577314	15.36
10	DSY-SD-L24-0012	SE6617-3	310601	8.41	1189946	11.24	605891	15.36
11	DSY-SD-L24-2448	SE6617-5	429914	8.41	1639503	11.24	788367	15.39
12	DSY-SD-L24-1224	SE6617-4	413627	8.42	1548780	11.23	767505	15.39
13		SSTD050U1114	306069	8.39	1144358	11.21	624745	15.34
14	WG99340-LCS	WG99340-2	259258	8.39	911649	11.21	493061	15.34
15	WG99340-LCSD	WG99340-3	318325	8.40	1167025	11.22	660623	15.35
16	WG99420-LCS	WG99420-2	265840	8.40	913921	11.22	471874	15.34
17	WG99420-LCSD	WG99420-3	275883	8.39	998730	11.22	501358	15.34
18	DSY-SD-N24-0012	SE6617-7	338372	8.40	1243667	11.21	646993	15.34
19	DSY-SD-N24-1224	SE6617-8	399124	8.40	1531520	11.22	726147	15.36
20	DSY-SD-N24-2448	SE6617-9	368587	8.40	1438589	11.22	733871	15.35

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-DUP26-100511	SE6617-10	333665	8.39	1217574	11.21	620303	15.34
02	DSY-SD-N26-0012	SE6617-11	348149	8.40	1367316	11.22	716507	15.35
03	DSY-SD-N26-1224	SE6617-12	423698	8.40	1570331	11.22	796515	15.35
04	DSY-SD-N26-2448	SE6617-13	316850	8.40	1225242	11.22	641361	15.35
05	DSY-SD-N28-0012	SE6617-14	361451	8.39	1326363	11.21	739401	15.34
06	DSY-SD-N28-1224	SE6617-15	398992	8.40	1552989	11.22	825219	15.34
07		SSTD050U1115	364715	8.38	1381025	11.21	721495	15.34
08	DSY-SD-N28-2448	SE6617-16	389462	8.39	1470769	11.20	720241	15.33
09	DSY-SD-N28-2448MS	WG99340-4	405922	8.39	1552033	11.22	766617	15.34
10	DSY-SD-N28-2448MSD	WG99340-5	434156	8.39	1667650	11.22	865108	15.35
11	DSY-SD-N30-0012	SE6617-17	395257	8.39	1519721	11.20	780657	15.33
12	DSY-SD-N30-1224	SE6617-18	399332	8.39	1611964	11.20	836891	15.33
13	DSY-SD-N30-2448	SE6617-19	398668	8.38	1554045	11.20	832548	15.33
14	DSY-SD-Q25-0012	SE6617-20	400500	8.38	1549007	11.20	835502	15.33
15		SSTD050U1123	305477	8.32	1086545	11.16	572175	15.28
16	WG101417-BLANK	WG101417-1	332839	8.33	1230699	11.15	655345	15.27
17	WG101417-LCS	WG101417-2	322154	8.33	1114372	11.15	549657	15.27
18	WG101417-LCSD	WG101417-3	355505	8.33	1316838	11.16	740402	15.28
19	DSY-SD-N28-0012	SE6617-14RE	374902	8.33	1419955	11.16	750002	15.27
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		697814	18.82	379609	25.12	180449	28.26
UPPER LIMIT		1395628	19.32	759218	25.62	360898	28.76
LOWER LIMIT		348907	18.32	189805	24.62	90225	27.76
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	883737	18.81	594632	25.10	343868	28.24
02	WG99420-BLANK	WG99420-1	761894	18.80	558280	25.08	413538*	28.24
03	WG99340-BLANK	WG99340-1	907084	18.80	632667	25.09	437762*	28.24
04	WG98966-BLANK	WG98966-1	740773	18.80	543526	25.09	430393*	28.24
05	WG98966-LCS	WG98966-2	601159	18.80	473013	25.09	305766	28.24
06	WG98966-LCSD	WG98966-3	852425	18.81	558202	25.09	392639*	28.24
07	DSY-SD-RB09-100411	SE6617-6	679328	18.80	524314	25.09	414909*	28.24
08	DSY-SD-L26-1224	SE6617-1	783526	18.80	498877	25.09	345697	28.24
09	DSY-SD-L26-2448	SE6617-2	798757	18.80	473511	25.09	230780	28.24
10	DSY-SD-L24-0012	SE6617-3	845545	18.80	580143	25.09	333141	28.24
11	DSY-SD-L24-2448	SE6617-5	815332	18.82	149978*	25.10	57802*	28.24
12	DSY-SD-L24-1224	SE6617-4	740338	18.84	113783*	25.10	45596*	28.25
13		SSTD050U1114	840041	18.79	450795	25.08	223333	28.24
14	WG99340-LCS	WG99340-2	756996	18.79	408916	25.08	254746	28.24
15	WG99340-LCSD	WG99340-3	938700	18.79	515257	25.09	286362	28.23
16	WG99420-LCS	WG99420-2	640161	18.78	394517	25.09	234724	28.23
17	WG99420-LCSD	WG99420-3	684464	18.78	427591	25.09	262534	28.24
18	DSY-SD-N24-0012	SE6617-7	888614	18.79	383018	25.08	162911	28.23
19	DSY-SD-N24-1224	SE6617-8	746525	18.80	138024*	25.08	53124*	28.24
20	DSY-SD-N24-2448	SE6617-9	974383	18.79	321296	25.09	114147	28.24

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		697814		18.82		379609		25.12		180449		28.26	
UPPER LIMIT		1395628		19.32		759218		25.62		360898		28.76	
LOWER LIMIT		348907		18.32		189805		24.62		90225		27.76	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-DUP26-100511	SE6617-10		851118		18.79		435088		25.08		170155		28.23	
02	DSY-SD-N26-0012	SE6617-11		977406		18.79		341607		25.08		111870		28.24	
03	DSY-SD-N26-1224	SE6617-12		907557		18.81		165021*		25.09		61024*		28.24	
04	DSY-SD-N26-2448	SE6617-13		896013		18.78		495424		25.08		212174		28.22	
05	DSY-SD-N28-0012	SE6617-14		1069086		18.79		463480		25.07		240720		28.23	
06	DSY-SD-N28-1224	SE6617-15		1119109		18.80		277455		25.09		92079		28.26	
07		SSTD050U1115		928379		18.78		345890		25.06		142086		28.20	
08	DSY-SD-N28-2448	SE6617-16		988399		18.78		280787		25.05		86737*		28.21	
09	DSY-SD-N28-2448MS	WG99340-4		874602		18.78		197215		25.06		85056*		28.21	
10	DSY-SD-N28-2448MSD	WG99340-5		930271		18.79		152224*		25.05		49788*		28.21	
11	DSY-SD-N30-0012	SE6617-17		1087924		18.78		260139		25.05		77987*		28.21	
12	DSY-SD-N30-1224	SE6617-18		1121424		18.78		251206		25.05		73168*		28.21	
13	DSY-SD-N30-2448	SE6617-19		1245395		18.78		399118		25.05		114306		28.21	
14	DSY-SD-Q25-0012	SE6617-20		1139108		18.78		206801		25.05		60294*		28.21	
15		SSTD050U1123		767711		18.72		372926		24.99		160304		28.14	
16	WG101417-BLANK	WG101417-1		941414		18.72		515738		24.99		181643		28.15	
17	WG101417-LCS	WG101417-2		811423		18.72		468403		25.00		157580		28.15	
18	WG101417-LCSD	WG101417-3		1111125		18.72		512701		25.00		164860		28.15	
19	DSY-SD-N28-0012	SE6617-14RE		1053515		18.72		322161		24.99		98159		28.15	
20															

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U111311.b\U8562.D
Report Date: 18-Nov-2011 13:55

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U111311.b\U8562.D
Lab Smp Id: SSTD050U1113
Inj Date : 13-NOV-2011 09:53 MS Autotune Date: 27-JUL-1998 22:19
Operator : WAS Inst ID: gcms-u.i
Smp Info : WG101143-1
Misc Info : WG101143,WG101143,WG101009-3,SE6617-1
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U111311.b\U8270C10.m
Meth Date : 18-Nov-2011 13:52 gcms-u.i Quant Type: ISTD
Cal Date : 12-NOV-2011 13:07 Cal File: U8544.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 19 1,4-Dichlorobenzene-D4	152	8.411	8.411	(1.000)	307490	40.0000		
149 Benzo(a)pyrene	252	28.118	28.118	(0.996)	430805	50.0000	49.7	
$ 33 Nitrobenzene-D5	82	9.726	9.726	(0.866)	447490	50.0000	46.4	
* 44 Naphthalene-D8	136	11.237	11.237	(1.000)	1143270	40.0000		
$ 63 2-Fluorobiphenyl	172	13.866	13.866	(0.902)	830287	50.0000	46.7	
* 77 Acenaphthene-D10	164	15.367	15.367	(1.000)	599281	40.0000		
* 114 Phenanthrene-D10	188	18.813	18.813	(1.000)	883737	40.0000		
127 Fluoranthene	202	21.680	21.680	(1.152)	953201	50.0000	52.6	
128 Pyrene	202	22.187	22.187	(0.884)	975007	50.0000	41.4	
$ 130 Terphenyl-D14	244	22.715	22.715	(0.905)	600239	50.0000	42.6	
140 Benzo(a)anthracene	228	25.065	25.065	(0.999)	725583	50.0000	49.0	
* 141 Chrysene-D12	240	25.096	25.096	(1.000)	594632	40.0000		
142 Chrysene	228	25.158	25.158	(1.002)	663135	50.0000	47.5	
147 Benzo(b)fluoranthene	252	27.476	27.476	(0.973)	448661	50.0000	49.8	
148 Benzo(k)fluoranthene	252	27.528	27.528	(0.975)	573478	50.0000	45.1	
* 150 Perylene-D12	264	28.242	28.242	(1.000)	343868	40.0000		
153 Indeno(1,2,3-cd)pyrene	276	30.374	30.374	(1.075)	231472	50.0000	43.2	
154 Dibenzo(a,h)anthracene	278	30.436	30.436	(1.078)	262362	50.0000	48.6	
155 Benzo(g,h,i)perylene	276	30.954	30.954	(1.096)	254159	50.0000	47.5	

Internal Std. Referenc

Data File: \\target_server\GG\chem\gcms-u.i\U111411.b\U8582.D
Report Date: 18-Nov-2011 14:05

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U111411.b\U8582.D
Lab Smp Id: SSTD050U1114
Inj Date : 14-NOV-2011 08:01 MS Autotune Date: 27-JUL-1998 22:19
Operator : WAS Inst ID: gcms-u.i
Smp Info : WG101101-1
Misc Info : WG101101,WG101101,WG101009-3,SE6617-11
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U111411.b\U8270C10.m
Meth Date : 18-Nov-2011 14:01 gcms-u.i Quant Type: ISTD
Cal Date : 12-NOV-2011 13:07 Cal File: U8544.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 19 1,4-Dichlorobenzene-D4	152	8.389	8.389	(1.000)	306069	40.0000		
149 Benzo(a)pyrene	252	28.116	28.116	(0.996)	286802	50.0000	50.9	
$ 33 Nitrobenzene-D5	82	9.703	9.703	(0.865)	468961	50.0000	48.6	
* 44 Naphthalene-D8	136	11.214	11.214	(1.000)	1144358	40.0000		
$ 63 2-Fluorobiphenyl	172	13.853	13.853	(0.903)	892342	50.0000	48.2	
* 77 Acenaphthene-D10	164	15.344	15.344	(1.000)	624745	40.0000		
* 114 Phenanthrene-D10	188	18.791	18.791	(1.000)	840041	40.0000		
127 Fluoranthene	202	21.657	21.657	(1.153)	846888	50.0000	49.2	
128 Pyrene	202	22.175	22.175	(0.884)	857045	50.0000	48.0	
$ 130 Terphenyl-D14	244	22.703	22.703	(0.905)	510106	50.0000	47.8	
140 Benzo(a)anthracene	228	25.042	25.042	(0.998)	546866	50.0000	48.7	
* 141 Chrysene-D12	240	25.083	25.083	(1.000)	450795	40.0000		
142 Chrysene	228	25.145	25.145	(1.002)	509378	50.0000	48.1	
147 Benzo(b)fluoranthene	252	27.464	27.464	(0.973)	302648	50.0000	51.7	
148 Benzo(k)fluoranthene	252	27.516	27.516	(0.974)	413235	50.0000	50.0	
* 150 Perylene-D12	264	28.240	28.240	(1.000)	223333	40.0000		
153 Indeno(1,2,3-cd)pyrene	276	30.362	30.362	(1.075)	207137	50.0000	59.5	
154 Dibenzo(a,h)anthracene	278	30.424	30.424	(1.077)	172354	50.0000	49.2	
155 Benzo(g,h,i)perylene	276	30.942	30.942	(1.096)	163291	50.0000	47.0	

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U111511.b\U8602.D
Report Date: 18-Nov-2011 14:12

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U111511.b\U8602.D
Lab Smp Id: SSTD050U1115
Inj Date : 15-NOV-2011 07:54 MS Autotune Date: 27-JUL-1998 22:19
Operator : WAS Inst ID: gcms-u.i
Smp Info : WG101335-1
Misc Info : WG101335,WG101335,WG101009-3,SE6617-16
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U111511.b\U8270C10.m
Meth Date : 18-Nov-2011 14:09 gcms-u.i Quant Type: ISTD
Cal Date : 12-NOV-2011 13:07 Cal File: U8544.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 19 1,4-Dichlorobenzene-D4	152	8.382	8.382	(1.000)	364715	40.0000		
149 Benzo(a)pyrene	252	28.078	28.078	(0.996)	162718	50.0000	45.4	
$ 33 Nitrobenzene-D5	82	9.696	9.696	(0.865)	543101	50.0000	46.6	
* 44 Naphthalene-D8	136	11.207	11.207	(1.000)	1381025	40.0000		
$ 63 2-Fluorobiphenyl	172	13.836	13.836	(0.902)	973962	50.0000	45.5	
* 77 Acenaphthene-D10	164	15.337	15.337	(1.000)	721495	40.0000		
* 114 Phenanthrene-D10	188	18.783	18.783	(1.000)	928379	40.0000		
127 Fluoranthene	202	21.640	21.640	(1.152)	766436	50.0000	40.2	
128 Pyrene	202	22.147	22.147	(0.884)	745545	50.0000	54.4	
$ 130 Terphenyl-D14	244	22.685	22.685	(0.905)	435118	50.0000	53.1	
140 Benzo(a)anthracene	228	25.014	25.014	(0.998)	401724	50.0000	46.7	
* 141 Chrysene-D12	240	25.056	25.056	(1.000)	345890	40.0000		
142 Chrysene	228	25.118	25.118	(1.002)	371883	50.0000	45.8	
147 Benzo(b)fluoranthene	252	27.436	27.436	(0.973)	185557	50.0000	49.8	
148 Benzo(k)fluoranthene	252	27.488	27.488	(0.975)	243936	50.0000	46.4	
* 150 Perylene-D12	264	28.202	28.202	(1.000)	142086	40.0000		
153 Indeno(1,2,3-cd)pyrene	276	30.334	30.334	(1.076)	110331	50.0000	49.8	
154 Dibenzo(a,h)anthracene	278	30.396	30.396	(1.078)	89180	50.0000	40.0	
155 Benzo(g,h,i)perylene	276	30.914	30.914	(1.096)	86723	50.0000	39.2	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
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Katahdin Analytical Services A0000088

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD890 DFTPP Injection Date: 10/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0825

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	39.6
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	55.3
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	9.2 (73.8)2
442	40.0 - 100.0% of mass 198	64.2
443	17.0 - 23.0% of mass 442	12.5 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1017	G3344	10/17/11	0845
02	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
03	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
04					
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Katahdin Analytical Services A0000089

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 10/17/11 Time: 0845

Lab File ID: G3344 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2822000	0.01	-8.48	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1507000	0.01	3.11	20.00	AVRG
Fluorene-D10	0.8720000	0.8635900	0.01	-0.96	20.00	AVRG
Pyrene-D10	1.2360000	1.4072000	0.01	13.85	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD911 DFTPP Injection Date: 11/02/11

Instrument ID: GCMS-G DFTPP Injection Time: 0601

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.7 (1.6)1
69	Less than 100.0% of mass 198	42.5
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	13.3 (76.3)2
442	40.0 - 100.0% of mass 198	90.3
443	17.0 - 23.0% of mass 442	17.5 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1102	G3691	11/02/11	0619
02		SSTD8.00G1102	G3692	11/02/11	0703
03		SSTD5.00G1102	G3693	11/02/11	0746
04		SSTD2.00G1102	G3694	11/02/11	0831
05		SSTD0.50G1102	G3695	11/02/11	0915
06		SSTD0.20G1102	G3696	11/02/11	1000
07		SIM IND CHECK	G3697	11/02/11	1045
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Katahdin Analytical Services A0000090

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date(s): 11/02/11 11/02/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0619 1000

LAB FILE ID: RF0.2: G3696 RF0.5: G3695 RF1: G3691
RF2: G3694 RF5: G3693 RF8: G3692

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.620	1.399	1.287	1.098	1.207	1.178	AVRG	1.29808638	14.471	15.000
2-Methylnaphthalene-D10	1.192	1.243	1.194	1.027	1.139	1.106	AVRG	1.15011689	6.680	15.000
Fluorene-D10	1.002	0.968	1.136	0.953	1.100	1.068	AVRG	1.03794548	7.181	15.000
Pyrene-D10	1.245	1.208	1.434	1.143	1.321	1.283	AVRG	1.27238392	7.894	15.000

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD926 DFTPP Injection Date: 11/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0807

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.3
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Less than 100.0% of mass 198	38.4
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	4.1
441	0.0 - 100.0% of mass 443	13.6 (74.9)2
442	40.0 - 100.0% of mass 198	93.1
443	17.0 - 23.0% of mass 442	18.2 (19.5)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1114	G3923	11/14/11	0827
02	WG101334-BLANK	WG101334-1	G3926	11/14/11	1041
03	WG99422-BLANK	WG99422-1	G3927	11/14/11	1126
04	WG98968-BLANK	WG98968-1	G3928	11/14/11	1210
05	DSY-SD-RB09-100411	SE6617-6	G3931	11/14/11	1424
06	DSY-SD-L26-1224	SE6617-1	G3936	11/14/11	1807
07	DSY-SD-L26-2448	SE6617-2	G3937	11/14/11	1851
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Katahdin Analytical Services A0000091

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 11/14/11 Time: 0827

Lab File ID: G3923 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Benzo(a)pyrene	1.3180000	1.2356000	0.01	-6.25	20.01	AVRG	
2-Methylnaphthalene-D10	1.0640000	1.1772000	0.01	10.64	20.00	AVRG	
Fluorene-D10	0.9240000	1.3802000	0.01	49.37	20.00	AVRG	<-
Pyrene-D10	1.0930000	1.2198000	0.01	11.60	20.00	AVRG	

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101334-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: G3926 Lab Sample ID: WG101334-1

Instrument ID: GCMS-G Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/14/11

Level: (low/med) LOW Time Analyzed: 1041

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-L26-1224	SE6617-1	G3936	11/14/11	1807
02	DSY-SD-L26-2448	SE6617-2	G3937	11/14/11	1851
03	DSY-SD-L24-0012	SE6617-3	G3949	11/15/11	1614
04	DSY-SD-L24-1224	SE6617-4	G3950	11/15/11	1659
05	DSY-SD-L24-2448	SE6617-5	G3951	11/15/11	1744
06	DSY-SD-N24-2448	SE6617-9	G3954	11/15/11	1957
07	DSY-SD-DUP26-100511	SE6617-10	G3970	11/16/11	1830
08	DSY-SD-N26-0012	SE6617-11	G3974	11/17/11	0902
09	DSY-SD-N26-1224	SE6617-12	G3975	11/17/11	0946
10	DSY-SD-N26-2448	SE6617-13	G3976	11/17/11	1031
11	DSY-SD-N28-0012	SE6617-14	G3977	11/17/11	1115
12	DSY-SD-N28-1224	SE6617-15	G3978	11/17/11	1200
13	DSY-SD-N28-2448	SE6617-16	G3979	11/17/11	1245
14	DSY-SD-N30-0012	SE6617-17	G3980	11/17/11	1330
15	DSY-SD-N30-1224	SE6617-18	G3981	11/17/11	1414
16	DSY-SD-N30-2448	SE6617-19	G3982	11/17/11	1459
17	DSY-SD-Q25-0012	SE6617-20	G3983	11/17/11	1544
18	DSY-SD-N24-1224	SE6617-8DL	G4103	11/23/11	1536
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COMMENTS:

Katahdin Analytical Services A0000084

Report of Analytical Results

Client:
Lab ID: WG101334-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 18-NOV-11
Extract Date: 18-OCT-11
Extracted By: WAS
Extraction Method: SW846 3550
Lab Prep Batch: WG101334

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		77.3	%					
Fluorene-D10	*	83.6	%					
Pyrene-D10		86.7	%					

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99422-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: G3927 Lab Sample ID: WG99422-1

Instrument ID: GCMS-G Date Extracted: 10/19/11

Matrix: (soil/water) SOIL Date Analyzed: 11/14/11

Level:(low/med) LOW Time Analyzed: 1126

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-N24-0012	SE6617-7	G3952	11/15/11	1828
02					
03					
04					
05					
06					
07					
08					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000087

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99422-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		55.6	%					
Fluorene-D10		67.1	%					
Pyrene-D10		75.9	%					

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98968-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: G3928 Lab Sample ID: WG98968-1

Instrument ID: GCMS-G Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/14/11

Level: (low/med) LOW Time Analyzed: 1210

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
02	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
03	DSY-SD-RB09-100411	SE6617-6	G3931	11/14/11	1424
04					
05					
06					
07					
08					
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COMMENTS:

Katahdin Analytical Services A0000086

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98968-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		49.4	%					
Fluorene-D10		65.8	%					
Pyrene-D10		72.5	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD927 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-G DFTPP Injection Time: 0826

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (74.8)2
442	40.0 - 100.0% of mass 198	93.7
443	17.0 - 23.0% of mass 442	17.6 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1115	G3939	11/15/11	0845
02		SSTD8.00G1115	G3940	11/15/11	0929
03		SSTD5.00G1115	G3941	11/15/11	1014
04		SSTD2.00G1115	G3942	11/15/11	1100
05		SSTD0.50G1115	G3943	11/15/11	1145
06		SSTD0.20G1125	G3944	11/15/11	1230
07		SIM IND CHECK	G3945	11/15/11	1315
08	DSY-SD-L24-0012	SE6617-3	G3949	11/15/11	1614
09	DSY-SD-L24-1224	SE6617-4	G3950	11/15/11	1659
10	DSY-SD-L24-2448	SE6617-5	G3951	11/15/11	1744
11	DSY-SD-N24-0012	SE6617-7	G3952	11/15/11	1828
12	DSY-SD-N24-2448	SE6617-9	G3954	11/15/11	1957
13					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date(s): 11/15/11 11/15/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0845 1230

LAB FILE ID: RF0.2: G3944 RF0.5: G3943 RF1: G3939
RF2: G3942 RF5: G3941 RF8: G3940

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.508	1.247	1.215	1.172	1.292	1.338	AVRG	1.29521840	9.192	15.000
2-Methylnaphthalene-D10	0.923	1.101	1.030	0.963	1.043	1.054	AVRG	1.01913546	6.344	15.000
Fluorene-D10	0.738	0.967	0.928	0.888	0.967	0.967	AVRG	0.90897353	9.855	15.000
Pyrene-D10	0.961	1.035	0.948	0.886	1.008	1.065	AVRG	0.98380939	6.600	15.000

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 11/15/11 Time: 0845

Lab File ID: G3939 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.2148000	0.01	-6.19	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0298000	0.01	1.06	20.00	AVRG
Fluorene-D10	0.9090000	0.9275700	0.01	2.04	20.00	AVRG
Pyrene-D10	0.9840000	0.9475900	0.01	-3.70	20.00	AVRG

FORM VII PEST

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD928 DFTPP Injection Date: 11/16/11

Instrument ID: GCMS-G DFTPP Injection Time: 0655

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.7
68	Less than 2.0% of mass 69	0.5 (1.1)1
69	Less than 100.0% of mass 198	42.0
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	60.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	23.9
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	11.5 (73.5)2
442	40.0 - 100.0% of mass 198	81.4
443	17.0 - 23.0% of mass 442	15.7 (19.2)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1116	G3955	11/16/11	0713
02	DSY-SD-DUP26-100511	SE6617-10	G3970	11/16/11	1830
03					
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Katahdin Analytical Services A0000093

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 11/16/11 Time: 0713

Lab File ID: G3955 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.1651000	0.01	-10.03	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0009000	0.01	-1.78	20.00	AVRG
Fluorene-D10	0.9090000	0.8921200	0.01	-1.86	20.00	AVRG
Pyrene-D10	0.9840000	1.1609000	0.01	17.98	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD929 DFTPP Injection Date: 11/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0713

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.0
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	59.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	26.1
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (75.3)2
442	40.0 - 100.0% of mass 198	93.2
443	17.0 - 23.0% of mass 442	17.5 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1117	G3972	11/17/11	0733
02	DSY-SD-N26-0012	SE6617-11	G3974	11/17/11	0902
03	DSY-SD-N26-1224	SE6617-12	G3975	11/17/11	0946
04	DSY-SD-N26-2448	SE6617-13	G3976	11/17/11	1031
05	DSY-SD-N28-0012	SE6617-14	G3977	11/17/11	1115
06	DSY-SD-N28-1224	SE6617-15	G3978	11/17/11	1200
07	DSY-SD-N28-2448	SE6617-16	G3979	11/17/11	1245
08	DSY-SD-N30-0012	SE6617-17	G3980	11/17/11	1330
09	DSY-SD-N30-1224	SE6617-18	G3981	11/17/11	1414
10	DSY-SD-N30-2448	SE6617-19	G3982	11/17/11	1459
11	DSY-SD-Q25-0012	SE6617-20	G3983	11/17/11	1544
12					
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FORM V SV

Katahdin Analytical Services A0000094

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 11/17/11 Time: 0733

Lab File ID: G3972 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.1376000	0.01	-12.15	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0075000	0.01	-1.13	20.00	AVRG
Fluorene-D10	0.9090000	0.8671700	0.01	-4.60	20.00	AVRG
Pyrene-D10	0.9840000	1.1530000	0.01	17.18	20.00	AVRG

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
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FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date(s): 11/19/11 11/19/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1147 1527

LAB FILE ID: RF0.2: G4023 RF0.5: G4022 RF1: G4018
RF2: G4021 RF5: G4020 RF8: G4019

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.226	1.334	1.377	1.285	1.319	1.367	AVRG	1.31790301	4.260	15.000
2-Methylnaphthalene-D10	0.894	1.105	1.150	1.062	1.072	1.103	AVRG	1.06431855	8.374	15.000
Fluorene-D10	0.704	0.898	0.928	0.975	0.995	1.041	AVRG	0.92347346	12.868	15.000
Pyrene-D10	0.963	1.125	1.161	1.028	1.131	1.150	AVRG	1.09297445	7.249	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: GD936 DFTPP Injection Date: 11/23/11

Instrument ID: GCMS-G DFTPP Injection Time: 1036

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.7
68	Less than 2.0% of mass 69	0.5 (1.1)1
69	Less than 100.0% of mass 198	42.8
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	3.6
441	0.0 - 100.0% of mass 443	12.3 (74.3)2
442	40.0 - 100.0% of mass 198	87.1
443	17.0 - 23.0% of mass 442	16.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1123	G4097	11/23/11	1055
02	WG101651-BLANK	WG101651-1	G4102	11/23/11	1452
03	DSY-SD-N24-1224	SE6617-8DL	G4103	11/23/11	1536
04	DSY-SD-N28-0012	SE6617-14RE	G4104	11/23/11	1621
05					
06					
07					
08					
09					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Instrument ID: GCMS-G Calibration Date: 11/23/11 Time: 1055

Lab File ID: G4097 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.3949000	0.01	5.83	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.0649000	0.01	0.08	20.00	AVRG
Fluorene-D10	0.9240000	0.8346700	0.01	-9.67	20.00	AVRG
Pyrene-D10	1.0930000	1.2051000	0.01	10.26	20.00	AVRG

FORM VII PEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101651-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID: G4102 Lab Sample ID: WG101651-1

Instrument ID: GCMS-G Date Extracted: 11/21/11

Matrix: (soil/water) SOIL Date Analyzed: 11/23/11

Level:(low/med) LOW Time Analyzed: 1452

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-N28-0012	SE6617-14RE	G4104	11/23/11	1621
02					
03					
04					
05					
06					
07					
08					
09					
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30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101651-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 28-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101651

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-18

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-L26-1224	SE6617-1	73.9		114.	*	104.		1
DSY-SD-DUP26-100511	SE6617-10	79.9		97.8	*	107.		1
DSY-SD-N26-0012	SE6617-11	75.0		79.1	*	126.		1
DSY-SD-N26-1224	SE6617-12	63.2		68.8		158.	*	1
DSY-SD-N26-2448	SE6617-13	80.5		87.4	*	126.		1
DSY-SD-N28-0012	SE6617-14	11.4	*	18.4		29.1	*	2
DSY-SD-N28-0012	SE6617-14RE	0.00	*	0.00	*	0.00	*	3
DSY-SD-N28-1224	SE6617-15	89.0		85.8	*	150.	*	2
DSY-SD-N28-2448	SE6617-16	26.5		27.2		44.6		0
DSY-SD-N30-0012	SE6617-17	70.7		84.7	*	136.	*	2
DSY-SD-N30-1224	SE6617-18	81.5		91.1	*	137.	*	2
DSY-SD-N30-2448	SE6617-19	62.9		70.7		114.		0
DSY-SD-L26-2448	SE6617-2	75.2		122.	*	99.9		1
DSY-SD-Q25-0012	SE6617-20	80.3		84.5	*	151.	*	2
DSY-SD-L24-0012	SE6617-3	81.8		55.7		78.6		0
DSY-SD-L24-1224	SE6617-4	66.4		50.4		115.		0
DSY-SD-L24-2448	SE6617-5	76.1		79.0	*	121.		1
DSY-SD-N24-0012	SE6617-7	69.2		79.9	*	97.5		1
DSY-SD-N24-1224	SE6617-8DL	74.3		78.4	*	89.2		1
DSY-SD-N24-2448	SE6617-9	41.2		56.3		116.		0
Method Blank Sample	WG101334-1	77.3		83.6	*	86.7		1
Method Blank Sample	WG101651-1	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG99422-1	55.6		67.1		75.9		0

QC Limits

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-18

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-18

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB09-100411	SE6617-6	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG98968-1	49.4		65.8		72.5		0
Laboratory Control S	WG98968-2	40.5	*	51.0		58.1		1
Laboratory Control S	WG98968-3	43.8		51.7		57.7		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98968-2
LCSD ID: WG98968-3
Project:
SDG: DSY-18
Report Date: 28-NOV-11

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 17-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.17	58.5*	1.13	56.5*	ug/L	3	30	63-98
2-Methylnaphthalene-D10			40.5*		43.8				43-92
Fluorene-D10			51.0		51.7				29-101
Pyrene-D10			58.1		57.7				53-166

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1017	39324	9.14	102062	12.09	48369	16.41
02	WG98968-LCS	WG98968-2	44447	9.14	116697	12.10	57824	16.41
03	WG98968-LCSD	WG98968-3	41433	9.14	113990	12.09	58056	16.41
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20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64726	20.09	32119	26.71	23689	30.04
UPPER LIMIT		129452	20.63	64238	27.25	47378	30.58
LOWER LIMIT		32363	19.55	16060	26.17	11845	29.50
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1017	58271	20.03	22735	26.65	20437	29.98
02	WG98968-LCS	WG98968-2	75106	20.03	45184	26.65	37176	29.98
03	WG98968-LCSD	WG98968-3	76069	20.03	41299	26.65	35793	29.98
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		36243	8.92	123776	11.87	61148	16.18
UPPER LIMIT		72486	9.46	247552	12.41	122296	16.72
LOWER LIMIT		18122	8.38	61888	11.33	30574	15.64
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG98968-BLANK	WG98968-1	56329	8.51	193446	11.46	105196	15.76
02								
03								
04								
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20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		83246	19.80	43673	26.39	30900	29.71
UPPER LIMIT		166492	20.34	87346	26.93	61800	30.25
LOWER LIMIT		41623	19.26	21837	25.85	15450	29.17
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG98968-BLANK	WG98968-1	154127	19.37	97438*	25.96	70118*	29.24
02								
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3923 Date Analyzed: 11/14/11

Instrument ID: GCMS-G Time Analyzed: 0827

	CLIENT SAMPLE ID	LAB SAMPLE ID	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD		50284		8.51		175100		11.45		92405		15.75	
	UPPER LIMIT		100568		9.05		350200		11.99		184810		16.29	
	LOWER LIMIT		25142		7.97		87550		10.91		46203		15.21	
01	WG101334-BLANK	WG101334-1	53788		8.51		200718		11.46		104617		15.76	
02	WG99422-BLANK	WG99422-1	50792		8.51		185557		11.46		97883		15.75	
03	DSY-SD-RB09-100411	SE6617-6	42774		8.51		149254		11.45		81348		15.75	
04	DSY-SD-L26-1224	SE6617-1	41887		8.51		160811		11.46		94322		15.76	
05	DSY-SD-L26-2448	SE6617-2	43403		8.51		177064		11.46		102316		15.76	
06														
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IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3923 Date Analyzed: 11/14/11

Instrument ID: GCMS-G Time Analyzed: 0827

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		126835		19.35		69454		25.94		46628		29.24	
UPPER LIMIT		253670		19.89		138908		26.48		93256		29.78	
LOWER LIMIT		63418		18.81		34727		25.40		23314		28.70	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	WG101334-BLANK	WG101334-1		145839		19.37		77371		25.94		53915		29.24	
02	WG99422-BLANK	WG99422-1		131868		19.35		72267		25.93		51374		29.24	
03	DSY-SD-RB09-100411	SE6617-6		116301		19.35		76453		25.93		49293		29.24	
04	DSY-SD-L26-1224	SE6617-1		169182		19.37		76634		25.96		39089		29.26	
05	DSY-SD-L26-2448	SE6617-2		190817		19.37		79764		25.96		41913		29.27	
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD		54590	8.47	163072	11.41	86969	15.71
UPPER LIMIT		109180	9.01	326144	11.95	173938	16.25
LOWER LIMIT		27295	7.93	81536	10.87	43485	15.17
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-L24-0012	SE6617-3	60312	8.47	170426	11.45	86701	15.77
02	DSY-SD-L24-1224	SE6617-4	53223	8.47	159678	11.44	79830	15.78
03	DSY-SD-L24-2448	SE6617-5	43196	8.47	156628	11.43	85554	15.72
04	DSY-SD-N24-0012	SE6617-7	46225	8.47	167809	11.41	89257	15.71
05	DSY-SD-N24-2448	SE6617-9	44997	8.47	162255	11.41	84408	15.72
06		SSTD1.00G1116	44875	8.43	154436	11.39	81674	15.68
07	DSY-SD-DUP26-100511	SE6617-10	38959	8.43	140511	11.39	73442	15.68
08		SSTD1.00G1117	56809	8.39	182940	11.34	93158	15.64
09	DSY-SD-N26-0012	SE6617-11	50518	8.40	181538	11.35	97641	15.64
10	DSY-SD-N26-1224	SE6617-12	48405	8.40	164748	11.36	119978	15.67
11	DSY-SD-N26-2448	SE6617-13	47654	8.40	175397	11.35	91840	15.64
12	DSY-SD-N28-0012	SE6617-14	49949	8.40	169055	11.35	94137	15.64
13	DSY-SD-N28-1224	SE6617-15	47601	8.39	170231	11.35	96619	15.64
14	DSY-SD-N28-2448	SE6617-16	47796	8.40	172615	11.35	91959	15.64
15	DSY-SD-N30-0012	SE6617-17	46389	8.40	171886	11.35	98782	15.64
16	DSY-SD-N30-1224	SE6617-18	46901	8.40	173958	11.35	97656	15.64
17	DSY-SD-N30-2448	SE6617-19	46150	8.40	172075	11.35	94790	15.64
18	DSY-SD-Q25-0012	SE6617-20	44515	8.40	160076	11.35	85776	15.65
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		127329	19.32	92483	25.90	69188	29.21
UPPER LIMIT		254658	19.86	184966	26.44	138376	29.75
LOWER LIMIT		63665	18.78	46242	25.36	34594	28.67
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-L24-0012	SE6617-3	132618	19.40	49007	26.10	30718*	29.35
02	DSY-SD-L24-1224	SE6617-4	72065	19.41	41055*	26.11	25780*	29.43
03	DSY-SD-L24-2448	SE6617-5	117652	19.32	53858	25.95	39255	29.23
04	DSY-SD-N24-0012	SE6617-7	129483	19.32	64864	25.93	45936	29.24
05	DSY-SD-N24-2448	SE6617-9	126709	19.33	65695	25.99	55712	29.28
06		SSTD1.00G1116	113873	19.26	61388	25.85	35555	29.15
07	DSY-SD-DUP26-100511	SE6617-10	108002	19.28	61303	25.88	40968	29.18
08		SSTD1.00G1117	127439	19.22	64701	25.81	43134	29.10
09	DSY-SD-N26-0012	SE6617-11	140768	19.24	54670	25.84	30460*	29.13
10	DSY-SD-N26-1224	SE6617-12	132005	19.28	40605*	25.86	30553*	29.16
11	DSY-SD-N26-2448	SE6617-13	140998	19.24	60506	25.81	34682	29.11
12	DSY-SD-N28-0012	SE6617-14	134890	19.24	63111	25.81	36851	29.10
13	DSY-SD-N28-1224	SE6617-15	131251	19.24	49838	25.82	25648*	29.13
14	DSY-SD-N28-2448	SE6617-16	142495	19.24	55007	25.84	33416*	29.13
15	DSY-SD-N30-0012	SE6617-17	141527	19.24	50458	25.82	23906*	29.11
16	DSY-SD-N30-1224	SE6617-18	141190	19.24	50307	25.82	25403*	29.13
17	DSY-SD-N30-2448	SE6617-19	132182	19.24	56036	25.82	29547*	29.13
18	DSY-SD-Q25-0012	SE6617-20	121378	19.25	42675*	25.84	33023*	29.14
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

	CLIENT SAMPLE ID	LAB SAMPLE ID	IS1(DCB) AREA #	IS1(DCB) RT #	IS2(NPT) AREA #	IS2(NPT) RT #	IS3(ANT) AREA #	IS3(ANT) RT #
	12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
	UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
	LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
01		SSTD1.00G1123	46410	8.26	163926	11.21	85272	15.49
02	WG101651-BLANK	WG101651-1	49799	8.26	160459	11.23	81909	15.51
03	DSY-SD-N24-1224	SE6617-8DL	44040	8.26	164279	11.21	90575	15.49
04	DSY-SD-N28-0012	SE6617-14RE	47103	8.26	161361	11.21	86405	15.48
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		118014		19.19		75564		25.77		53419		29.09	
UPPER LIMIT		236028		19.73		151128		26.31		106838		29.63	
LOWER LIMIT		59007		18.65		37782		25.23		26710		28.55	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1123		126447		19.10		74687		25.67		50122	29.00
02	WG101651-BLANK	WG101651-1		113155		19.12		77838		25.66		51210	29.00
03	DSY-SD-N24-1224	SE6617-8DL		149842		19.09		70042		25.67		34177	28.98
04	DSY-SD-N28-0012	SE6617-14RE		142864		19.08		63836		25.66		36289	28.96
05													
06													
07													
08													
09													
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11													
12													
13													
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15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
12 HOUR STD		36243		8.92		123776		11.87		61148		16.18	
UPPER LIMIT		72486		9.46		247552		12.41		122296		16.72	
LOWER LIMIT		18122		8.38		61888		11.33		30574		15.64	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1114		50284	8.51		175100	11.45		92405		15.75	
02	WG101334-BLANK	WG101334-1		53788	8.51		200718	11.46		104617		15.76	
03	WG99422-BLANK	WG99422-1		50792	8.51		185557	11.46		97883		15.75	
04	WG98968-BLANK	WG98968-1		56329	8.51		193446	11.46		105196		15.76	
05	DSY-SD-RB09-100411	SE6617-6		42774	8.51		149254	11.45		81348		15.75	
06	DSY-SD-L26-1224	SE6617-1		41887	8.51		160811	11.46		94322		15.76	
07	DSY-SD-L26-2448	SE6617-2		43403	8.51		177064	11.46		102316		15.76	
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-18

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		83246		19.80		43673		26.39		30900		29.71	
UPPER LIMIT		166492		20.34		87346		26.93		61800		30.25	
LOWER LIMIT		41623		19.26		21837		25.85		15450		29.17	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1114		126835	19.35	69454		25.94		46628		29.24	
02	WG101334-BLANK	WG101334-1		145839	19.37	77371		25.94		53915		29.24	
03	WG99422-BLANK	WG99422-1		131868	19.35	72267		25.93		51374		29.24	
04	WG98968-BLANK	WG98968-1		154127	19.37	97438*		25.96		70118*		29.24	
05	DSY-SD-RB09-100411	SE6617-6		116301	19.35	76453		25.93		49293		29.24	
06	DSY-SD-L26-1224	SE6617-1		169182*	19.37	76634		25.96		39089		29.26	
07	DSY-SD-L26-2448	SE6617-2		190817*	19.37	79764		25.96		41913		29.27	
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-g.i\G111411.b\G3923.D
Report Date: 18-Nov-2011 14:10

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G111411.b\G3923.D
Lab Smp Id: SSTD1.00G1114
Inj Date : 14-NOV-2011 08:27 MS Autotune Date: 15-JUN-2004 08:29
Operator : WAS Inst ID: gcms-g.i
Smp Info : SSTD1.00G1114
Misc Info : SW846 M8270C SIM
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G111411.b\gspsim22.m
Meth Date : 18-Nov-2011 14:09 gcms-g.i Quant Type: ISTD
Cal Date : 02-NOV-2011 10:00 Cal File: G3696.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
*	7 1,4-Dichlorobenzene-D4	152	8.512	8.512	(1.000)	50284	0.80000	(a)	
*	20 Naphthalene-D8	136	11.451	11.451	(1.000)	175100	0.80000	(a)	
$	25 2-Methylnaphthalene-D10	152	13.103	13.103	(0.832)	135975	1.00000	1.02	
*	39 Acenaphthene-D10	164	15.748	15.748	(1.000)	92405	0.80000	(a)	
$	47 Fluorene-D10	176	17.012	17.012	(1.080)	159421	1.00000	1.33	
*	58 Phenanthrene-D10	188	19.354	19.354	(1.000)	126835	0.80000	(a)	
$	64 Pyrene-D10	212	22.836	22.836	(0.880)	105896	1.00000	0.959(a)	
*	68 Chrysene-D12	240	25.943	25.943	(1.000)	69454	0.80000	(a)	
	75 Benzo(a)pyrene	252	29.115	29.115	(0.996)	72017	1.00000	0.952	
*	76 Perylene-D12	264	29.240	29.240	(1.000)	46628	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-g.i\G111611.b\G3955.D
Report Date: 18-Nov-2011 14:17

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G111611.b\G3955.D
Lab Smp Id: SSTD1.00G1116
Inj Date : 16-NOV-2011 07:13 MS Autotune Date: 15-JUN-2004 08:29
Operator : WAS Inst ID: gcms-g.i
Smp Info : WG101237-1,SSTD1.00G1116
Misc Info : WG101237,WG101237,WG101158-3,SE6617-10
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G111611.b\gspsim23.m
Meth Date : 18-Nov-2011 14:16 gcms-g.i Quant Type: ISTD
Cal Date : 15-NOV-2011 12:30 Cal File: G3944.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 7 1,4-Dichlorobenzene-D4	152	8.433	8.433	(1.000)	44875	0.80000	(a)	
* 20 Naphthalene-D8	136	11.388	11.388	(1.000)	154436	0.80000	(a)	
$ 25 2-Methylnaphthalene-D10	152	13.030	13.030	(0.831)	102187	1.00000	0.982(a)	
* 39 Acenaphthene-D10	164	15.679	15.679	(1.000)	81674	0.80000	(a)	
$ 47 Fluorene-D10	176	16.926	16.926	(1.079)	91079	1.00000	0.981(a)	
* 58 Phenanthrene-D10	188	19.264	19.264	(1.000)	113873	0.80000	(a)	
$ 64 Pyrene-D10	212	22.755	22.755	(0.880)	89080	1.00000	1.18	
* 68 Chrysene-D12	240	25.849	25.849	(1.000)	61388	0.80000	(a)	
75 Benzo(a)pyrene	252	29.014	29.014	(0.995)	51783	1.00000	0.900(M)	M3
* 76 Perylene-D12	264	29.151	29.151	(1.000)	35555	0.80000	(aM)	M3

11-28-11

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-g.i\G111711.b\G3972.D
Report Date: 18-Nov-2011 14:25

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G111711.b\G3972.D
Lab Smp Id: SSTD1.00G1117
Inj Date : 17-NOV-2011 07:33 MS Autotune Date: 15-JUN-2004 08:29
Operator : WAS Inst ID: gcms-g.i
Smp Info : WG101263-1
Misc Info : WG101263,WG101263,WG101158-3,SE6617-11
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G111711.b\gspsim23.m
Meth Date : 18-Nov-2011 14:24 gcms-g.i Quant Type: ISTD
Cal Date : 15-NOV-2011 12:30 Cal File: G3944.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 7 1,4-Dichlorobenzene-D4	152	8.385	8.385	(1.000)	56809	0.80000	(a)	
* 20 Naphthalene-D8	136	11.340	11.340	(1.000)	182940	0.80000	(a)	
$ 25 2-Methylnaphthalene-D10	152	12.988	12.988	(0.831)	117326	1.00000	0.989(a)	
* 39 Acenaphthene-D10	164	15.636	15.636	(1.000)	93158	0.80000	(a)	
$ 47 Fluorene-D10	176	16.893	16.893	(1.080)	100980	1.00000	0.954(aM)	M6
* 58 Phenanthrene-D10	188	19.223	19.223	(1.000)	127439	0.80000	(a)	WG3 11-28-11
$ 64 Pyrene-D10	212	22.713	22.713	(0.880)	93248	1.00000	1.17	
* 68 Chrysene-D12	240	25.808	25.808	(1.000)	64701	0.80000	(a)	
75 Benzo(a)pyrene	252	28.976	28.976	(0.996)	61336	1.00000	0.878	
* 76 Perylene-D12	264	29.100	29.100	(1.000)	43134	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-g.i\G112311.b\G4097.D
Report Date: 28-Nov-2011 08:47

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G112311.b\G4097.D
Lab Smp Id: SSTD1.00G1123
Inj Date : 23-NOV-2011 10:55 MS Autotune Date: 15-JUN-2004 08:29
Operator : JCG Inst ID: gcms-g.i
Smp Info : SSTD1.00G1123
Misc Info : SW846 M8270C SIM
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G112311.b\gspsim25.m
Meth Date : 28-Nov-2011 08:46 gcms-g.i Quant Type: ISTD
Cal Date : 19-NOV-2011 15:27 Cal File: G4023.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)		REVIEW CODE
*	7 1,4-Dichlorobenzene-D4	152	8.256	8.256	(1.000)	46410	0.80000		(a)	
*	20 Naphthalene-D8	136	11.205	11.205	(1.000)	163926	0.80000		(a)	
$	25 2-Methylnaphthalene-D10	152	12.890	12.890	(0.832)	113504	1.00000	1.00		
*	39 Acenaphthene-D10	164	15.491	15.491	(1.000)	85272	0.80000		(a)	
$	47 Fluorene-D10	176	16.757	16.757	(1.082)	88968	1.00000	0.904	(aM)	M6
*	58 Phenanthrene-D10	188	19.102	19.102	(1.000)	126447	0.80000		(a)	
$	64 Pyrene-D10	212	22.586	22.586	(0.880)	112508	1.00000	1.10		
*	68 Chrysene-D12	240	25.672	25.672	(1.000)	74687	0.80000		(a)	
	75 Benzo(a)pyrene	252	28.877	28.877	(0.996)	87395	1.00000	1.06		
*	76 Perylene-D12	264	29.002	29.002	(1.000)	50122	0.80000		(aM)	M3

wcs 11-28-11

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM VI PCB

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM VI PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	13.28	3.82
02	WG98971-BLANK	WG98971-1	10/25/11	1259	13.29	3.83
03	WG98971-LCS	WG98971-2	10/25/11	1325	13.30	3.83
04	WG98971-LCSD	WG98971-3	10/25/11	1351	13.29	3.83
05		AR1660 0.25	10/25/11	1509	13.29	3.82
06	DSY-SD-RB09-100411	SE6617-6	10/25/11	2046	13.29	3.81
07		AR1660 1.0	10/25/11	2137	13.29	3.81
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	17.03	4.31
02	WG98971-BLANK	WG98971-1	10/25/11	1259	17.04	4.32
03	WG98971-LCS	WG98971-2	10/25/11	1325	17.04	4.32
04	WG98971-LCSD	WG98971-3	10/25/11	1351	17.04	4.32
05		AR1660 0.25	10/25/11	1509	17.03	4.31
06	DSY-SD-RB09-100411	SE6617-6	10/25/11	2046	17.03	4.31
07		AR1660 1.0	10/25/11	2137	17.03	4.31
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000235

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1830000	1.0000000	37768000	0.001	18.30	20.00	2RDR
(2)	1.1354000	1.0000000	21264000	0.001	13.54	20.00	2RDR
(3)	1.0897000	1.0000000	53895000	0.001	8.97	20.00	2RDR
(4)	1.0366000	1.0000000	30635000	0.001	3.66	20.00	2RDR
(5)	0.9511900	1.0000000	25113000	0.001	-4.88	20.00	2RDR
Average %D: 7.9200							
Aroclor-1260	0.8772200	1.0000000	43989000	0.001	-12.28	20.00	2RDR
(2)	0.9016300	1.0000000	58365000	0.001	-9.84	20.00	2RDR
(3)	0.9620000	1.0000000	45532000	0.001	-3.80	20.00	2RDR
(4)	0.8836600	1.0000000	41669000	0.001	-11.63	20.00	2RDR
(5)	0.8547600	1.0000000	26401000	0.001	-14.52	20.00	2RDR
Average %D: -10.41							
Decachlorobiphenyl	1.75e-002	2.e-002	522250000	0.001	-12.50	20.00	2RDR
Tetrachloro-m-xylene	2.24e-002	2.e-002	1.3e+009	0.001	12.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1076000	1.0000000	3861800.0	0.001	10.76	20.00	2RDR
(2)	1.1020000	1.0000000	6314600.0	0.001	10.20	20.00	2RDR
(3)	1.0410000	1.0000000	10786000	0.001	4.10	20.00	2RDR
(4)	1.0197000	1.0000000	5610900.0	0.001	1.97	20.00	2RDR
(5)	1.0098000	1.0000000	4961400.0	0.001	0.98	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	1.0331000	1.0000000	7258000.0	0.001	3.31	20.00	2RDR
(2)	1.0394000	1.0000000	8839300.0	0.001	3.94	20.00	2RDR
(3)	1.0611000	1.0000000	6314800.0	0.001	6.11	20.00	2RDR
(4)	1.0261000	1.0000000	5859400.0	0.001	2.61	20.00	2RDR
(5)	1.0370000	1.0000000	5911400.0	0.001	3.70	20.00	2RDR
Average %D: 3.9400							
Decachlorobiphenyl	1.91e-002	2.e-002	91785000	0.001	-4.50	20.00	2RDR
Tetrachloro-m-xylene	2.17e-002	2.e-002	236440000	0.001	8.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2735100	0.2500000	34489000	0.001	9.40	20.00	2RDR
(2)	0.2769800	0.2500000	20424000	0.001	10.79	20.00	2RDR
(3)	0.2394900	0.2500000	41239000	0.001	-4.20	20.00	2RDR
(4)	0.2595400	0.2500000	28584000	0.001	3.82	20.00	2RDR
(5)	0.2543200	0.2500000	24379000	0.001	1.73	20.00	2RDR
Average %D: 4.3200							
Aroclor-1260	0.2717700	0.2500000	49175000	0.001	8.71	20.00	2RDR
(2)	0.2671800	0.2500000	59586000	0.001	6.87	20.00	2RDR
(3)	0.2742700	0.2500000	45441000	0.001	9.71	20.00	2RDR
(4)	0.2710200	0.2500000	46132000	0.001	8.41	20.00	2RDR
(5)	0.2979600	0.2500000	35279000	0.001	19.18	20.00	2RDR
Average %D: 10.560							
Decachlorobiphenyl	5.71e-003	5.e-003	640580000	0.001	14.20	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	1.13e+009	0.001	0.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2471500	0.2500000	3488200.0	0.001	-1.14	20.00	2RDR
(2)	0.2518000	0.2500000	5857500.0	0.001	0.72	20.00	2RDR
(3)	0.2368700	0.2500000	9583300.0	0.001	-5.25	20.00	2RDR
(4)	0.2359300	0.2500000	5042500.0	0.001	-5.63	20.00	2RDR
(5)	0.2542900	0.2500000	4956100.0	0.001	1.72	20.00	2RDR
Average %D: -1.920							
Aroclor-1260	0.2510600	0.2500000	6928600.0	0.001	0.42	20.00	2RDR
(2)	0.2392400	0.2500000	7753400.0	0.001	-4.30	20.00	2RDR
(3)	0.2469500	0.2500000	5555000.0	0.001	-1.22	20.00	2RDR
(4)	0.2535000	0.2500000	5604300.0	0.001	1.40	20.00	2RDR
(5)	0.2414000	0.2500000	5165200.0	0.001	-3.44	20.00	2RDR
Average %D: -1.440							
Decachlorobiphenyl	4.97e-003	5.e-003	93873000	0.001	-0.60	20.00	2RDR
Tetrachloro-m-xylene	4.64e-003	5.e-003	198710000	0.001	-7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1320000	1.0000000	36153000	0.001	13.20	20.00	2RDR
(2)	1.1266000	1.0000000	21101000	0.001	12.66	20.00	2RDR
(3)	1.0274000	1.0000000	50675000	0.001	2.74	20.00	2RDR
(4)	1.0853000	1.0000000	32111000	0.001	8.53	20.00	2RDR
(5)	1.0609000	1.0000000	28130000	0.001	6.09	20.00	2RDR
Average %D: 8.6400							
Aroclor-1260	1.1455000	1.0000000	58212000	0.001	14.55	20.00	2RDR
(2)	1.1247000	1.0000000	73535000	0.001	12.47	20.00	2RDR
(3)	1.1560000	1.0000000	55336000	0.001	15.60	20.00	2RDR
(4)	1.1523000	1.0000000	55069000	0.001	15.23	20.00	2RDR
(5)	1.1983000	1.0000000	37467000	0.001	19.83	20.00	2RDR
Average %D: 15.540							
Decachlorobiphenyl	2.37e-002	2.e-002	714850000	0.001	18.50	20.00	2RDR
Tetrachloro-m-xylene	2.05e-002	2.e-002	1.19e+009	0.001	2.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9821600	1.0000000	3427800.0	0.001	-1.78	20.00	2RDR
(2)	1.0035000	1.0000000	5756200.0	0.001	0.35	20.00	2RDR
(3)	0.9733700	1.0000000	10084000	0.001	-2.66	20.00	2RDR
(4)	0.9545600	1.0000000	5249500.0	0.001	-4.54	20.00	2RDR
(5)	1.0030000	1.0000000	4928000.0	0.001	0.30	20.00	2RDR
Average %D: -1.670							
Aroclor-1260	1.0067000	1.0000000	7071600.0	0.001	0.67	20.00	2RDR
(2)	0.9734300	1.0000000	8269900.0	0.001	-2.66	20.00	2RDR
(3)	0.9749700	1.0000000	5792600.0	0.001	-2.50	20.00	2RDR
(4)	1.0067000	1.0000000	5747400.0	0.001	0.67	20.00	2RDR
(5)	0.9626400	1.0000000	5477400.0	0.001	-3.74	20.00	2RDR
Average %D: -1.510							
Decachlorobiphenyl	1.99e-002	2.e-002	95610000	0.001	-0.50	20.00	2RDR
Tetrachloro-m-xylene	1.9e-002	2.e-002	206810000	0.001	-5.00	20.00	2RDR

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.25 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/31/11	1028	13.24	3.80
02	WG99554-BLANK	WG99554-1	10/31/11	1446	13.24	3.80
03	WG99554-LCS	WG99554-2	10/31/11	1512	13.25	3.80
04	WG99554-LCSD	WG99554-3	10/31/11	1538	13.24	3.81
05	DSY-SD-N28-2448MS	WG99554-4	10/31/11	1604	13.23	3.80
06	DSY-SD-N28-2448MSD	WG99554-5	10/31/11	1630	13.24	3.80
07		AR1660 0.25	10/31/11	1722	13.24	3.80
08		AR1660 1.0	10/31/11	2352	13.23	3.80
09		AR1254 1.0	11/01/11	0110		
10	DSY-SD-L26-1224	SE6617-1	11/01/11	0504	13.23	3.80
11	DSY-SD-L26-2448	SE6617-2	11/01/11	0530	13.24	3.80
12		AR1254 1.0	11/01/11	0740		
13		AR1660 0.25	11/01/11	0845	13.25	3.80
14		AR1660 0.25	11/02/11	1723	13.23	3.80
15		AR1254 1.0	11/02/11	1841		
16	DSY-SD-L24-0012	SE6617-3	11/02/11	1959	13.24	3.80
17	DSY-SD-L24-1224	SE6617-4	11/02/11	2025	13.25	3.80
18	DSY-SD-L24-2448	SE6617-5	11/02/11	2051	13.23	3.80
19	DSY-SD-N24-0012	SE6617-7	11/02/11	2117	13.23	3.80
20	DSY-SD-N24-1224	SE6617-8	11/02/11	2143	13.23	3.80

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000232

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.28

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/31/11	1028	16.96	4.29
02	WG99554-BLANK	WG99554-1	10/31/11	1446	16.97	4.29
03	WG99554-LCS	WG99554-2	10/31/11	1512	16.97	4.30
04	WG99554-LCSD	WG99554-3	10/31/11	1538	16.97	4.30
05	DSY-SD-N28-2448MS	WG99554-4	10/31/11	1604	16.96	4.29
06	DSY-SD-N28-2448MSD	WG99554-5	10/31/11	1630	16.96	4.29
07		AR1660 0.25	10/31/11	1722	16.97	4.29
08		AR1660 1.0	10/31/11	2352	16.95	4.29
09		AR1254 1.0	11/01/11	0110		
10	DSY-SD-L26-1224	SE6617-1	11/01/11	0504	16.95	4.29
11	DSY-SD-L26-2448	SE6617-2	11/01/11	0530	16.96	4.29
12		AR1254 1.0	11/01/11	0740		
13		AR1660 0.25	11/01/11	0845	16.95	4.28
14		AR1660 0.25	11/02/11	1723	16.96	4.29
15		AR1254 1.0	11/02/11	1841		
16	DSY-SD-L24-0012	SE6617-3	11/02/11	1959	16.97	4.29
17	DSY-SD-L24-1224	SE6617-4	11/02/11	2025	16.98	4.29
18	DSY-SD-L24-2448	SE6617-5	11/02/11	2051	16.96	4.29
19	DSY-SD-N24-0012	SE6617-7	11/02/11	2117	16.96	4.29
20	DSY-SD-N24-1224	SE6617-8	11/02/11	2143	16.96	4.29

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000236

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 1028

Lab File ID: 7EZ042 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0686000	1.0000000	34143000	0.001	6.86	20.00	2RDR
(2)	0.9797400	1.0000000	18367000	0.001	-2.03	20.00	2RDR
(3)	1.0631000	1.0000000	52518000	0.001	6.31	20.00	2RDR
(4)	1.0088000	1.0000000	29793000	0.001	0.88	20.00	2RDR
(5)	0.9632100	1.0000000	25443000	0.001	-3.68	20.00	2RDR
Average %D: 1.6700							
Aroclor-1260	0.9212000	1.0000000	46314000	0.001	-7.88	20.00	2RDR
(2)	0.9349800	1.0000000	60636000	0.001	-6.50	20.00	2RDR
(3)	0.9824200	1.0000000	46560000	0.001	-1.76	20.00	2RDR
(4)	0.9067600	1.0000000	42816000	0.001	-9.32	20.00	2RDR
(5)	1.0218000	1.0000000	31760000	0.001	2.18	20.00	2RDR
Average %D: -4.660							
Decachlorobiphenyl	1.85e-002	2.e-002	554120000	0.001	-7.50	20.00	2RDR
Tetrachloro-m-xylene	2.09e-002	2.e-002	1.22e+009	0.001	4.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 1028

Lab File ID: 7EZ042 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0300000	1.0000000	3593600.0	0.001	3.00	20.00	2RDR
(2)	1.0120000	1.0000000	5804500.0	0.001	1.20	20.00	2RDR
(3)	0.9749100	1.0000000	10100000	0.001	-2.51	20.00	2RDR
(4)	0.9746200	1.0000000	5360800.0	0.001	-2.54	20.00	2RDR
(5)	0.9791100	1.0000000	4810300.0	0.001	-2.09	20.00	2RDR
Average %D: -0.590							
Aroclor-1260	0.9624200	1.0000000	6758900.0	0.001	-3.76	20.00	2RDR
(2)	0.9602500	1.0000000	8156200.0	0.001	-3.98	20.00	2RDR
(3)	0.9633700	1.0000000	5722300.0	0.001	-3.66	20.00	2RDR
(4)	0.9554100	1.0000000	5451100.0	0.001	-4.46	20.00	2RDR
(5)	0.9431900	1.0000000	5364100.0	0.001	-5.68	20.00	2RDR
Average %D: -4.310							
Decachlorobiphenyl	1.77e-002	2.e-002	85071000	0.001	-11.50	20.00	2RDR
Tetrachloro-m-xylene	2.01e-002	2.e-002	218300000	0.001	0.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 1722

Lab File ID: 7EZ057 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2544600	0.2500000	32013000	0.001	1.78	20.00	2RDR
(2)	0.2558700	0.2500000	18812000	0.001	2.35	20.00	2RDR
(3)	0.2222300	0.2500000	37736000	0.001	-11.11	20.00	2RDR
(4)	0.2392300	0.2500000	26133000	0.001	-4.31	20.00	2RDR
(5)	0.2169700	0.2500000	20330000	0.001	-13.21	20.00	2RDR
Average %D: -4.880							
Aroclor-1260	0.2224500	0.2500000	38942000	0.001	-11.02	20.00	2RDR
(2)	0.2245700	0.2500000	47838000	0.001	-10.17	20.00	2RDR
(3)	0.2283400	0.2500000	36436000	0.001	-8.66	20.00	2RDR
(4)	0.2220900	0.2500000	36602000	0.001	-11.16	20.00	2RDR
(5)	0.2400500	0.2500000	28062000	0.001	-3.98	20.00	2RDR
Average %D: -9.000							
Decachlorobiphenyl	4.72e-003	5.e-003	520500000	0.001	-5.60	20.00	2RDR
Tetrachloro-m-xylene	5.62e-003	5.e-003	1.26e+009	0.001	12.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 1722

Lab File ID: 7EZ057 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2530600	0.2500000	3570800.0	0.001	1.22	20.00	2RDR
(2)	0.2483000	0.2500000	5777000.0	0.001	-0.68	20.00	2RDR
(3)	0.2322100	0.2500000	9387800.0	0.001	-7.12	20.00	2RDR
(4)	0.2278700	0.2500000	4863500.0	0.001	-8.85	20.00	2RDR
(5)	0.2319300	0.2500000	4515500.0	0.001	-7.23	20.00	2RDR
Average %D: -4.520							
Aroclor-1260	0.2293400	0.2500000	6314400.0	0.001	-8.26	20.00	2RDR
(2)	0.2227200	0.2500000	7183900.0	0.001	-10.91	20.00	2RDR
(3)	0.2295300	0.2500000	5134400.0	0.001	-8.19	20.00	2RDR
(4)	0.2352800	0.2500000	5184100.0	0.001	-5.89	20.00	2RDR
(5)	0.2257500	0.2500000	4803500.0	0.001	-9.70	20.00	2RDR
Average %D: -8.600							
Decachlorobiphenyl	4.69e-003	5.e-003	88428000	0.001	-6.20	20.00	2RDR
Tetrachloro-m-xylene	5.23e-003	5.e-003	224440000	0.001	4.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 2352

Lab File ID: 7EZ072 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0986000	1.0000000	35096000	0.001	9.86	20.00	2RDR
(2)	1.0094000	1.0000000	18921000	0.001	0.94	20.00	2RDR
(3)	1.0532000	1.0000000	52007000	0.001	5.32	20.00	2RDR
(4)	0.9862900	1.0000000	29112000	0.001	-1.37	20.00	2RDR
(5)	0.8965800	1.0000000	23613000	0.001	-10.34	20.00	2RDR
Average %D: 0.8800							
Aroclor-1260	0.8606800	1.0000000	43116000	0.001	-13.93	20.00	2RDR
(2)	0.8893700	1.0000000	57529000	0.001	-11.06	20.00	2RDR
(3)	0.9533000	1.0000000	45093000	0.001	-4.67	20.00	2RDR
(4)	0.8609900	1.0000000	40543000	0.001	-13.90	20.00	2RDR
(5)	0.8693700	1.0000000	26868000	0.001	-13.06	20.00	2RDR
Average %D: -11.33							
Decachlorobiphenyl	1.76e-002	2.e-002	525310000	0.001	-12.00	20.00	2RDR
Tetrachloro-m-xylene	2.34e-002	2.e-002	1.36e+009	0.001	17.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 10/31/11 Time: 2352

Lab File ID: 7EZ072 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0662000	1.0000000	3718800.0	0.001	6.62	20.00	2RDR
(2)	1.0180000	1.0000000	5838500.0	0.001	1.80	20.00	2RDR
(3)	0.9833900	1.0000000	10189000	0.001	-1.66	20.00	2RDR
(4)	0.9650500	1.0000000	5307700.0	0.001	-3.50	20.00	2RDR
(5)	0.9555900	1.0000000	4694400.0	0.001	-4.44	20.00	2RDR
Average %D: -0.240							
Aroclor-1260	0.9286800	1.0000000	6520500.0	0.001	-7.13	20.00	2RDR
(2)	0.9515000	1.0000000	8080600.0	0.001	-4.85	20.00	2RDR
(3)	0.9644400	1.0000000	5728800.0	0.001	-3.56	20.00	2RDR
(4)	0.9464000	1.0000000	5399100.0	0.001	-5.36	20.00	2RDR
(5)	0.9283700	1.0000000	5277700.0	0.001	-7.16	20.00	2RDR
Average %D: -5.610							
Decachlorobiphenyl	1.73e-002	2.e-002	83167000	0.001	-13.50	20.00	2RDR
Tetrachloro-m-xylene	2.21e-002	2.e-002	240020000	0.001	10.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0110

Lab File ID: 7EZ075 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0465000	1.0000000	42951000	0.001	4.65	20.00	2RDR
(2)	1.0464000	1.0000000	52590000	0.001	4.64	20.00	2RDR
(3)	1.0599000	1.0000000	34814000	0.001	5.99	20.00	2RDR
(4)	1.0577000	1.0000000	37936000	0.001	5.77	20.00	2RDR
(5)	1.1589000	1.0000000	42932000	0.001	15.89	20.00	2RDR
Average %D: 7.3900							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0110

Lab File ID: 7EZ075 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0359000	1.0000000	4195100.0	0.001	3.59	20.00	2RDR
(2)	1.0461000	1.0000000	6905700.0	0.001	4.61	20.00	2RDR
(3)	1.0181000	1.0000000	7628600.0	0.001	1.81	20.00	2RDR
(4)	1.0176000	1.0000000	9606400.0	0.001	1.76	20.00	2RDR
(5)	1.0584000	1.0000000	5975300.0	0.001	5.84	20.00	2RDR
Average %D: 3.5200							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0740

Lab File ID: 7EZ090 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1182000	1.0000000	46028000	0.001	11.82	20.00	2RDR	
(2)	1.1388000	1.0000000	57533000	0.001	13.88	20.00	2RDR	
(3)	1.1442000	1.0000000	37775000	0.001	14.42	20.00	2RDR	
(4)	1.1077000	1.0000000	39813000	0.001	10.77	20.00	2RDR	
(5)	1.2129000	1.0000000	45094000	0.001	21.29	20.00	2RDR	<-
Average %D: 14.440								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0740

Lab File ID: 7EZ090 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1377000	1.0000000	4607800.0	0.001	13.77	20.00	2RDR
(2)	1.1191000	1.0000000	7388200.0	0.001	11.91	20.00	2RDR
(3)	1.0866000	1.0000000	8145900.0	0.001	8.66	20.00	2RDR
(4)	1.0947000	1.0000000	10349000	0.001	9.47	20.00	2RDR
(5)	1.1409000	1.0000000	6456100.0	0.001	14.09	20.00	2RDR
Average %D: 11.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0845

Lab File ID: 7EZ091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2950500	0.2500000	37288000	0.001	18.02	20.00	2RDR	
(2)	0.2745700	0.2500000	20240000	0.001	9.83	20.00	2RDR	
(3)	0.2975400	0.2500000	53032000	0.001	19.02	20.00	2RDR	
(4)	0.2849500	0.2500000	31650000	0.001	13.98	20.00	2RDR	
(5)	0.2610700	0.2500000	25111000	0.001	4.43	20.00	2RDR	
Average %D: 13.040								
Aroclor-1260	0.2505600	0.2500000	44773000	0.001	0.22	20.00	2RDR	
(2)	0.2640400	0.2500000	58719000	0.001	5.62	20.00	2RDR	
(3)	0.2765500	0.2500000	45887000	0.001	10.62	20.00	2RDR	
(4)	0.2421300	0.2500000	40504000	0.001	-3.15	20.00	2RDR	
(5)	0.2690700	0.2500000	31677000	0.001	7.63	20.00	2RDR	
Average %D: 4.2000								
Decachlorobiphenyl	4.81e-003	5.e-003	531390000	0.001	-3.80	20.00	2RDR	
Tetrachloro-m-xylene	6.41e-003	5.e-003	1.44e+009	0.001	28.20	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/01/11 Time: 0845

Lab File ID: 7EZ091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2893100	0.2500000	4076900.0	0.001	15.72	20.00	2RDR
(2)	0.2689800	0.2500000	6252700.0	0.001	7.59	20.00	2RDR
(3)	0.2612300	0.2500000	10606000	0.001	4.49	20.00	2RDR
(4)	0.2577100	0.2500000	5526300.0	0.001	3.08	20.00	2RDR
(5)	0.2519900	0.2500000	4910600.0	0.001	0.80	20.00	2RDR
Average %D: 6.3200							
Aroclor-1260	0.2490400	0.2500000	6871600.0	0.001	-0.38	20.00	2RDR
(2)	0.2603600	0.2500000	8481700.0	0.001	4.14	20.00	2RDR
(3)	0.2617400	0.2500000	5912000.0	0.001	4.70	20.00	2RDR
(4)	0.2530600	0.2500000	5594200.0	0.001	1.22	20.00	2RDR
(5)	0.2573400	0.2500000	5533800.0	0.001	2.94	20.00	2RDR
Average %D: 2.5200							
Decachlorobiphenyl	4.59e-003	5.e-003	86438000	0.001	-8.20	20.00	2RDR
Tetrachloro-m-xylene	5.76e-003	5.e-003	247700000	0.001	15.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 1723

Lab File ID: 7EK062 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2038200	0.2500000	25421000	0.001	-18.47	20.00	2RDR	
(2)	0.1810500	0.2500000	13088000	0.001	-27.58	20.00	2RDR	<-
(3)	0.2156600	0.2500000	36404000	0.001	-13.74	20.00	2RDR	
(4)	0.1938700	0.2500000	20660000	0.001	-22.45	20.00	2RDR	<-
(5)	0.1671500	0.2500000	14934000	0.001	-33.14	20.00	2RDR	<-
Average %D: -23.08								
Aroclor-1260	0.1705000	0.2500000	28181000	0.001	-31.80	20.00	2RDR	<-
(2)	0.1888400	0.2500000	37980000	0.001	-24.46	20.00	2RDR	<-
(3)	0.1987400	0.2500000	30644000	0.001	-20.50	20.00	2RDR	<-
(4)	0.1729000	0.2500000	27039000	0.001	-30.84	20.00	2RDR	<-
(5)	0.1909300	0.2500000	21954000	0.001	-23.63	20.00	2RDR	<-
Average %D: -26.24								
Decachlorobiphenyl	3.31e-003	5.e-003	349910000	0.001	-33.80	20.00	2RDR	<-
Tetrachloro-m-xylene	4.34e-003	5.e-003	959910000	0.001	-13.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 1723

Lab File ID: 7EK062 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2015000	0.2500000	2850400.0	0.001	-19.40	20.00	2RDR	
(2)	0.1928500	0.2500000	4500900.0	0.001	-22.86	20.00	2RDR	<-
(3)	0.2070200	0.2500000	8329900.0	0.001	-17.19	20.00	2RDR	
(4)	0.2340500	0.2500000	5000800.0	0.001	-6.38	20.00	2RDR	
(5)	0.2229700	0.2500000	4338800.0	0.001	-10.81	20.00	2RDR	
Average %D: -15.32								
Aroclor-1260	0.1891000	0.2500000	5176300.0	0.001	-24.36	20.00	2RDR	<-
(2)	0.2428300	0.2500000	7877200.0	0.001	-2.87	20.00	2RDR	
(3)	0.1954700	0.2500000	4312300.0	0.001	-21.81	20.00	2RDR	<-
(4)	0.1793600	0.2500000	3894000.0	0.001	-28.26	20.00	2RDR	<-
(5)	0.2616200	0.2500000	5632600.0	0.001	4.65	20.00	2RDR	
Average %D: -14.52								
Decachlorobiphenyl	4.65e-003	5.e-003	87570000	0.001	-7.00	20.00	2RDR	
Tetrachloro-m-xylene	4.25e-003	5.e-003	181930000	0.001	-15.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 1841

Lab File ID: 7EK065 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8456100	1.0000000	34349000	0.001	-15.44	20.00	2RDR
(2)	0.9040300	1.0000000	45009000	0.001	-9.60	20.00	2RDR
(3)	0.9043400	1.0000000	29374000	0.001	-9.57	20.00	2RDR
(4)	0.8347800	1.0000000	29581000	0.001	-16.52	20.00	2RDR
(5)	0.9604500	1.0000000	35033000	0.001	-3.96	20.00	2RDR
Average %D: -11.02							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 1841

Lab File ID: 7EK065 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8865900	1.0000000	3590000.0	0.001	-11.34	20.00	2RDR
(2)	0.8691000	1.0000000	5734900.0	0.001	-13.09	20.00	2RDR
(3)	0.8721800	1.0000000	6524300.0	0.001	-12.78	20.00	2RDR
(4)	0.8888000	1.0000000	8364900.0	0.001	-11.12	20.00	2RDR
(5)	0.9218100	1.0000000	5180300.0	0.001	-7.82	20.00	2RDR
Average %D: -11.23							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.25 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-N24-2448	SE6617-9	11/02/11	2209	13.23	3.80
02	DSY-SD-DUP26-100511	SE6617-10	11/02/11	2235	13.23	3.80
03	DSY-SD-N26-0012	SE6617-11	11/02/11	2301	13.23	3.80
04		AR1660 1.0	11/02/11	2353	13.23	3.80
05		AR1254 1.0	11/03/11	0109		
06	DSY-SD-N26-1224	SE6617-12	11/03/11	0135	13.22	3.80
07	DSY-SD-N26-2448	SE6617-13	11/03/11	0200	13.22	3.80
08	DSY-SD-N28-0012	SE6617-14	11/03/11	0226	13.22	3.80
09	DSY-SD-N28-1224	SE6617-15	11/03/11	0252	13.22	3.80
10	DSY-SD-N28-2448	SE6617-16	11/03/11	0318		
11	DSY-SD-N30-0012	SE6617-17	11/03/11	0343	13.23	3.80
12	DSY-SD-N30-1224	SE6617-18	11/03/11	0409	13.23	3.80
13	DSY-SD-N30-2448	SE6617-19	11/03/11	0435	13.22	3.80
14	DSY-SD-Q25-0012	SE6617-20	11/03/11	0500	13.22	3.80
15		AR1660 0.25	11/03/11	0552	13.23	3.80
16		AR1254 1.0	11/03/11	0710		
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.28

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-N24-2448	SE6617-9	11/02/11	2209	16.96	4.29
02	DSY-SD-DUP26-100511	SE6617-10	11/02/11	2235	16.95	4.29
03	DSY-SD-N26-0012	SE6617-11	11/02/11	2301	16.96	4.29
04		AR1660 1.0	11/02/11	2353	16.95	4.29
05		AR1254 1.0	11/03/11	0109		
06	DSY-SD-N26-1224	SE6617-12	11/03/11	0135	16.95	4.29
07	DSY-SD-N26-2448	SE6617-13	11/03/11	0200	16.95	4.29
08	DSY-SD-N28-0012	SE6617-14	11/03/11	0226	16.95	4.29
09	DSY-SD-N28-1224	SE6617-15	11/03/11	0252	16.95	4.29
10	DSY-SD-N28-2448	SE6617-16	11/03/11	0318	16.95	4.29
11	DSY-SD-N30-0012	SE6617-17	11/03/11	0343	16.95	4.29
12	DSY-SD-N30-1224	SE6617-18	11/03/11	0409	16.95	4.29
13	DSY-SD-N30-2448	SE6617-19	11/03/11	0435	16.95	4.29
14	DSY-SD-Q25-0012	SE6617-20	11/03/11	0500	16.95	4.29
15		AR1660 0.25	11/03/11	0552	16.95	4.29
16		AR1254 1.0	11/03/11	0710		
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000237

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 2353

Lab File ID: 7EK077 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0030000	1.0000000	32062000	0.001	0.30	20.00	2RDR	
(2)	0.9418900	1.0000000	17661000	0.001	-5.81	20.00	2RDR	
(3)	0.9148400	1.0000000	44860000	0.001	-8.52	20.00	2RDR	
(4)	0.8490200	1.0000000	24957000	0.001	-15.10	20.00	2RDR	
(5)	0.7631100	1.0000000	19955000	0.001	-23.69	20.00	2RDR	<-
Average %D: -10.56								
Aroclor-1260	0.6874200	1.0000000	33994000	0.001	-31.26	20.00	2RDR	<-
(2)	0.7115300	1.0000000	45391000	0.001	-28.85	20.00	2RDR	<-
(3)	0.7585100	1.0000000	35327000	0.001	-24.15	20.00	2RDR	<-
(4)	0.6783200	1.0000000	31503000	0.001	-32.17	20.00	2RDR	<-
(5)	0.7772200	1.0000000	23927000	0.001	-22.28	20.00	2RDR	<-
Average %D: -27.74								
Decachlorobiphenyl	1.35e-002	2.e-002	399420000	0.001	-32.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.1e-002	2.e-002	1.22e+009	0.001	5.00	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/02/11 Time: 2353

Lab File ID: 7EK077 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0148000	1.0000000	3540900.0	0.001	1.48	20.00	2RDR	
(2)	0.9656300	1.0000000	5541600.0	0.001	-3.44	20.00	2RDR	
(3)	0.8854600	1.0000000	9171100.0	0.001	-11.45	20.00	2RDR	
(4)	0.8592700	1.0000000	4720700.0	0.001	-14.07	20.00	2RDR	
(5)	0.8394600	1.0000000	4122100.0	0.001	-16.05	20.00	2RDR	
Average %D: -8.710								
Aroclor-1260	0.8217300	1.0000000	5765100.0	0.001	-17.83	20.00	2RDR	
(2)	0.8567900	1.0000000	7263500.0	0.001	-14.32	20.00	2RDR	
(3)	0.8556200	1.0000000	5069400.0	0.001	-14.44	20.00	2RDR	
(4)	0.8402200	1.0000000	4786200.0	0.001	-15.98	20.00	2RDR	
(5)	0.8367600	1.0000000	4744100.0	0.001	-16.32	20.00	2RDR	
Average %D: -15.78								
Decachlorobiphenyl	1.49e-002	2.e-002	71670000	0.001	-25.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.08e-002	2.e-002	226310000	0.001	4.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0109

Lab File ID: 7EK080 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8819400	1.0000000	35902000	0.001	-11.81	20.00	2RDR
(2)	0.9111800	1.0000000	45389000	0.001	-8.88	20.00	2RDR
(3)	0.9016600	1.0000000	29281000	0.001	-9.83	20.00	2RDR
(4)	0.8699200	1.0000000	30895000	0.001	-13.01	20.00	2RDR
(5)	0.9799000	1.0000000	35804000	0.001	-2.01	20.00	2RDR
Average %D: -9.110							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0109

Lab File ID: 7EK080 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9772400	1.0000000	3957500.0	0.001	-2.28	20.00	2RDR
(2)	0.9353400	1.0000000	6173300.0	0.001	-6.47	20.00	2RDR
(3)	0.9082400	1.0000000	6797200.0	0.001	-9.18	20.00	2RDR
(4)	0.9320800	1.0000000	8782400.0	0.001	-6.79	20.00	2RDR
(5)	0.9929200	1.0000000	5594200.0	0.001	-0.71	20.00	2RDR
Average %D: -5.080							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2836100	0.2500000	35801000	0.001	13.44	20.00	2RDR
(2)	0.2823200	0.2500000	20832000	0.001	12.93	20.00	2RDR
(3)	0.2545600	0.2500000	44301000	0.001	1.82	20.00	2RDR
(4)	0.2627600	0.2500000	28973000	0.001	5.10	20.00	2RDR
(5)	0.2365100	0.2500000	22448000	0.001	-5.40	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	0.2354700	0.2500000	41642000	0.001	-5.81	20.00	2RDR
(2)	0.2437800	0.2500000	53135000	0.001	-2.49	20.00	2RDR
(3)	0.2556900	0.2500000	41796000	0.001	2.28	20.00	2RDR
(4)	0.2356400	0.2500000	39239000	0.001	-5.74	20.00	2RDR
(5)	0.2470600	0.2500000	28935000	0.001	-1.18	20.00	2RDR
Average %D: -2.600							
Decachlorobiphenyl	4.64e-003	5.e-003	510940000	0.001	-7.20	20.00	2RDR
Tetrachloro-m-xylene	5.92e-003	5.e-003	1.33e+009	0.001	18.40	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2765400	0.2500000	3898700.0	0.001	10.62	20.00	2RDR
(2)	0.2684000	0.2500000	6239200.0	0.001	7.36	20.00	2RDR
(3)	0.2450700	0.2500000	9927900.0	0.001	-1.97	20.00	2RDR
(4)	0.2371100	0.2500000	5068700.0	0.001	-5.16	20.00	2RDR
(5)	0.2503700	0.2500000	4878900.0	0.001	0.15	20.00	2RDR
Average %D: 2.2000							
Aroclor-1260	0.2413500	0.2500000	6654100.0	0.001	-3.46	20.00	2RDR
(2)	0.2471100	0.2500000	8024800.0	0.001	-1.16	20.00	2RDR
(3)	0.2527000	0.2500000	5693700.0	0.001	1.08	20.00	2RDR
(4)	0.2524400	0.2500000	5579900.0	0.001	0.98	20.00	2RDR
(5)	0.2513300	0.2500000	5394700.0	0.001	0.53	20.00	2RDR
Average %D: -0.400							
Decachlorobiphenyl	4.72e-003	5.e-003	88981000	0.001	-5.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240130000	0.001	11.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0710

Lab File ID: 7EK094 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1444000	1.0000000	47152000	0.001	14.44	20.00	2RDR	
(2)	1.1618000	1.0000000	58766000	0.001	16.18	20.00	2RDR	
(3)	1.1645000	1.0000000	38490000	0.001	16.45	20.00	2RDR	
(4)	1.1455000	1.0000000	41235000	0.001	14.55	20.00	2RDR	
(5)	1.2573000	1.0000000	46871000	0.001	25.73	20.00	2RDR	<-
Average %D: 17.470								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0710

Lab File ID: 7EK094 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1445000	1.0000000	4635400.0	0.001	14.45	20.00	2RDR
(2)	1.1361000	1.0000000	7500500.0	0.001	13.61	20.00	2RDR
(3)	1.0926000	1.0000000	8191700.0	0.001	9.26	20.00	2RDR
(4)	1.0940000	1.0000000	10343000	0.001	9.40	20.00	2RDR
(5)	1.1573000	1.0000000	6551500.0	0.001	15.73	20.00	2RDR
Average %D: 12.490							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.08 TCX: 3.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/18/11	1516	13.10	3.73
02		AR1660 0.05	11/18/11	1542	13.09	3.73
03		AR1660 0.1	11/18/11	1608	13.10	3.73
04		AR1660 0.25	11/18/11	1633	13.10	3.74
05		AR1660 2.5	11/18/11	1659	13.10	3.74
06		AR1660 10	11/18/11	1725	13.09	3.74
07		AR1016 1.0	11/18/11	1751		
08		AR1260 1.0	11/18/11	1817		
09		AR1242 1.0	11/18/11	1843		
10		AR1248 1.0	11/18/11	2119		
11		AR1254 1.0	11/18/11	2354		
12		AR1254 0.05	11/19/11	0020		
13		AR1254 0.1	11/19/11	0046		
14		AR1254 0.25	11/19/11	0111		
15		AR1254 2.5	11/19/11	0137		
16		AR1254 10	11/19/11	0203		
17		AR1221 1.0	11/19/11	0229		
18		AR1232 1.0	11/19/11	0503		
19		AR1660 1.0	11/22/11	0039	13.07	3.73
20	WG101418-BLANK	WG101418-1	11/22/11	1309	13.07	3.73

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000238

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.71 TCX: 4.20

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/18/11	1516	16.72	4.19
02		AR1660 0.05	11/18/11	1542	16.73	4.19
03		AR1660 0.1	11/18/11	1608	16.73	4.19
04		AR1660 0.25	11/18/11	1633	16.74	4.20
05		AR1660 2.5	11/18/11	1659	16.73	4.20
06		AR1660 10	11/18/11	1725	16.73	4.20
07		AR1016 1.0	11/18/11	1751		
08		AR1260 1.0	11/18/11	1817		
09		AR1242 1.0	11/18/11	1843		
10		AR1248 1.0	11/18/11	2119		
11		AR1254 1.0	11/18/11	2354		
12		AR1254 0.05	11/19/11	0020		
13		AR1254 0.1	11/19/11	0046		
14		AR1254 0.25	11/19/11	0111		
15		AR1254 2.5	11/19/11	0137		
16		AR1254 10	11/19/11	0203		
17		AR1221 1.0	11/19/11	0229		
18		AR1232 1.0	11/19/11	0503		
19		AR1660 1.0	11/22/11	0039	16.70	4.19
20	WG101418-BLANK	WG101418-1	11/22/11	1309	16.70	4.19

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000240

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date(s): 11/18/11 11/19/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1516 1225

LAB FILE ID: RF0.05: 7EK702 RF0.1: 7EK703 RF0.25: 7EK704
RF1: 7EK701 RF2.5: 7EK705 RF10: 7EK706

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1521800	3169000	8314500	3e+007	9e+007	4e+008	2ORDR	5.706e-002	2.72e-008	-4.79e-018	0.99899	0.99000
(2)	865650	1744900	4914200	1e+007	6e+007	2e+008	2ORDR	6.835e-002	4.629e-008	-1.71e-017	0.99862	0.99000
(3)	1751400	3822300	1e+007	4e+007	2e+008	6e+008	2ORDR	7.428e-002	1.668e-008	-1.88e-018	0.99907	0.99000
(4)	1096600	2439000	6788900	2e+007	5e+007	4e+008	2ORDR	-4.39e-002	5.133e-008	-6.55e-017	0.99974	0.99000
(5)	1015500	2065200	5516900	2.e+007	7e+007	4e+008	2ORDR	5.772e-002	3.753e-008	-2.82e-017	0.99926	0.99000
Aroclor-1221	213990	526160	1386100	5323400	1e+007	5e+007	2ORDR	-6.52e-003	1.947e-007	-1.57e-016	0.99998	0.99000
(2)	171880	250200	687370	2834300	6439300	2e+007	2ORDR	-5.69e-003	3.582e-007	4.278e-015	0.99996	0.99000
(3)	247670	499810	1399200	6507500	2e+007	9e+007	2ORDR	1.804e-002	1.534e-007	-4.81e-016	0.99999	0.99000
(4)	662310	1311000	3473000	2e+007	4e+007	2e+008	2ORDR	2.255e-002	5.973e-008	-6.34e-017	0.99997	0.99000
Aroclor-1232	650400	1552500	3001800	1e+007	4e+007	2e+008	2ORDR	3.766e-002	6.244e-008	-4.54e-017	0.99974	0.99000
(2)	594220	1191800	3001800	1e+007	4e+007	1e+008	2ORDR	2.866e-002	7.12e-008	-1.95e-017	0.99986	0.99000
(3)	355600	494320	3001800	1e+007	4e+007	2e+008	2ORDR	7.762e-002	5.955e-008	-7.45e-017	0.99933	0.99000
(4)	135450	462250	2415900	8693300	3e+007	1e+008	2ORDR	5.253e-002	9.446e-008	-1.81e-016	0.99968	0.99000
(5)	184720	399370	1207400	7081500	2e+007	1e+008	2ORDR	6.799e-002	1.156e-007	-2.46e-016	0.99967	0.99000
Aroclor-1242	1554400	2494800	6606900	3e+007	7e+007	3.e+008	2ORDR	2.022e-002	3.38e-008	-3.48e-018	0.99991	0.99000
(2)	865250	1487700	3919000	2e+007	5e+007	2.e+008	2ORDR	2.619e-002	5.476e-008	-2.09e-017	0.99989	0.99000
(3)	1483000	2821200	7869700	4e+007	1e+008	6e+008	2ORDR	4.597e-002	2.302e-008	-1.13e-017	0.99980	0.99000
(4)	809880	1918700	5211400	2e+007	7e+007	3e+008	2ORDR	4.271e-002	3.552e-008	-1.84e-017	0.99985	0.99000
(5)	1008600	1560200	4313600	2.e+007	6.e+007	3e+008	2ORDR	3.966e-002	4.394e-008	-3.91e-017	0.99982	0.99000
Aroclor-1248	850240	1805500	4298300	2e+007	6e+007	3.e+008	2ORDR	2.668e-002	4.174e-008	-2.95e-017	0.99996	0.99000
(2)	1364100	2953000	6878400	3e+007	9e+007	5e+008	2ORDR	2.623e-002	2.779e-008	-1.32e-017	0.99996	0.99000
(3)	1354900	3016400	7228500	4e+007	1e+008	6e+008	2ORDR	3.526e-002	2.407e-008	-1.17e-017	0.99994	0.99000
(4)	1036600	2371900	5562000	3e+007	7e+007	3e+008	2ORDR	2.366e-002	3.652e-008	-5.84e-018	0.99996	0.99000
(5)	436340	885050	2374300	2e+007	4e+007	3e+008	2ORDR	5.02e-002	5.972e-008	-8.46e-017	0.99989	0.99000
Aroclor-1254	1575700	2749000	6947100	4e+007	1e+008	5e+008	2ORDR	1.582e-002	2.582e-008	-1.05e-017	0.99986	0.99000
(2)	1717800	2962900	7615600	5e+007	1e+008	6e+008	2ORDR	2.652e-002	2.077e-008	-8.19e-018	0.99988	0.99000
(3)	759990	1278700	5083000	3e+007	8e+007	5e+008	2ORDR	3.448e-002	3.111e-008	-2.16e-017	0.99987	0.99000
(4)	1310400	2415000	6839800	4e+007	1.e+008	5e+008	2ORDR	1.951e-002	2.588e-008	-1.34e-017	0.99985	0.99000
(5)	985100	1637700	5520700	4e+007	9e+007	6e+008	2ORDR	3.025e-002	2.945e-008	-2.13e-017	0.99988	0.99000
Aroclor-1260	1809400	3732600	1e+007	3e+007	1e+008	6e+008	2ORDR	7.081e-002	1.932e-008	-5.93e-018	0.99889	0.99000
(2)	2139300	4597800	1e+007	5e+007	2e+008	6e+008	2ORDR	8.511e-002	1.33e-008	3.465e-018	0.99864	0.99000
(3)	1683200	3482700	1.e+007	4e+007	1e+008	6e+008	2ORDR	7.179e-002	1.821e-008	-4.16e-018	0.99912	0.99000
(4)	1374900	2962600	9467900	4e+007	1e+008	6e+008	2ORDR	7.337e-002	1.972e-008	-6.54e-018	0.99912	0.99000
(5)	1836300	3796100	8998500	2.e+007	9.e+007	5.e+008	2ORDR	6.201e-002	2.962e-008	-1.94e-017	0.99810	0.99000
Tetrachloro-m-xylene	993360	2171100	5870900	2e+007	7.e+007	3e+008	2ORDR	1.226e-003	7.543e-010	-4.67e-019	0.99899	0.99000
Decachlorobiphenyl	474580	985990	2767100	9752900	3e+007	2e+008	2ORDR	1.064e-003	1.55e-009	-2.26e-018	0.99937	0.99000

FORM VI PCB

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date(s): 11/18/11 11/19/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1516 1225

LAB FILE ID: RF0.05: 7EK702 RF0.1: 7EK703 RF0.25: 7EK704
RF1: 7EK701 RF2.5: 7EK705 RF10: 7EK706

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	155200	299750	766400	2776900	7553500	3.e+007	2ORDR	7.733e-003	3.345e-007	-1.48e-016	0.99993	0.99000
(2)	236100	484130	1215100	4343400	1e+007	5e+007	2ORDR	9.156e-003	2.112e-007	9.641e-019	0.99991	0.99000
(3)	430490	811990	2027100	7920800	2e+007	9e+007	2ORDR	1.315e-002	1.171e-007	-1.82e-017	0.99994	0.99000
(4)	229450	424750	1051200	4247100	1e+007	5e+007	2ORDR	7.792e-003	2.273e-007	-3.26e-016	0.99998	0.99000
(5)	203150	404520	1007100	3806900	1.e+007	4e+007	2ORDR	6.165e-003	2.501e-007	-3.58e-016	0.99996	0.99000
Aroclor-1221	79048	153820	350880	1292700	3068100	1e+007	2ORDR	-1.95e-002	7.995e-007	5.62e-015	0.99998	0.99000
(2)	90267	172270	417740	1685300	4288900	2e+007	2ORDR	2.491e-003	5.84e-007	-3.13e-017	1.00000	0.99000
(3)	50247	111420	270970	1113800	2854200	1e+007	2ORDR	7.933e-003	8.733e-007	1.036e-015	0.99999	0.99000
(4)	194810	378870	905080	3729200	9545100	4e+007	2ORDR	5.984e-003	2.609e-007	1.418e-016	0.99999	0.99000
Aroclor-1232	181170	362790	819150	3300400	8332200	3e+007	2ORDR	-9.62e-004	3.e-007	8.174e-017	1.00000	0.99000
(2)	113680	238710	536400	2049500	5130200	2e+007	2ORDR	-8.64e-003	4.92e-007	-5.89e-016	1.00000	0.99000
(3)	147140	303870	683660	3138800	8506400	4e+007	2ORDR	2.073e-002	3.006e-007	-7.92e-016	0.99995	0.99000
(4)	63722	161510	329910	1617900	4294400	2e+007	2ORDR	2.036e-002	5.961e-007	-3.64e-015	0.99997	0.99000
(5)	74129	153610	327550	1419200	3623900	2e+007	2ORDR	1.685e-003	7.096e-007	-5.41e-015	0.99999	0.99000
Aroclor-1242	159380	248610	619190	2422900	6007100	2e+007	2ORDR	-7.35e-003	4.168e-007	6.448e-017	1.00000	0.99000
(2)	253940	410680	988830	3897800	9632500	4e+007	2ORDR	-7.15e-003	2.583e-007	1.945e-016	1.00000	0.99000
(3)	389330	632640	1562500	6647600	2e+007	7.e+007	2ORDR	6.866e-003	1.473e-007	-5.57e-017	0.99999	0.99000
(4)	198730	325060	815180	3448400	8823000	4e+007	2ORDR	4.523e-003	2.882e-007	-5.45e-016	1.00000	0.99000
(5)	212250	333030	798080	3258600	8393800	3e+007	2ORDR	7.201e-004	3.029e-007	-4.89e-016	0.99999	0.99000
Aroclor-1248	189480	379430	862200	3802500	9386700	4.e+007	2ORDR	7.147e-004	2.694e-007	-4.17e-016	0.99999	0.99000
(2)	230160	476120	1072500	4541200	1e+007	5e+007	2ORDR	-2.09e-003	2.245e-007	-1.16e-016	0.99999	0.99000
(3)	286240	585870	1319600	5772500	1e+007	6.e+007	2ORDR	3.306e-004	1.771e-007	-1.59e-016	0.99999	0.99000
(4)	225390	458310	1044700	4625400	1e+007	5e+007	2ORDR	4.703e-003	2.179e-007	-2.99e-016	0.99999	0.99000
(5)	149120	338250	809830	4295400	1e+007	5e+007	2ORDR	2.764e-002	2.269e-007	-8.19e-016	0.99997	0.99000
Aroclor-1254	165660	312540	746070	3164100	7947300	3e+007	2ORDR	2.009e-003	3.18e-007	-4.72e-016	1.00000	0.99000
(2)	295450	565240	1382700	5721200	1e+007	5e+007	2ORDR	-1.91e-003	1.774e-007	8.795e-017	1.00000	0.99000
(3)	244500	478940	1210600	5725700	1e+007	6e+007	2ORDR	1.828e-002	1.708e-007	-1.76e-016	0.99998	0.99000
(4)	243650	521990	1333200	6806500	2e+007	8e+007	2ORDR	2.8e-002	1.413e-007	-1.96e-016	0.99997	0.99000
(5)	149150	289840	730510	3735400	9661900	5e+007	2ORDR	2.102e-002	2.667e-007	-1.03e-015	0.99998	0.99000
Aroclor-1260	263980	549040	1395200	5378500	1e+007	6e+007	2ORDR	6.703e-003	1.786e-007	-1.07e-016	0.99998	0.99000
(2)	290800	595520	1518400	6173500	2e+007	7e+007	2ORDR	4.378e-003	1.608e-007	-1.28e-016	1.00000	0.99000
(3)	199970	411580	1047900	4954200	1e+007	5e+007	2ORDR	-1.66e-003	2.195e-007	-3.18e-016	0.99990	0.99000
(4)	194690	404360	1045600	4140200	1e+007	5e+007	2ORDR	8.928e-003	2.328e-007	-2.51e-016	0.99998	0.99000
(5)	179720	348760	888600	3430100	9572300	4e+007	2ORDR	1.495e-002	2.699e-007	-7.66e-016	0.99992	0.99000
Tetrachloro-m-xylene	201300	388760	967140	3424500	9788500	4e+007	2ORDR	2.692e-004	5.19e-009	-3.25e-018	0.99985	0.99000
Decachlorobiphenyl	64946	126130	330530	1310100	3283700	1e+007	2ORDR	3.935e-006	1.531e-008	-2.59e-017	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1751

Lab File ID: 7EK663 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0610000	1.0000000	37156000	0.001	6.10	20.00	2RDR	
(2)	1.1002000	1.0000000	22475000	0.001	10.02	20.00	2RDR	
(3)	1.0130000	1.0000000	56634000	0.001	1.30	20.00	2RDR	
(4)	1.6368000	1.0000000	34239000	0.001	63.68	20.00	2RDR	<-
(5)	1.0174000	1.0000000	26082000	0.001	1.74	20.00	2RDR	
Average %D: 16.570								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1751

Lab File ID: 7EK663 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9878500	1.0000000	2933600.0	0.001	-1.22	20.00	2RDR
(2)	1.0524000	1.0000000	4940200.0	0.001	5.24	20.00	2RDR
(3)	1.0263000	1.0000000	8662500.0	0.001	2.63	20.00	2RDR
(4)	1.0070000	1.0000000	4423100.0	0.001	0.70	20.00	2RDR
(5)	0.9907300	1.0000000	3958600.0	0.001	-0.93	20.00	2RDR
Average %D: 1.2800							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1817

Lab File ID: 7EK664 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	1.0502000	1.0000000	51501000	0.001	5.02	20.00	2RDR
(2)	0.9837300	1.0000000	66414000	0.001	-1.63	20.00	2RDR
(3)	1.0375000	1.0000000	53701000	0.001	3.75	20.00	2RDR
(4)	0.8749900	1.0000000	41204000	0.001	-12.50	20.00	2RDR
(5)	1.0336000	1.0000000	33540000	0.001	3.36	20.00	2RDR
Average %D: -0.400							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1817

Lab File ID: 7EK664 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9715400	1.0000000	5418700.0	0.001	-2.85	20.00	2RDR
(2)	0.9512000	1.0000000	5914200.0	0.001	-4.88	20.00	2RDR
(3)	1.0490000	1.0000000	4820300.0	0.001	4.90	20.00	2RDR
(4)	0.8779300	1.0000000	3748100.0	0.001	-12.21	20.00	2RDR
(5)	0.9193600	1.0000000	3383900.0	0.001	-8.06	20.00	2RDR
Average %D: -4.620							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.08 TCX: 3.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG101418-LCS	WG101418-2	11/22/11	1335	13.07	3.73
02	WG101418-LCSD	WG101418-3	11/22/11	1401	13.08	3.73
03		AR1660 1.0	11/22/11	1755	13.08	3.73
04		AR1254 1.0	11/22/11	1913		
05	DSY-SD-N28-2448	SE6617-16RE	11/22/11	1939	13.07	3.73
06		AR1660 0.25	11/23/11	0025	13.01	3.73
07		AR1254 1.0	11/23/11	0143		
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.71 TCX: 4.20

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG101418-LCS	WG101418-2	11/22/11	1335	16.70	4.19
02	WG101418-LCSD	WG101418-3	11/22/11	1401	16.70	4.19
03		AR1660 1.0	11/22/11	1755	16.71	4.19
04		AR1254 1.0	11/22/11	1913		
05	DSY-SD-N28-2448	SE6617-16RE	11/22/11	1939	16.70	4.19
06		AR1660 0.25	11/23/11	0025	16.69	4.19
07		AR1254 1.0	11/23/11	0143		
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000241

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 0039

Lab File ID: 7EK761 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8731000	1.0000000	30164000	0.001	-12.69	20.00	2RDR	
(2)	0.8728800	1.0000000	17491000	0.001	-12.71	20.00	2RDR	
(3)	0.7784100	1.0000000	42413000	0.001	-22.16	20.00	2RDR	<-
(4)	1.1259000	1.0000000	23494000	0.001	12.59	20.00	2RDR	
(5)	0.7315700	1.0000000	18204000	0.001	-26.84	20.00	2RDR	<-
Average %D: -12.36								
Aroclor-1260	0.6912900	1.0000000	32436000	0.001	-30.87	20.00	2RDR	<-
(2)	0.6852400	1.0000000	44603000	0.001	-31.48	20.00	2RDR	<-
(3)	0.7177100	1.0000000	35768000	0.001	-28.23	20.00	2RDR	<-
(4)	0.6969400	1.0000000	31953000	0.001	-30.31	20.00	2RDR	<-
(5)	0.7607500	1.0000000	23967000	0.001	-23.92	20.00	2RDR	<-
Average %D: -28.96								
Decachlorobiphenyl	1.38e-002	2.e-002	414910000	0.001	-31.00	20.00	2RDR	<-
Tetrachloro-m-xylene	1.96e-002	2.e-002	1.24e+009	0.001	-2.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 0039

Lab File ID: 7EK761 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8572000	1.0000000	2542200.0	0.001	-14.28	20.00	2RDR	
(2)	0.8383400	1.0000000	3926600.0	0.001	-16.17	20.00	2RDR	
(3)	0.7931600	1.0000000	6667100.0	0.001	-20.68	20.00	2RDR	<-
(4)	0.7856600	1.0000000	3438500.0	0.001	-21.43	20.00	2RDR	<-
(5)	0.8376400	1.0000000	3340100.0	0.001	-16.24	20.00	2RDR	
Average %D: -17.76								
Aroclor-1260	0.8305200	1.0000000	4624500.0	0.001	-16.95	20.00	2RDR	
(2)	0.8330000	1.0000000	5172800.0	0.001	-16.70	20.00	2RDR	
(3)	0.8464400	1.0000000	3885600.0	0.001	-15.36	20.00	2RDR	
(4)	0.8386500	1.0000000	3578100.0	0.001	-16.14	20.00	2RDR	
(5)	0.9118000	1.0000000	3355400.0	0.001	-8.82	20.00	2RDR	
Average %D: -14.79								
Decachlorobiphenyl	1.71e-002	2.e-002	56026000	0.001	-14.50	20.00	2RDR	
Tetrachloro-m-xylene	1.83e-002	2.e-002	173740000	0.001	-8.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1755

Lab File ID: 7EK777 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0184000	1.0000000	35571000	0.001	1.84	20.00	2RDR	
(2)	1.0134000	1.0000000	20571000	0.001	1.34	20.00	2RDR	
(3)	0.9020200	1.0000000	49902000	0.001	-9.80	20.00	2RDR	
(4)	1.2995000	1.0000000	27109000	0.001	29.95	20.00	2RDR	<-
(5)	0.8363300	1.0000000	21080000	0.001	-16.37	20.00	2RDR	
Average %D: 1.3900								
Aroclor-1260	0.6994100	1.0000000	32865000	0.001	-30.06	20.00	2RDR	<-
(2)	0.6895700	1.0000000	44921000	0.001	-31.04	20.00	2RDR	<-
(3)	0.7108100	1.0000000	35383000	0.001	-28.92	20.00	2RDR	<-
(4)	0.6942900	1.0000000	31816000	0.001	-30.57	20.00	2RDR	<-
(5)	0.7794800	1.0000000	24619000	0.001	-22.05	20.00	2RDR	<-
Average %D: -28.53								
Decachlorobiphenyl	1.44e-002	2.e-002	436100000	0.001	-28.00	20.00	2RDR	<-
Tetrachloro-m-xylene	2.43e-002	2.e-002	1.56e+009	0.001	21.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1755

Lab File ID: 7EK777 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0775000	1.0000000	3202400.0	0.001	7.75	20.00	2RDR	
(2)	0.9668300	1.0000000	4535100.0	0.001	-3.32	20.00	2RDR	
(3)	0.8651200	1.0000000	7282900.0	0.001	-13.49	20.00	2RDR	
(4)	0.8208100	1.0000000	3594700.0	0.001	-17.92	20.00	2RDR	
(5)	0.7799800	1.0000000	3107400.0	0.001	-22.00	20.00	2RDR	<-
Average %D: -9.790								
Aroclor-1260	0.8310500	1.0000000	4627400.0	0.001	-16.90	20.00	2RDR	
(2)	0.8214300	1.0000000	5100300.0	0.001	-17.86	20.00	2RDR	
(3)	0.8533600	1.0000000	3917500.0	0.001	-14.66	20.00	2RDR	
(4)	0.8307900	1.0000000	3544000.0	0.001	-16.92	20.00	2RDR	
(5)	0.9139800	1.0000000	3363600.0	0.001	-8.60	20.00	2RDR	
Average %D: -14.99								
Decachlorobiphenyl	1.59e-002	2.e-002	51915000	0.001	-20.50	20.00	2RDR	<-
Tetrachloro-m-xylene	1.97e-002	2.e-002	187710000	0.001	-1.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1913

Lab File ID: 7EK780 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.8971800	1.0000000	34629000	0.001	-10.28	20.00	2RDR	
(2)	0.9160600	1.0000000	43583000	0.001	-8.39	20.00	2RDR	
(3)	0.8947700	1.0000000	28205000	0.001	-10.52	20.00	2RDR	
(4)	0.7580800	1.0000000	28975000	0.001	-24.19	20.00	2RDR	<-
(5)	0.9860600	1.0000000	33258000	0.001	-1.39	20.00	2RDR	
Average %D: -10.96								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1913

Lab File ID: 7EK780 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.8705000	1.0000000	2742200.0	0.001	-12.95	20.00	2RDR	
(2)	0.7934500	1.0000000	4472500.0	0.001	-20.66	20.00	2RDR	<-
(3)	0.8020200	1.0000000	4611300.0	0.001	-19.80	20.00	2RDR	
(4)	0.8751600	1.0000000	6045500.0	0.001	-12.48	20.00	2RDR	
(5)	1.0356000	1.0000000	3861800.0	0.001	3.56	20.00	2RDR	
Average %D: -12.46								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0025

Lab File ID: 7EK792 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2361800	0.2500000	26374000	0.001	-5.53	20.00	2RDR	
(2)	0.2401500	0.2500000	14864000	0.001	-3.94	20.00	2RDR	
(3)	0.2258600	0.2500000	36385000	0.001	-9.66	20.00	2RDR	
(4)	0.2054600	0.2500000	19552000	0.001	-17.82	20.00	2RDR	
(5)	0.1926400	0.2500000	14420000	0.001	-22.94	20.00	2RDR	<-
Average %D: -11.96								
Aroclor-1260	0.1787000	0.2500000	22374000	0.001	-28.52	20.00	2RDR	<-
(2)	0.2070100	0.2500000	36576000	0.001	-17.20	20.00	2RDR	
(3)	0.2102600	0.2500000	30474000	0.001	-15.90	20.00	2RDR	
(4)	0.2012700	0.2500000	25994000	0.001	-19.49	20.00	2RDR	
(5)	0.1874500	0.2500000	16987000	0.001	-25.02	20.00	2RDR	<-
Average %D: -21.24								
Decachlorobiphenyl	3.33e-002	5.e-003	4.3e+009	0.001	566.00	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.01e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0025

Lab File ID: 7EK792 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2050300	0.2500000	2359700.0	0.001	-17.99	20.00	2RDR	
(2)	0.2078600	0.2500000	3763900.0	0.001	-16.86	20.00	2RDR	
(3)	0.2001200	0.2500000	6387400.0	0.001	-19.95	20.00	2RDR	
(4)	0.1831600	0.2500000	3089000.0	0.001	-26.74	20.00	2RDR	<-
(5)	0.1622600	0.2500000	2498400.0	0.001	-35.10	20.00	2RDR	<-
Average %D: -23.32								
Aroclor-1260	0.1795400	0.2500000	3872400.0	0.001	-28.18	20.00	2RDR	<-
(2)	0.1810300	0.2500000	4396900.0	0.001	-27.59	20.00	2RDR	<-
(3)	0.2091700	0.2500000	3847400.0	0.001	-16.33	20.00	2RDR	
(4)	0.2579600	0.2500000	4284100.0	0.001	3.18	20.00	2RDR	
(5)	0.2058400	0.2500000	2835200.0	0.001	-17.66	20.00	2RDR	
Average %D: -17.32								
Decachlorobiphenyl	3.45e-003	5.e-003	45045000	0.001	-31.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.45e-003	5.e-003	160240000	0.001	-11.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0143

Lab File ID: 7EK795 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.7012000	1.0000000	26842000	0.001	-29.88	20.00	2RDR	<-
(2)	0.7570400	1.0000000	35678000	0.001	-24.30	20.00	2RDR	<-
(3)	0.7735700	1.0000000	24162000	0.001	-22.64	20.00	2RDR	<-
(4)	0.6137900	1.0000000	23245000	0.001	-38.62	20.00	2RDR	<-
(5)	0.8147300	1.0000000	27174000	0.001	-18.53	20.00	2RDR	
Average %D: -26.79								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0143

Lab File ID: 7EK795 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.7607000	1.0000000	2394300.0	0.001	-23.93	20.00	2RDR	<-
(2)	0.7189500	1.0000000	4054400.0	0.001	-28.10	20.00	2RDR	<-
(3)	0.7284300	1.0000000	4176400.0	0.001	-27.16	20.00	2RDR	<-
(4)	0.8233800	1.0000000	5673000.0	0.001	-17.66	20.00	2RDR	
(5)	0.9646800	1.0000000	3587800.0	0.001	-3.53	20.00	2RDR	
Average %D: -20.08								

FORM VII PEST

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98971-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Lab Sample ID: WG98971-1 Lab File ID: 7EJ837

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/11/11

Date Analyzed (1): 10/25/11 Date Analyzed (2): 10/25/11

Time Analyzed (1): 1259 Time Analyzed (2): 1259

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98971-LCS	WG98971-2	7EJ838	10/25/11	10/25/11
02	WG98971-LCSD	WG98971-3	7EJ839	10/25/11	10/25/11
03	DSY-SD-RB09-100411	SE6617-6	7EJ855	10/25/11	10/25/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
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14					
15					
16					
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18					
19					
20					
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22					
23					
24					

COMMENTS:

FORM IVPCB

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99554-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Lab Sample ID: WG99554-1 Lab File ID: 7EZ051

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/21/11

Date Analyzed (1): 10/31/11 Date Analyzed (2): 10/31/11

Time Analyzed (1): 1446 Time Analyzed (2): 1446

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99554-LCS	WG99554-2	7EZ052	10/31/11	10/31/11
02	WG99554-LCSD	WG99554-3	7EZ053	10/31/11	10/31/11
03	DSY-SD-N28-2448MS	WG99554-4	7EZ054	10/31/11	10/31/11
04	DSY-SD-N28-2448MSD	WG99554-5	7EZ055	10/31/11	10/31/11
05	DSY-SD-L26-1224	SE6617-1	7EZ084	11/01/11	11/01/11
06	DSY-SD-L26-2448	SE6617-2	7EZ085	11/01/11	11/01/11
07	DSY-SD-L24-0012	SE6617-3	7EK068	11/02/11	11/02/11
08	DSY-SD-L24-1224	SE6617-4	7EK069	11/02/11	11/02/11
09	DSY-SD-L24-2448	SE6617-5	7EK070	11/02/11	11/02/11
10	DSY-SD-N24-0012	SE6617-7	7EK071	11/02/11	11/02/11
11	DSY-SD-N24-1224	SE6617-8	7EK072	11/02/11	11/02/11
12	DSY-SD-N24-2448	SE6617-9	7EK073	11/02/11	11/02/11
13	DSY-SD-DUP26-100511	SE6617-10	7EK074	11/02/11	11/02/11
14	DSY-SD-N26-0012	SE6617-11	7EK075	11/02/11	11/02/11
15	DSY-SD-N26-1224	SE6617-12	7EK081	11/03/11	11/03/11
16	DSY-SD-N26-2448	SE6617-13	7EK082	11/03/11	11/03/11
17	DSY-SD-N28-0012	SE6617-14	7EK083	11/03/11	11/03/11
18	DSY-SD-N28-1224	SE6617-15	7EK084	11/03/11	11/03/11
19	DSY-SD-N28-2448	SE6617-16	7EK085	11/03/11	11/03/11
20	DSY-SD-N30-0012	SE6617-17	7EK086	11/03/11	11/03/11
21	DSY-SD-N30-1224	SE6617-18	7EK087	11/03/11	11/03/11
22	DSY-SD-N30-2448	SE6617-19	7EK088	11/03/11	11/03/11
23	DSY-SD-Q25-0012	SE6617-20	7EK089	11/03/11	11/03/11
24					

COMMENTS: _____

FORM IVPCB

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101418-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

Lab Sample ID: WG101418-1 Lab File ID: 7EK766

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 11/21/11

Date Analyzed (1): 11/22/11 Date Analyzed (2): 11/22/11

Time Analyzed (1): 1309 Time Analyzed (2): 1309

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG101418-LCS	WG101418-2	7EK767	11/22/11	11/22/11
02	WG101418-LCSD	WG101418-3	7EK768	11/22/11	11/22/11
03	DSY-SD-N28-2448	SE6617-16RE	7EK781	11/22/11	11/22/11
04					
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24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98971-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 18-nov-2011 18:13

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	45.6	%					
Decachlorobiphenyl		59.5	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99554-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 21-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 31-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 18-nov-2011 18:13

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		64.9	%					
Decachlorobiphenyl		97.3	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101418-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 23-nov-2011 12:59

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		73.9	%					
Decachlorobiphenyl		73.6	%					

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FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98971-BLANK	WG98971-1	38*	46*	59	51			2
02	WG98971-LCS	WG98971-2	38*	45*	86	73			2
03	WG98971-LCSD	WG98971-3	45*	53*	77	65			2
04	DSY-SD-RB09-100411	SE6617-6	57*	62	62	50			1
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000160

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99554-BLANK	WG99554-1	60	65	97	86			0
02	WG99554-LCS	WG99554-2	80	88	105	92			0
03	WG99554-LCSD	WG99554-3	77	85	105	91			0
04	DSY-SD-N28-2448MS	WG99554-4	58	79	90	111			0
05	DSY-SD-N28-2448MSD	WG99554-5	55*	76	78	104			1
06	DSY-SD-L26-1224	SE6617-1	80	93	71	78			0
07	DSY-SD-L26-2448	SE6617-2	71	86	68	78			0
08	DSY-SD-L24-0012	SE6617-3	36*	55*	37*	65			3
09	DSY-SD-L24-1224	SE6617-4	39*	56	46*	75			2
10	DSY-SD-L24-2448	SE6617-5	48*	66	40*	61			2
11	DSY-SD-N24-0012	SE6617-7	45*	57	30*	43*			3
12	DSY-SD-N24-1224	SE6617-8	44*	63	41*	62			2
13	DSY-SD-N24-2448	SE6617-9	59	78	47*	66			1
14	DSY-SD-DUP26-100511	SE6617-10	52*	67	44*	58*			3
15	DSY-SD-N26-0012	SE6617-11	37*	47*	28*	36*			4
16	DSY-SD-N26-1224	SE6617-12	52*	72	50*	70			2
17	DSY-SD-N26-2448	SE6617-13	60	75	56*	68			1
18	DSY-SD-N28-0012	SE6617-14	70	81	58*	68			1
19	DSY-SD-N28-1224	SE6617-15	59	74	55*	68			1
20	DSY-SD-N28-2448	SE6617-16	0*	2*	0*	2*			4
21	DSY-SD-N30-0012	SE6617-17	60	69	52*	57*			2
22	DSY-SD-N30-1224	SE6617-18	48*	55*	46*	52*			4
23	DSY-SD-N30-2448	SE6617-19	66	79	62	73			0
24	DSY-SD-Q25-0012	SE6617-20	44*	54*	58*	70			3
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000161

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-18

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm) GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG101418-BLANK	WG101418-1	74	69	70	74			0
02	WG101418-LCS	WG101418-2	69	68	71	74			0
03	WG101418-LCSD	WG101418-3	79	80	86	91			0
04	DSY-SD-N28-2448	SE6617-16RE	43*	60	47*	68			2
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000162

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LCS/LCSD Recovery Report

LCS ID: WG98971-2
LCSD ID: WG98971-3
Project:
SDG: DSY-18
Report Date: 29-nov-2011 10:57

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	1.00	0.572	57.2*	0.693	69.3	ug/L	19	30	65-112
Aroclor-1260	1.00	0.654	65.4	0.677	67.7	ug/L	3	30	62-104
Tetrachloro-M-Xylene			45.1*		53.0*				62-111
Decachlorobiphenyl			86.5		77.0				44-135

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99554-2
LCSD ID: WG99554-3
Project:
SDG: DSY-18
Report Date: 18-nov-2011 18:13

Received Date: 21-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554

Analysis Date: 31-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	152.	91.0	138.	82.6	ug/Kgdrywt	10	50	53-123
Aroclor-1260	167.	150.	89.8	146.	87.4	ug/Kgdrywt	3	50	58-120
Tetrachloro-M-Xylene			88.6		85.3				56-115
Decachlorobiphenyl			105.		105.				59-124

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Cert No E87604

MS/MSD Recovery Report

MS ID: WG99554-4
MSD ID: WG99554-5
Sample ID: SE6617-16
Client ID: DSY-SD-N28-2448
Project:
SDG: DSY-18

Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99554
Report Date: 01-DEC-11

Analysis Date: 31-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 63.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	255.	256.	ug/Kgdrywt	U13.	260	260	103.	101.	2	30	53-123
Aroclor-1260	255	256	ug/Kgdrywt	250	360	380	44*	53*	7	30	58-120
Tetrachloro-M-Xylene							79.2	76.7			56-115
Decachlorobiphenyl							111.	104.			59-124

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG101418-2
LCSD ID: WG101418-3
Project:
SDG: DSY-18
Report Date: 23-nov-2011 12:59

Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	154.	92.2	192.	115.	ug/Kgdrywt	22	50	53-123
Aroclor-1260	167.	136.	81.4	164.	98.2	ug/Kgdrywt	19	50	58-120
Tetrachloro-M-Xylene			68.8		80.2				56-115
Decachlorobiphenyl			74.2		91.3				59-124

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P26-100511

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-10 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	36.6		
Aroclor-1254	2	6.47	6.40	6.54	49.5		
	3	6.83	6.77	6.91	60.1		
COLUMN 1	4	7.67	7.60	7.74	52.5		
	5	8.13	8.07	8.21	64.4	52.6	
	1	6.36	6.29	6.43	36.4		
	2	7.33	7.26	7.40	41.3		
	3	7.61	7.54	7.68	47.8		
COLUMN 2	4	8.43	8.36	8.50	44.9		
	5	10.13	10.06	10.20	65.3	47.1	11.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000135

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-L24-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-3 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	558		
Aroclor-1254	2	6.47	6.40	6.54	735		
	3	6.83	6.77	6.91	891		
COLUMN 1	4	7.67	7.60	7.74	838		
	5	8.13	8.07	8.21	981	801	
	1	6.37	6.29	6.43	996		
	2	7.33	7.26	7.40	1110		
	3	7.62	7.54	7.68	1080		
COLUMN 2	4	8.43	8.36	8.50	1100		
	5	10.13	10.06	10.20	1460	1150	35.8
	1	7.24	7.18	7.32	404		
Aroclor-1260	2	7.67	7.60	7.74	476		
	3	8.13	8.08	8.22	772		
COLUMN 1	4	8.32	8.26	8.40	170		
	5	10.14	10.09	10.23	224	409	
	1	8.81	8.73	8.87	720	JVP 120111	
	2	9.25	9.17	9.31	611		
	3	10.13	10.06	10.20	~~11.9~~		22.4
COLUMN 2	4	11.10	11.08	11.22	381		
	5	13.00	12.92	13.06	334	SIZ ~~411~~	~~0.5~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-L24-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-4 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	1140		
Aroclor-1254	2	6.47	6.40	6.54	1430		
	3	6.83	6.77	6.91	1850		
COLUMN 1	4	7.67	7.60	7.74	1630		
	5	8.13	8.07	8.21	1580	1530	
	1	6.37	6.29	6.43	2120		
	2	7.34	7.26	7.40	2010		
	3	7.62	7.54	7.68	2010		
COLUMN 2	4	8.44	8.36	8.50	2060		
	5	10.14	10.06	10.20	1970	2030	28.1
	1	7.25	7.18	7.32	736		
Aroclor-1260	2	7.67	7.60	7.74	922		
	3	8.15	8.08	8.22	~~26.7~~	JP 12011	
COLUMN 1	4	8.32	8.26	8.40	327	593	
	5	10.15	10.09	10.23	387	~~480~~	
	1	8.81	8.73	8.87	1100		
	2	9.25	9.17	9.31	1040		
	3	10.13	10.06	10.20	~~10.7~~		
COLUMN 2	4	11.16	11.08	11.22	354	765	25.3
	5	13.00	12.92	13.06	567	~~614~~	~~24.5~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-L26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-2 Date(s) Analyzed: 11/01/11 11/01/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	38.1		
Aroclor-1254	2	6.49	6.40	6.54	58.8		
	3	6.84	6.77	6.91	30.7		
COLUMN 1	4	7.68	7.61	7.75	29.6		
	5	8.14	8.08	8.22	37.0	38.8	
	1	6.37	6.30	6.44	69.7		
	2	7.35	7.26	7.40	66.4		
	3	7.62	7.55	7.69	28.9		
COLUMN 2	4	8.44	8.37	8.51	34.5		
	5	10.13	10.07	10.21	30.1	45.9	16.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-N24-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-7 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	70.0		
Aroclor-1254	2	6.48	6.40	6.54	98.4		
	3	6.83	6.77	6.91	86.3		
COLUMN 1	4	7.67	7.60	7.74	117		
	5	8.13	8.07	8.21	137	102	
	1	6.37	6.29	6.43	74.3		
	2	7.33	7.26	7.40	84.3		
	3	7.62	7.54	7.68	77.5		
COLUMN 2	4	8.44	8.36	8.50	83.2		
	5	10.13	10.06	10.20	133	90.5	11.9
	1	7.25	7.18	7.32	58.3		
Aroclor-1260	2	7.67	7.60	7.74	86.6		
	3	8.13	8.08	8.22	104		
COLUMN 1	4	8.32	8.26	8.40	59.0		
	5	10.15	10.09	10.23	76.4	76.8	
	1	8.81	8.73	8.87	61.8		
	2	9.25	9.17	9.31	85.8		
	3	10.13	10.06	10.20	118		
COLUMN 2	4	11.16	11.08	11.22	101		
	5	12.99	12.92	13.06	91.6	91.7	17.7
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N24-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-8 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	392		
Aroclor-1254	2	6.47	6.40	6.54	514		
	3	6.83	6.77	6.91	579		
COLUMN 1	4	7.66	7.60	7.74	575		
	5	8.13	8.07	8.21	694	551	
	1	6.36	6.29	6.43	596		
	2	7.33	7.26	7.40	627		
	3	7.61	7.54	7.68	659		
COLUMN 2	4	8.43	8.36	8.50	685		
	5	10.12	10.06	10.20	964	706	24.7
	1	7.24	7.18	7.32	283		
Aroclor-1260	2	7.66	7.60	7.74	332		
	3	8.13	8.08	8.22	543	JVP 12011	
COLUMN 1	4	8.31	8.26	8.40	95.5		
	5	10.14	10.09	10.23	107	272	
	1	8.80	8.73	8.87	370		
	2	9.24	9.17	9.31	385		
	3	10.13	10.06	10.20	~~12.3~~		
COLUMN 2	4	11.09	11.08	11.22	226	284	4.3
	5	12.99	12.92	13.06	153	~~229~~	~~17.2~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N24-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-9 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	64.2		
Aroclor-1254	2	6.47	6.40	6.54	93.3		
	3	6.83	6.77	6.91	123		
COLUMN 1	4	7.71	7.60	7.74	151		
	5	8.14	8.07	8.21	134	113	
	1	6.36	6.29	6.43	77.9		
	2	7.33	7.26	7.40	96.6		
	3	7.61	7.54	7.68	108		
COLUMN 2	4	8.43	8.36	8.50	113		
	5	10.12	10.06	10.20	184	116	2.6
	1	7.25	7.18	7.32	65.5		
Aroclor-1260	2	7.71	7.60	7.74	92.3		
	3	8.14	8.08	8.22	104		
COLUMN 1	4	8.32	8.26	8.40	40.2		
	5	10.14	10.09	10.23	44.8	69.3	
	1	8.80	8.73	8.87	77.8		
	2	9.24	9.17	9.31	82.0		
	3	10.12	10.06	10.20	172		
COLUMN 2	4	11.15	11.08	11.22	48.8		
	5	12.98	12.92	13.06	56.9	87.5	23.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N26-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-11 Date(s) Analyzed: 11/02/11 11/02/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	67.0		
Aroclor-1254	2	6.47	6.40	6.54	98.0		
	3	6.83	6.77	6.91	89.3		
COLUMN 1	4	7.66	7.60	7.74	123		
	5	8.13	8.07	8.21	154	106	
	1	6.36	6.29	6.43	68.7		
	2	7.33	7.26	7.40	76.7		
	3	7.61	7.54	7.68	87.7		
COLUMN 2	4	8.43	8.36	8.50	105		
	5	10.13	10.06	10.20	158	99.4	6.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-12 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	326		
Aroclor-1254	2	6.47	6.40	6.54	452		
	3	6.83	6.77	6.91	529		
COLUMN 1	4	7.66	7.60	7.74	515		
	5	8.13	8.07	8.21	575	480	
	1	6.36	6.29	6.43	498		
	2	7.33	7.26	7.40	554		
	3	7.61	7.54	7.68	576		
COLUMN 2	4	8.43	8.36	8.50	578		
	5	10.12	10.06	10.20	693	580	18.9
	1	7.24	7.18	7.32	245		
Aroclor-1260	2	7.66	7.60	7.74	295		
	3	8.13	8.08	8.22	451		
COLUMN 1	4	8.31	8.26	8.40	104		
	5	10.14	10.09	10.23	131	245	
	1	8.80	8.73	8.87	339		
	2	9.24	9.17	9.31	338		
	3	10.13	10.06	10.20	~~9.56~~		
COLUMN 2	4	11.14	11.08	11.22	143	248 ~~300~~	1.2 ~~20.2~~
	5	12.98	12.92	13.06	172		
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

JF 12011

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N28-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-14 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	72.9		
Aroclor-1254	2	6.48	6.40	6.54	99.4		
	3	6.83	6.77	6.91	99.1		
COLUMN 1	4	7.66	7.60	7.74	119		
	5	8.13	8.07	8.21	135	105	
	1	6.36	6.29	6.43	106		
	2	7.33	7.26	7.40	87.6		
	3	7.61	7.54	7.68	81.2		
COLUMN 2	4	8.43	8.36	8.50	97.6		
	5	10.12	10.06	10.20	121	98.7	6.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N28-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-15 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	516		
Aroclor-1254	2	6.47	6.40	6.54	527		
	3	6.82	6.77	6.91	207		
COLUMN 1	4	7.66	7.60	7.74	394		
	5	8.13	8.07	8.21	323	394	
	1	6.36	6.29	6.43	1170		
	2	7.33	7.26	7.40	859		
	3	7.61	7.54	7.68	602		
COLUMN 2	4	8.43	8.36	8.50	747		
	5	10.12	10.06	10.20	298	735	60.4
	1	7.24	7.18	7.32	236		
Aroclor-1260	2	7.66	7.60	7.74	236		
	3	8.13	8.08	8.22	250		
COLUMN 1	4	8.31	8.26	8.40	57.9		
	5	10.14	10.09	10.23	59.8	168	
	1	8.80	8.73	8.87	323		
	2	9.24	9.17	9.31	306		
	3	10.12	10.06	10.20	277		
COLUMN 2	4	11.15	11.08	11.22	95.5		
	5	12.97	12.92	13.06	73.9	215	24.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-N28-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-16 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	46.1		
Aroclor-1254	2	6.47	6.40	6.54	62.1		
	3	6.83	6.77	6.91	52.8		
COLUMN 1	4	7.67	7.60	7.74	56.4		
	5	8.13	8.07	8.21	67.1	56.9	
	1	6.36	6.29	6.43	45.2		
	2	7.33	7.26	7.40	49.5		
	3	7.61	7.54	7.68	50.0		
COLUMN 2	4	8.43	8.36	8.50	59.0		
	5	10.13	10.06	10.20	57.3	52.2	8.6
	1	7.25	7.18	7.32	34.4		
Aroclor-1260	2	7.67	7.60	7.74	46.7		
	3	8.13	8.08	8.22	49.9		
COLUMN 1	4	8.31	8.26	8.40	21.7		
	5					32.0	
	1	8.80	8.73	8.87	30.5		
	2	9.24	9.17	9.31	32.9		
	3	10.13	10.06	10.20	48.3		
COLUMN 2	4	11.09	11.08	11.22	12.2		
	5					26.6	18.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-N28-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-16RE Date(s) Analyzed: 11/22/11 11/22/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.06	6.02	6.16	279		
Aroclor-1254	2	6.39	6.34	6.48	389		
	3	6.75	6.71	6.85	336		
COLUMN 1	4	7.61	7.53	7.67	378		
	5	8.03	8.00	8.14	454	367	
	1	6.25	6.20	6.34	476		
	2	7.21	7.15	7.29	582		
	3	7.48	7.44	7.58	470		
COLUMN 2	4	8.28	8.24	8.38	498		
	5	9.93	9.90	10.04	564	518	34.1
	1	7.16	7.09	7.23	201		
Aroclor-1260	2	7.57	7.51	7.65	229		
	3	8.03	7.98	8.12	313		
COLUMN 1	4	8.21	8.15	8.29	88.4		
	5	10.01	9.97	10.11	99.0	186	
	1	8.64	8.58	8.72	266		
	2	9.07	9.01	9.15	269		
	3	9.93	9.87	10.01	459		
COLUMN 2	4	10.88	10.88	11.02	142		
	5	12.77	12.70	12.84	100	247	28.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N30-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-17 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	45.2		
Aroclor-1254	2	6.48	6.40	6.54	86.8		
	3	6.83	6.77	6.91	75.3		
COLUMN 1	4	7.67	7.60	7.74	73.2		
	5	8.13	8.07	8.21	89.2	74.0	
	1	6.37	6.29	6.43	51.4		
	2	7.33	7.26	7.40	47.2		
	3	7.61	7.54	7.68	41.9		
COLUMN 2	4	8.43	8.36	8.50	45.7		
	5	10.12	10.06	10.20	68.0	50.8	37.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N30-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-18 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	76.4		
Aroclor-1254	2	6.48	6.40	6.54	79.8		
	3	6.83	6.77	6.91	88.8		
COLUMN 1	4	7.67	7.60	7.74	86.3		
	5	8.14	8.07	8.21	101	86.4	
	1	6.36	6.29	6.43	93.9		
	2	7.33	7.26	7.40	80.7		
	3	7.61	7.54	7.68	55.3		
COLUMN 2	4	8.43	8.36	8.50	76.9		
	5	10.13	10.06	10.20	80.7	77.5	10.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-N30-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-19 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	56.2		
Aroclor-1254	2	6.47	6.40	6.54	72.2		
	3	6.83	6.77	6.91	76.8		
COLUMN 1	4	7.66	7.60	7.74	78.0		
	5	8.13	8.07	8.21	95.4	75.7	
	1	6.36	6.29	6.43	64.4		
	2	7.33	7.26	7.40	67.6		
	3	7.61	7.54	7.68	69.8		
COLUMN 2	4	8.43	8.36	8.50	74.7		
	5	10.12	10.06	10.20	92.5	73.8	2.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-Q25-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-18

Lab Sample ID: SE6617-20 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	182		
Aroclor-1254	2	6.47	6.40	6.54	251		
	3	6.83	6.77	6.91	240		
COLUMN 1	4	7.67	7.60	7.74	245		
	5	8.13	8.07	8.21	294	242	
	1	6.36	6.29	6.43	261		
	2	7.33	7.26	7.40	255		
	3	7.61	7.54	7.68	247		
COLUMN 2	4	8.43	8.36	8.50	249		
	5	10.12	10.06	10.20	312	265	9.1
	1	7.24	7.18	7.32	117		
Aroclor-1260	2	7.67	7.60	7.74	153		
	3	8.13	8.08	8.22	227		
COLUMN 1	4	8.32	8.26	8.40	54.2		
	5	10.14	10.09	10.23	69.2	124	
	1	8.80	8.73	8.87	157		
	2	9.24	9.17	9.31	159		
	3	10.12	10.06	10.20	291		
COLUMN 2	4	11.15	11.08	11.22	93.6		
	5	12.99	12.92	13.06	70.5	154	21.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE: DECEMBER 16, 2011**

FROM: **A. COGNETTI** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: SELECT SVOC/SELECT PAH/PCB**
CTO WE61, NAVSTA NEWPORT- DERECKTOR SHIPYARD
SAMPLE DELIVERY GROUP (SDG) – DSY-19

SAMPLES: 19/Sediment/Select SVOC/SELECT PAH/PCB

DSY-SD-DUP27-100511	DSY-SD-DUP28-100611	DSY-SD-Q25-1224
DSY-SD-Q25-2448	DSY-SD-Q29-0012	DSY-SD-Q29-1224
DSY-SD-Q29-2448	DSY-SD-T25-0012	DSY-SD-T25-1224
DSY-SD-T25-2448	DSY-SD-T29-0012	DSY-SD-T29-1224
DSY-SD-T29-2448	DSY-SD-W24-0012	DSY-SD-W24-1224
DSY-SD-W24-2448	DSY-SD-W26-0012	DSY-SD-W26-1224
DSY-SD-W26-2448		

1/Aqueous/Select SVOC/Select PAH/PCB

DSY-SD-RB10-100511

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-19 consists of nineteen (19) environmental sediment samples and a rinsate blank. All samples were analyzed for select semivolatile organic compounds (SVOC), select polycyclic aromatic hydrocarbon (PAH) and polychlorinated biphenyls (PCBs). The select SVOCs are benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene and pyrene. The select PAH is benzo(a)pyrene. There are two (2) field duplicate pairs contained within this SDG: DSY-SD-W26-2448/DSY-SD-DUP27-100511 and DSY-SD-W24-0012/DSY-SD-DUP28-100611.

The samples were collected on October 5 and 6, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270D for SVOCs, 8270D SIM for PAH, and 8082A for PCB analytical and reporting protocol. A Tier 2 data validation was performed on the analyses.

The data contained in this SDG were validated with regard to the following parameters:

*	• Data Completeness
*	• Holding Times
*	• GC/MS Tuning
	• Initial and Continuing Calibration
*	• Laboratory Method and/or Field Quality Control Blanks
	• Surrogate Spike Recoveries
	• Laboratory Control Spike / Laboratory Control Spike Duplicate Recoveries
*	• Internal Standards Performance
	• Matrix Spike/Matrix Spike Duplicate Results
*	• Detection Limits
	• Field Duplicate Precision

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

CALIBRATIONS

The continuing calibration percent differences (%Ds) for pyrene and benzo(g,h,i)perylene were greater than the 20% quality control limit on November 18, 2011 @ 11:29 on instrument GCMS-N. The positive and nondetected results were qualified as estimated (J) and (UJ), respectively in the affected samples DSY-SD-Q25-1224, DSY-SD-Q25-2448 and DSY-SD-W26-0012.

The initial calibration percent relative standard deviation (%RSD) for indeno(1,2,3-cd)pyrene was greater than the 15% quality control limit on November 12, 2011 on instrument GCMS-U. The nondetected indeno(1,2,3-cd)pyrene was qualified as estimated (UJ) in the affected sample DSY-SD-RB10-100511.

The continuing calibration %D for benzo(g,h,i)perylene was greater than the 20% quality control limit on November 15, 2011 @ 7:54 on instrument GCMS-N. The nondetected benzo(g,h,i)perylene result was qualified as estimated (UJ) in the affected sample DSY-SD-RB10-100511.

The continuing calibration %D for Aroclor 1242 was greater than the 20% quality control limit on October 29, 2011 @ 00:27 on column 1. The positive Aroclor 1242 result in sample DSY-SD-T29-2448 was qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The percent recoveries (%Rs) of all surrogates in the PAH fraction for sample DSY-SD-RB10-100511 were not quantified. The recoveries reported in the full scan analysis were acceptable. No further action was required.

The %Rs of PCB surrogate DCB were less than the lower quality control limit on both columns in samples DSY-SD-W26-0012 and DSY-SD-W24-2448. In addition, the %R of PCB surrogate TCX was less than the lower quality control limit on column 1 in samples DSY-SD-W26-0012 and DSY-SD-W24-2448. The positive and nondetected Aroclor results were qualified as estimated (J) and (UJ), respectively in samples

DSY-SD-W26-0012 and DSY-SD-W24-2448.

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

The SVOC laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) %Rs of benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were less than the lower quality control limit in batch WG98966 affecting the rinsate blank. The nondetected benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were qualified as estimated (UJ) in sample DSY-SD-RB10-100511. In addition, the LCSD %Rs of benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were less than the quality control limit. The LCS %Rs and relative percent differences (RPDs) for benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were within quality control limits. No action was taken.

The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB10-100511. The nondetected benzo(a)pyrene result was qualified as estimated, (UJ).

DIFFERENCE BETWEEN COLUMNS/DETECTORS

The RPD between columns in the PCB analyses was greater than 40% in the following samples. No action was taken because the RPD exceeded the 40% quality control limit by 0.1%.

Sample	Analyte	RPD	Qualification
DSY-SD-W24-1224	Arolcor 1260	40.1	No action

INTERNAL STANDARDS

The SVOC internal standard perylene-d12 had areas less than the lower quality control limit in samples DSY-SD-W24-1224 and DSY-SD-W24-0012. The nondetected analytes quantified using this internal standard were qualified as estimated (UJ) in samples DSY-SD-W24-1224 and DSY-SD-W24-0012. A copy of the continuing calibration raw data is included in Appendix D.

MATRIX SPIKE/ MATRIX SPIKE DUPLICATE RESULTS

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of Aroclor 1016 were less than the lower quality control limit in sample DSY-SD-T29-2448. The nondetected Aroclor 1016 results was qualified as estimated (UJ) in sample DSY-SD-T29-2448.

FIELD DUPLICATE PRECISION

Field duplicate imprecision was noted in the field duplicate pair DSY-SD-W26-2448 and DSY-SD-DUP27-100511 for Aroclor 1254. The positive Aroclor 1254 results in samples DSY-SD-W26-2448 and DSY-SD-DUP27-100511 were qualified as estimated (J).

ADDITIONAL COMMENTS

The MSD %R of pyrene exceeded quality control limit in sample DSY-SD-T29-2448. The MS %R and RPD for pyrene were within quality control limits. No action was taken.

The continuing calibration %D for Aroclor 1016 was greater than the 20% quality control limit on column 1 on October 29, 2011 @ 6:31. No action was taken on the nondetected Aroclor 1016 results in the affected

samples.

The continuing calibration %D for Aroclor 1254 was greater than the 20% quality control limit on column1 on October 29, 2011 @ 7:49. The positive Aroclor 1254 results in the affected samples DSY-SD-W24-0012, DSY-SD-W24-1224 and DSY-SD-DUP28-100611 were taken from column 2. No action was taken.

The PCB surrogate recoveries of DCB and TCX were less than the lower quality control limit but greater than 10% on column 1 for sample DSY-SD-W24-1224 and column 2 for sample DSY-SD-RB10-100511. No action was taken on the nondetected PCB results in samples DSY-SD-W24-1224 and DSY-SD-RB10-100511. The positive PCB results in sample DSY-SD-W24-1224 were taken from column 2.

The PCB surrogate recoveries of DCB were less than the lower quality control limit but greater than 10% in samples DSY-SD-Q25-1224, DSY-SD-T25-0012 and DSY-SD-DUP28-100511. No action was taken.

The PCB LCS associated with batch WG98971 had a %R of Aroclor 1016 less than the lower quality control limit. The %R of Aroclor 1016 in the LCSD and the RPD were within quality control limits. No action was taken on the Aroclor 1016 results in the affected rinse blank.

According to the SAP for Derecktor Shipyard, August 2011, Total High Molecular Weight PAHs and Total PCBs were to be reported by the laboratory. The laboratory did not report them.

According to Worksheet #15 of the SAP, the laboratory first will analyze the samples in full scan mode. If the value associated with any J-flagged sample result or U-flagged (non-detected) sample result for any HMW PAH is above the project LOQ goal, the laboratory will reanalyze the sample for that PAH in SIM mode. The laboratory only analyzed benzo(a)pyrene for all samples in the SIM mode. Several samples had PAH results in the full scan mode that were greater than the project limit of quantitation (LOQ).

Positive results reported at concentrations greater than the method detection limit (MDL) but less than the Reporting Limit (RL) were qualified as estimated (J).

Nondetected results were reported at the limit of detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: Continuing calibration noncompliances in the SVOC and PCB fractions resulted in the qualification of data. The percent recoveries of surrogates were outside quality control limits in the PAH and PCB fractions resulting in the qualification of data. The percent recoveries of several analytes in the LCS and LCSD were outside quality control limits in the SVOC fraction. The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB10-100511. Internal standard noncompliances were noted for perylene-d12 in the SVOC H fraction in samples DSY-SD-W24-1224 and DSY-SD-W24-0012.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted in the field duplicate pair DSY-SD-W26-2448 and DSY-SD-DUP27-100511 for Aroclor 1254. The MS/MSD %Rs of Aroclor 1016 were less than the lower quality control limit in sample DSY-SD-T29-2448.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96), and the Department of Defense (DoD) document entitled, "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

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Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB10-100511
SDG: DSY-19	LAB_ID	SE6618-7
FRACTION: OS	SAMP_DATE	10/5/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	7.1	UJ	E
BENZO(B)FLUORANTHENE	7.1	U	
BENZO(G,H,I)PERYLENE	7.1	UJ	C
BENZO(K)FLUORANTHENE	7.1	UJ	E
CHRYSENE	7.1	UJ	E
DIBENZO(A,H)ANTHRACENE	7.1	U	
FLUORANTHENE	7.1	U	
INDENO(1,2,3-CD)PYRENE	7.1	UJ	C
PYRENE	7.1	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP27-100511			DSY-SD-DUP28-100611			DSY-SD-Q25-1224			DSY-SD-Q25-2448		
SDG: DSY-19	LAB_ID	SE6618-6			SE6618-20			SE6618-1			SE6618-2		
FRACTION: OS	SAMP_DATE	10/5/2011			10/6/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	61.5			39.4			70.8			80.4		
	DUP_OF	DSY-SD-W26-2448			DSY-SD-W24-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		240	J	P	360	J	P	340	U		300	U	
BENZO(B)FLUORANTHENE		380	U		580	J	P	340	U		300	U	
BENZO(G,H,I)PERYLENE		380	U		580	U		340	UJ	C	300	UJ	C
BENZO(K)FLUORANTHENE		380	U		250	J	P	340	U		300	U	
CHRYSENE		260	J	P	530	J	P	340	U		300	U	
DIBENZO(A,H)ANTHRACENE		380	U		580	U		340	U		300	U	
FLUORANTHENE		170	J	P	820			340	U		300	U	
INDENO(1,2,3-CD)PYRENE		380	U		580	U		340	U		300	U	
PYRENE		890			1600			140	UJ	C	300	UJ	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-0012			DSY-SD-Q29-1224			DSY-SD-Q29-2448			DSY-SD-T25-0012		
SDG: DSY-19	LAB_ID	SE6618-11			SE6618-12			SE6618-13			SE6618-8		
FRACTION: OS	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.0			46.8			73.7			38.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		630	U		840			330	U		220	J	P
BENZO(B)FLUORANTHENE		630	U		970			330	U		470	J	P
BENZO(G,H,I)PERYLENE		630	U		280	J	P	330	U		620	U	
BENZO(K)FLUORANTHENE		630	U		500	J	P	330	U		620	U	
CHRYSENE		270	J	P	1200			140	J	P	290	J	P
DIBENZO(A,H)ANTHRACENE		630	U		520	U		330	U		620	U	
FLUORANTHENE		630	U		810			330	U		620	U	
INDENO(1,2,3-CD)PYRENE		630	U		300	J	P	330	U		620	U	
PYRENE		630	J	P	2400			550			840		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T25-1224			DSY-SD-T25-2448			DSY-SD-T29-0012			DSY-SD-T29-1224		
SDG: DSY-19	LAB_ID	SE6618-9			SE6618-10			SE6618-14			SE6618-15		
FRACTION: OS	SAMP_DATE	10/5/2011			10/5/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	43.7			74.9			73.7			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		380	J	P	300	U		210	J	P	300	U	
BENZO(B)FLUORANTHENE		560	U		300	U		310	J	P	300	U	
BENZO(G,H,I)PERYLENE		560	U		300	U		310	U		300	U	
BENZO(K)FLUORANTHENE		560	U		300	U		130	J	P	300	U	
CHRYSENE		560	J	P	300	U		270	J	P	300	U	
DIBENZO(A,H)ANTHRACENE		560	U		300	U		310	U		300	U	
FLUORANTHENE		300	J	P	300	U		190	J	P	300	U	
INDENO(1,2,3-CD)PYRENE		560	U		300	U		310	U		300	U	
PYRENE		2100			270	J	P	570			190	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-T29-2448			DSY-SD-W24-0012			DSY-SD-W24-1224			DSY-SD-W24-2448		
SDG: DSY-19	LAB_ID	SE6618-16			SE6618-17			SE6618-18			SE6618-19		
FRACTION: OS	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.1			38.8			64.3			76.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		280	U		560	J	P	220	J	P	310	U	
BENZO(B)FLUORANTHENE		280	U		780	J	PN	360	UJ	N	310	U	
BENZO(G,H,I)PERYLENE		280	U		610	UJ	N	360	UJ	N	310	U	
BENZO(K)FLUORANTHENE		280	U		340	J	PN	360	UJ	N	310	U	
CHRYSENE		280	U		710	J	P	270	J	P	310	U	
DIBENZO(A,H)ANTHRACENE		280	U		610	UJ	N	360	UJ	N	310	U	
FLUORANTHENE		280	U		750	J	P	430	J	P	310	U	
INDENO(1,2,3-CD)PYRENE		280	U		610	UJ	N	360	UJ	N	310	U	
PYRENE		280	U		1800			800			310	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-W26-0012			DSY-SD-W26-1224			DSY-SD-W26-2448		
SDG: DSY-19	LAB_ID	SE6618-3			SE6618-4			SE6618-5		
FRACTION: OS	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.1			40.0			70.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		420	J	P	330	J	P	200	J	P
BENZO(B)FLUORANTHENE		640	J	P	610	J	P	330	U	
BENZO(G,H,I)PERYLENE		600	UJ	C	600	U		330	U	
BENZO(K)FLUORANTHENE		300	J	P	250	J	P	330	U	
CHRYSENE		500	J	P	470	J	P	230	J	P
DIBENZO(A,H)ANTHRACENE		600	U		600	U		330	U	
FLUORANTHENE		350	J	P	300	J	P	330	U	
INDENO(1,2,3-CD)PYRENE		600	U		600	U		330	U	
PYRENE		1300	J	C	1200			700		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB10-100511		
SDG: DSY-19	LAB_ID	SE6618-7		
FRACTION: PAH	SAMP_DATE	10/5/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP27-100511			DSY-SD-DUP28-100611			DSY-SD-Q25-1224			DSY-SD-Q25-2448		
SDG: DSY-19	LAB_ID	SE6618-6			SE6618-20			SE6618-1			SE6618-2		
FRACTION: PAH	SAMP_DATE	10/5/2011			10/6/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	61.5			39.4			70.8			80.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		160			310			36			12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-0012			DSY-SD-Q29-1224			DSY-SD-Q29-2448			DSY-SD-T25-0012		
SDG: DSY-19	LAB_ID	SE6618-11			SE6618-12DL			SE6618-13			SE6618-8		
FRACTION: PAH	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.0			46.8			73.7			38.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		190			560			120			250		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T25-1224			DSY-SD-T25-2448			DSY-SD-T29-0012			DSY-SD-T29-1224		
SDG: DSY-19	LAB_ID	SE6618-9			SE6618-10			SE6618-14			SE6618-15		
FRACTION: PAH	SAMP_DATE	10/5/2011			10/5/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	43.7			74.9			73.7			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		490			68			190			56		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T29-2448			DSY-SD-W24-0012			DSY-SD-W24-1224			DSY-SD-W24-2448		
SDG: DSY-19	LAB_ID	SE6618-16			SE6618-17			SE6618-18			SE6618-19		
FRACTION: PAH	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.1			38.8			64.3			76.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		22	J	P	400			150			13	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-W26-0012			DSY-SD-W26-1224			DSY-SD-W26-2448		
SDG: DSY-19	LAB_ID	SE6618-3			SE6618-4			SE6618-5		
FRACTION: PAH	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.1			40.0			70.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		320			300			140		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP27-100511			DSY-SD-DUP28-100611			DSY-SD-Q25-1224			DSY-SD-Q25-2448		
SDG: DSY-19	LAB_ID	SE6618-6			SE6618-20			SE6618-1			SE6618-2		
FRACTION: PCB	SAMP_DATE	10/5/2011			10/6/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	61.5			39.4			70.8			80.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		14	U		21	U		11	U		10	U	
AROCLOR-1221		14	U		21	U		11	U		10	U	
AROCLOR-1232		16	U		25	U		13	U		12	U	
AROCLOR-1242		14	U		21	U		11	U		10	U	
AROCLOR-1248		14	U		21	U		11	U		10	U	
AROCLOR-1254		620	J	G	1400			89			10	U	
AROCLOR-1260		14	U		440			11	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-0012			DSY-SD-Q29-1224			DSY-SD-Q29-2448			DSY-SD-T25-0012		
SDG: DSY-19	LAB_ID	SE6618-11			SE6618-12			SE6618-13			SE6618-8		
FRACTION: PCB	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.0			46.8			73.7			38.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		21	U		18	U		11	U		22	U	
AROCLOR-1221		21	U		18	U		11	U		22	U	
AROCLOR-1232		25	U		21	U		13	U		26	U	
AROCLOR-1242		21	U		18	U		11	U		22	U	
AROCLOR-1248		21	U		18	U		11	U		22	U	
AROCLOR-1254		21	U		260			98			1500		
AROCLOR-1260		21	U		18	U		11	U		22	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-T25-1224			DSY-SD-T25-2448			DSY-SD-T29-0012			DSY-SD-T29-1224		
SDG: DSY-19	LAB_ID	SE6618-9			SE6618-10			SE6618-14			SE6618-15		
FRACTION: PCB	SAMP_DATE	10/5/2011			10/5/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	43.7			74.9			73.7			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		19	U		11	U		11	U		10	U	
AROCLOR-1221		19	U		11	U		11	U		10	U	
AROCLOR-1232		22	U		12	U		13	U		12	U	
AROCLOR-1242		19	U		11	U		11	U		57		
AROCLOR-1248		19	U		11	U		11	U		10	U	
AROCLOR-1254		92			110			110			10	U	
AROCLOR-1260		19	U		11	U		11	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-T29-2448			DSY-SD-W24-0012			DSY-SD-W24-1224			DSY-SD-W24-2448		
SDG: DSY-19	LAB_ID	SE6618-16			SE6618-17			SE6618-18			SE6618-19		
FRACTION: PCB	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.1			38.8			64.3			76.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	D	22	U		13	U		11	UJ	R
AROCLOR-1221		10	U		22	U		13	U		11	UJ	R
AROCLOR-1232		12	U		26	U		15	U		13	UJ	R
AROCLOR-1242		120	J	C	22	U		13	U		11	UJ	R
AROCLOR-1248		10	U		22	U		13	U		11	UJ	R
AROCLOR-1254		10	U		1600			630			11	UJ	R
AROCLOR-1260		10	U		660			500			11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-W26-0012			DSY-SD-W26-1224			DSY-SD-W26-2448		
SDG: DSY-19	LAB_ID	SE6618-3			SE6618-4			SE6618-5		
FRACTION: PCB	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.1			40.0			70.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		22	UJ	R	21	U		12	U	
AROCLOR-1221		22	UJ	R	21	U		12	U	
AROCLOR-1232		26	UJ	R	24	U		14	U	
AROCLOR-1242		22	UJ	R	21	U		12	U	
AROCLOR-1248		22	UJ	R	21	U		12	U	
AROCLOR-1254		150	J	R	240			260	J	G
AROCLOR-1260		22	UJ	R	21	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB10-100511
SDG: DSY-19	LAB_ID	SE6618-7
FRACTION: PCB	SAMP_DATE	10/5/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
AROCLOR-1016	0.24	U	
AROCLOR-1221	0.24	U	
AROCLOR-1232	0.24	U	
AROCLOR-1242	0.24	U	
AROCLOR-1248	0.24	U	
AROCLOR-1254	0.24	U	
AROCLOR-1260	0.24	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-6
Client ID: DSY-SD-DUP27-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 62.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	240	ug/Kgdrywt	1	330	500	130	380
Benzo(b)fluoranthene	U	380	ug/Kgdrywt	1	330	500	200	380
Benzo(g,h,i)perylene	U	380	ug/Kgdrywt	1	330	500	160	380
Benzo(k)fluoranthene	U	380	ug/Kgdrywt	1	330	500	120	380
Chrysene	J	260	ug/Kgdrywt	1	330	500	140	380
Dibenzo(a,h)anthracene	U	380	ug/Kgdrywt	1	330	500	190	380
Fluoranthene	J	170	ug/Kgdrywt	1	330	500	160	380
Indeno(1,2,3-cd)pyrene	U	380	ug/Kgdrywt	1	330	500	180	380
Pyrene		890	ug/Kgdrywt	1	330	500	150	380
Nitrobenzene-d5		45.6	%					
2-Fluorobiphenyl		59.5	%					
Terphenyl-d14		60.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-20
Client ID: DSY-SD-DUP28-100611
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	360	ug/Kgdrywt	1	330	760	200	580
Benzo(b)fluoranthene	J	580	ug/Kgdrywt	1	330	760	310	580
Benzo(g,h,i)perylene	U	580	ug/Kgdrywt	1	330	760	240	580
Benzo(k)fluoranthene	J	250	ug/Kgdrywt	1	330	760	190	580
Chrysene	J	530	ug/Kgdrywt	1	330	760	220	580
Dibenzo(a,h)anthracene	U	580	ug/Kgdrywt	1	330	760	300	580
Fluoranthene		820	ug/Kgdrywt	1	330	760	240	580
Indeno(1,2,3-cd)pyrene	U	580	ug/Kgdrywt	1	330	760	280	580
Pyrene		1600	ug/Kgdrywt	1	330	760	230	580
Nitrobenzene-d5		33.1	%					
2-Fluorobiphenyl		50.9	%					
Terphenyl-d14		38.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-1
Client ID: DSY-SD-Q25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 71.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	340	ug/Kgdrywt	1	330	460	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	460	190	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	460	140	340
Benzo(k)fluoranthene	U	340	ug/Kgdrywt	1	330	460	120	340
Chrysene	U	340	ug/Kgdrywt	1	330	460	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	460	180	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	460	150	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	460	170	340
Pyrene	U	140	ug/Kgdrywt	1	330	460	140	340
Nitrobenzene-d5		62.3	%					
2-Fluorobiphenyl		68.4	%					
Terphenyl-d14		82.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-2
Client ID: DSY-SD-Q25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 80.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		68.3	%					
2-Fluorobiphenyl		73.2	%					
Terphenyl-d14		91.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-11
Client ID: DSY-SD-Q29-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	630	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	U	630	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	U	630	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	270	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	330	630
Fluoranthene	U	630	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene	J	630	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		39.7	%					
2-Fluorobiphenyl		51.9	%					
Terphenyl-d14		57.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-12
Client ID: DSY-SD-Q29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 47.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		840	ug/Kgdrywt	1	330	690	180	520
Benzo(b)fluoranthene		970	ug/Kgdrywt	1	330	690	280	520
Benzo(g,h,i)perylene	J	280	ug/Kgdrywt	1	330	690	220	520
Benzo(k)fluoranthene	J	500	ug/Kgdrywt	1	330	690	170	520
Chrysene		1200	ug/Kgdrywt	1	330	690	200	520
Dibenzo(a,h)anthracene	U	520	ug/Kgdrywt	1	330	690	270	520
Fluoranthene		810	ug/Kgdrywt	1	330	690	220	520
Indeno(1,2,3-cd)pyrene	J	300	ug/Kgdrywt	1	330	690	260	520
Pyrene		2400	ug/Kgdrywt	1	330	690	210	520
Nitrobenzene-d5		35.2	%					
2-Fluorobiphenyl		50.1	%					
Terphenyl-d14		43.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-13
Client ID: DSY-SD-Q29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	330	ug/Kgdrywt	1	330	440	110	330
Benzo(b)fluoranthene	U	330	ug/Kgdrywt	1	330	440	180	330
Benzo(g,h,i)perylene	U	330	ug/Kgdrywt	1	330	440	140	330
Benzo(k)fluoranthene	U	330	ug/Kgdrywt	1	330	440	110	330
Chrysene	J	140	ug/Kgdrywt	1	330	440	130	330
Dibenzo(a,h)anthracene	U	330	ug/Kgdrywt	1	330	440	170	330
Fluoranthene	U	330	ug/Kgdrywt	1	330	440	140	330
Indeno(1,2,3-cd)pyrene	U	330	ug/Kgdrywt	1	330	440	160	330
Pyrene		550	ug/Kgdrywt	1	330	440	130	330
Nitrobenzene-d5		47.7	%					
2-Fluorobiphenyl		59.4	%					
Terphenyl-d14		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-8
Client ID: DSY-SD-T25-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	220	ug/Kgdrywt	1	330	820	210	620
Benzo(b)fluoranthene	J	470	ug/Kgdrywt	1	330	820	330	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	820	260	620
Benzo(k)fluoranthene	U	620	ug/Kgdrywt	1	330	820	210	620
Chrysene	J	290	ug/Kgdrywt	1	330	820	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	820	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	820	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	820	300	620
Pyrene		840	ug/Kgdrywt	1	330	820	250	620
Nitrobenzene-d5		42.6	%					
2-Fluorobiphenyl		53.7	%					
Terphenyl-d14		69.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-9
Client ID: DSY-SD-T25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 44.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	380	ug/Kgdrywt	1	330	740	190	560
Benzo(b)fluoranthene	U	560	ug/Kgdrywt	1	330	740	300	560
Benzo(g,h,i)perylene	U	560	ug/Kgdrywt	1	330	740	230	560
Benzo(k)fluoranthene	U	560	ug/Kgdrywt	1	330	740	190	560
Chrysene	J	560	ug/Kgdrywt	1	330	740	210	560
Dibenzo(a,h)anthracene	U	560	ug/Kgdrywt	1	330	740	290	560
Fluoranthene	J	300	ug/Kgdrywt	1	330	740	240	560
Indeno(1,2,3-cd)pyrene	U	560	ug/Kgdrywt	1	330	740	280	560
Pyrene		2100	ug/Kgdrywt	1	330	740	230	560
Nitrobenzene-d5		58.2	%					
2-Fluorobiphenyl		73.4	%					
Terphenyl-d14		74.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-10
Client ID: DSY-SD-T25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 75.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	150	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	J	270	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		45.7	%					
2-Fluorobiphenyl		57.2	%					
Terphenyl-d14		34.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-14
Client ID: DSY-SD-T29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	210	ug/Kgdrywt	1	330	410	110	310
Benzo(b)fluoranthene	J	310	ug/Kgdrywt	1	330	410	160	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	410	130	310
Benzo(k)fluoranthene	J	130	ug/Kgdrywt	1	330	410	100	310
Chrysene	J	270	ug/Kgdrywt	1	330	410	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	410	160	310
Fluoranthene	J	190	ug/Kgdrywt	1	330	410	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	410	150	310
Pyrene		570	ug/Kgdrywt	1	330	410	120	310
Nitrobenzene-d5		37.3	%					
2-Fluorobiphenyl		47.8	%					
Terphenyl-d14		62.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-15
Client ID: DSY-SD-T29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 81.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	150	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	J	190	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		46.5	%					
2-Fluorobiphenyl		56.2	%					
Terphenyl-d14		61.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-16
Client ID: DSY-SD-T29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 83.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	280	ug/Kgdrywt	1	330	370	97.	280
Benzo(b)fluoranthene	U	280	ug/Kgdrywt	1	330	370	150	280
Benzo(g,h,i)perylene	U	280	ug/Kgdrywt	1	330	370	120	280
Benzo(k)fluoranthene	U	280	ug/Kgdrywt	1	330	370	93.	280
Chrysene	U	280	ug/Kgdrywt	1	330	370	110	280
Dibenzo(a,h)anthracene	U	280	ug/Kgdrywt	1	330	370	140	280
Fluoranthene	U	280	ug/Kgdrywt	1	330	370	120	280
Indeno(1,2,3-cd)pyrene	U	280	ug/Kgdrywt	1	330	370	140	280
Pyrene	U	280	ug/Kgdrywt	1	330	370	110	280
Nitrobenzene-d5		52.7	%					
2-Fluorobiphenyl		60.4	%					
Terphenyl-d14		78.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-17
Client ID: DSY-SD-W24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	560	ug/Kgdrywt	1	330	820	210	610
Benzo(b)fluoranthene	J	780	ug/Kgdrywt	1	330	820	330	610
Benzo(g,h,i)perylene	U	610	ug/Kgdrywt	1	330	820	260	610
Benzo(k)fluoranthene	J	340	ug/Kgdrywt	1	330	820	200	610
Chrysene	J	710	ug/Kgdrywt	1	330	820	240	610
Dibenzo(a,h)anthracene	U	610	ug/Kgdrywt	1	330	820	320	610
Fluoranthene	J	750	ug/Kgdrywt	1	330	820	260	610
Indeno(1,2,3-cd)pyrene	U	610	ug/Kgdrywt	1	330	820	300	610
Pyrene		1800	ug/Kgdrywt	1	330	820	250	610
Nitrobenzene-d5		39.2	%					
2-Fluorobiphenyl		58.4	%					
Terphenyl-d14		42.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-18
Client ID: DSY-SD-W24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 64.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	220	ug/Kgdrywt	1	330	480	120	360
Benzo(b)fluoranthene	U	360	ug/Kgdrywt	1	330	480	200	360
Benzo(g,h,i)perylene	U	360	ug/Kgdrywt	1	330	480	150	360
Benzo(k)fluoranthene	U	360	ug/Kgdrywt	1	330	480	120	360
Chrysene	J	270	ug/Kgdrywt	1	330	480	140	360
Dibenzo(a,h)anthracene	U	360	ug/Kgdrywt	1	330	480	190	360
Fluoranthene	J	430	ug/Kgdrywt	1	330	480	160	360
Indeno(1,2,3-cd)pyrene	U	360	ug/Kgdrywt	1	330	480	180	360
Pyrene		800	ug/Kgdrywt	1	330	480	150	360
Nitrobenzene-d5		43.0	%					
2-Fluorobiphenyl		59.4	%					
Terphenyl-d14		57.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-19
Client ID: DSY-SD-W24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 76.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	420	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	420	150	310
Pyrene	U	310	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		47.5	%					
2-Fluorobiphenyl		55.2	%					
Terphenyl-d14		74.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-3
Client ID: DSY-SD-W26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	420	ug/Kgdrywt	1	330	800	210	600
Benzo(b)fluoranthene	J	640	ug/Kgdrywt	1	330	800	320	600
Benzo(g,h,i)perylene	U	600	ug/Kgdrywt	1	330	800	250	600
Benzo(k)fluoranthene	J	300	ug/Kgdrywt	1	330	800	200	600
Chrysene	J	500	ug/Kgdrywt	1	330	800	230	600
Dibenzo(a,h)anthracene	U	600	ug/Kgdrywt	1	330	800	310	600
Fluoranthene	J	350	ug/Kgdrywt	1	330	800	260	600
Indeno(1,2,3-cd)pyrene	U	600	ug/Kgdrywt	1	330	800	300	600
Pyrene		1300	ug/Kgdrywt	1	330	800	240	600
Nitrobenzene-d5		39.0	%					
2-Fluorobiphenyl		51.8	%					
Terphenyl-d14		58.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-4
Client ID: DSY-SD-W26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	330	ug/Kgdrywt	1	330	800	210	600
Benzo(b)fluoranthene	J	610	ug/Kgdrywt	1	330	800	320	600
Benzo(g,h,i)perylene	U	600	ug/Kgdrywt	1	330	800	250	600
Benzo(k)fluoranthene	J	250	ug/Kgdrywt	1	330	800	200	600
Chrysene	J	470	ug/Kgdrywt	1	330	800	230	600
Dibenzo(a,h)anthracene	U	600	ug/Kgdrywt	1	330	800	310	600
Fluoranthene	J	300	ug/Kgdrywt	1	330	800	260	600
Indeno(1,2,3-cd)pyrene	U	600	ug/Kgdrywt	1	330	800	300	600
Pyrene		1200	ug/Kgdrywt	1	330	800	240	600
Nitrobenzene-d5		50.4	%					
2-Fluorobiphenyl		61.0	%					
Terphenyl-d14		64.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-5
Client ID: DSY-SD-W26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 70.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	200	ug/Kgdrywt	1	330	440	110	330
Benzo(b)fluoranthene	U	330	ug/Kgdrywt	1	330	440	180	330
Benzo(g,h,i)perylene	U	330	ug/Kgdrywt	1	330	440	140	330
Benzo(k)fluoranthene	U	330	ug/Kgdrywt	1	330	440	110	330
Chrysene	J	230	ug/Kgdrywt	1	330	440	120	330
Dibenzo(a,h)anthracene	U	330	ug/Kgdrywt	1	330	440	170	330
Fluoranthene	U	330	ug/Kgdrywt	1	330	440	140	330
Indeno(1,2,3-cd)pyrene	U	330	ug/Kgdrywt	1	330	440	160	330
Pyrene		700	ug/Kgdrywt	1	330	440	130	330
Nitrobenzene-d5		45.2	%					
2-Fluorobiphenyl		62.4	%					
Terphenyl-d14		56.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-7
Client ID: DSY-SD-RB10-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		49.6						
2-Fluorobiphenyl		55.3						
Terphenyl-d14		66.3						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-6
Client ID: DSY-SD-DUP27-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 62.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	30.	5.0	15.
2-Methylnaphthalene-D10		28.9	%					
Fluorene-D10		38.7	%					
Pyrene-D10		61.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-20
Client ID: DSY-SD-DUP28-100611
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	46.	7.6	23.
2-Methylnaphthalene-D10		29.2	%					
Fluorene-D10		47.8	%					
Pyrene-D10		72.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-1
Client ID: DSY-SD-Q25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 71.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		36.	ug/Kgdrywt	1	20	28.	4.6	14.
2-Methylnaphthalene-D10		60.0	%					
Fluorene-D10		64.9	%					
Pyrene-D10		77.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-2
Client ID: DSY-SD-Q25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 80.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		67.6	%					
Fluorene-D10		71.4	%					
Pyrene-D10		74.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-11
Client ID: DSY-SD-Q29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10		42.2	%					
Fluorene-D10		61.2	%					
Pyrene-D10		68.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-12DL
Client ID: DSY-SD-Q29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 47.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		560	ug/Kgdrywt	2	20	84.	14.	42.
2-Methylnaphthalene-D10		30.7	%					
Fluorene-D10		37.6	%					
Pyrene-D10		43.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-13
Client ID: DSY-SD-Q29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	27.	4.4	13.
2-Methylnaphthalene-D10		35.6	%					
Fluorene-D10		40.7	%					
Pyrene-D10		57.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-8
Client ID: DSY-SD-T25-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		250	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10		41.0	%					
Fluorene-D10		58.1	%					
Pyrene-D10		60.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-9
Client ID: DSY-SD-T25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 44.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		490	ug/Kgdrywt	1	20	45.	7.4	22.
2-Methylnaphthalene-D10		34.6	%					
Fluorene-D10		40.7	%					
Pyrene-D10		53.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-10
Client ID: DSY-SD-T25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 75.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		68.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		40.8	%					
Fluorene-D10		50.5	%					
Pyrene-D10		66.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-14
Client ID: DSY-SD-T29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	25.	4.1	12.
2-Methylnaphthalene-D10		39.6	%					
Fluorene-D10		50.2	%					
Pyrene-D10		59.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-15
Client ID: DSY-SD-T29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 81.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		56.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		45.0	%					
Fluorene-D10		62.5	%					
Pyrene-D10		80.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-16
Client ID: DSY-SD-T29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 83.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	22.	ug/Kgdrywt	1	20	22.	3.7	11.
2-Methylnaphthalene-D10		46.1	%					
Fluorene-D10		59.9	%					
Pyrene-D10		74.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-17
Client ID: DSY-SD-W24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		400	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10		36.5	%					
Fluorene-D10		48.7	%					
Pyrene-D10		63.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-18
Client ID: DSY-SD-W24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 64.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		150	ug/Kgdrywt	1	20	29.	4.8	15.
2-Methylnaphthalene-D10		35.6	%					
Fluorene-D10		46.4	%					
Pyrene-D10		79.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-19
Client ID: DSY-SD-W24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 76.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	13.	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10		38.3	%					
Fluorene-D10		54.5	%					
Pyrene-D10		66.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-3
Client ID: DSY-SD-W26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		320	ug/Kgdrywt	1	20	48.	8.0	24.
2-Methylnaphthalene-D10		47.6	%					
Fluorene-D10		56.2	%					
Pyrene-D10		61.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-4
Client ID: DSY-SD-W26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		300	ug/Kgdrywt	1	20	48.	8.0	24.
2-Methylnaphthalene-D10		49.8	%					
Fluorene-D10		60.0	%					
Pyrene-D10		65.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-5
Client ID: DSY-SD-W26-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 70.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	26.	4.4	13.
2-Methylnaphthalene-D10		45.2	%					
Fluorene-D10		58.0	%					
Pyrene-D10		71.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-7
Client ID: DSY-SD-RB10-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-6
Client ID: DSY-SD-DUP27-100511
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 62.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	27.	13.	14.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	27.	9.3	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	27.	9.7	14.
Aroclor-1254		620	ug/Kgdrywt	1	17	27.	7.5	14.
Aroclor-1260	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Tetrachloro-M-Xylene		95.1	%					
Decachlorobiphenyl		85.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-20
Client ID: DSY-SD-DUP28-100611
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 29-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	43.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	24.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	43.	15.	21.
Aroclor-1254		1400	ug/Kgdrywt	1	17	43.	12.	21.
Aroclor-1260		440	ug/Kgdrywt	1	17	43.	15.	21.
Tetrachloro-M-Xylene		78.8	%					
Decachlorobiphenyl		78.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-1
Client ID: DSY-SD-Q25-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 71.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	23.	11.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	23.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	23.	7.8	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	23.	8.2	11.
Aroclor-1254		89.	ug/Kgdrywt	1	17	23.	6.3	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Tetrachloro-M-Xylene		88.6	%					
Decachlorobiphenyl		76.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-2
Client ID: DSY-SD-Q25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 80.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.1	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		88.4	%					
Decachlorobiphenyl		105.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-11
Client ID: DSY-SD-Q29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene		92.5	%					
Decachlorobiphenyl		81.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-12
Client ID: DSY-SD-Q29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 47.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1221	U	18.	ug/Kgdrywt	1	17	36.	17.	18.
Aroclor-1232	U	21.	ug/Kgdrywt	1	17	36.	20.	21.
Aroclor-1242	U	18.	ug/Kgdrywt	1	17	36.	12.	18.
Aroclor-1248	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Aroclor-1254		260	ug/Kgdrywt	1	17	36.	10.	18.
Aroclor-1260	U	18.	ug/Kgdrywt	1	17	36.	13.	18.
Tetrachloro-M-Xylene		91.1	%					
Decachlorobiphenyl		74.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-13
Client ID: DSY-SD-Q29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	23.	8.0	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	23.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	23.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	23.	7.7	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Aroclor-1254		98.	ug/Kgdrywt	1	17	23.	6.2	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	23.	8.0	11.
Tetrachloro-M-Xylene		82.6	%					
Decachlorobiphenyl		78.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-8
Client ID: DSY-SD-T25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254		1500	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Tetrachloro-M-Xylene		86.4	%					
Decachlorobiphenyl		79.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-9
Client ID: DSY-SD-T25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 44.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254		92.	ug/Kgdrywt	1	17	38.	10.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Tetrachloro-M-Xylene		98.8	%					
Decachlorobiphenyl		84.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-10
Client ID: DSY-SD-T25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 75.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	21.	7.5	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	21.	9.9	11.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	12.	12.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	21.	7.3	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Aroclor-1254		110	ug/Kgdrywt	1	17	21.	5.9	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	21.	7.5	11.
Tetrachloro-M-Xylene		83.9	%					
Decachlorobiphenyl		83.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-14
Client ID: DSY-SD-T29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	23.	11.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	23.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	23.	7.8	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	23.	8.2	11.
Aroclor-1254		110	ug/Kgdrywt	1	17	23.	6.3	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Tetrachloro-M-Xylene		95.1	%					
Decachlorobiphenyl		85.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-15
Client ID: DSY-SD-T29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 81.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242		57.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Tetrachloro-M-Xylene		85.5	%					
Decachlorobiphenyl		84.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-16
Client ID: DSY-SD-T29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 83.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.3	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242		120	ug/Kgdrywt	1	17	20.	6.8	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.5	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Tetrachloro-M-Xylene		74.9	%					
Decachlorobiphenyl		68.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-17
Client ID: DSY-SD-W24-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 29-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	43.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	16.	22.
Aroclor-1254		1600	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260		660	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene		80.2	%					
Decachlorobiphenyl		79.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-18
Client ID: DSY-SD-W24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 29-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 64.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	25.	9.0	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	25.	12.	13.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	25.	14.	15.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	25.	8.7	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	25.	9.1	13.
Aroclor-1254		630	ug/Kgdrywt	1	17	25.	7.0	13.
Aroclor-1260		500	ug/Kgdrywt	1	17	25.	9.0	13.
Tetrachloro-M-Xylene		64.2	%					
Decachlorobiphenyl		67.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-19
Client ID: DSY-SD-W24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 29-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 76.
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		62.8	%					
Decachlorobiphenyl	*	55.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-3
Client ID: DSY-SD-W26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	43.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	16.	22.
Aroclor-1254		150	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene		64.5	%					
Decachlorobiphenyl	*	49.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-4
Client ID: DSY-SD-W26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	41.	19.	21.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	41.	15.	21.
Aroclor-1254		240	ug/Kgdrywt	1	17	41.	11.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Tetrachloro-M-Xylene		81.1	%					
Decachlorobiphenyl		77.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-5
Client ID: DSY-SD-W26-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 28-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 70.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.4	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.1	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.5	12.
Aroclor-1254		260	ug/Kgdrywt	1	17	24.	6.6	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.4	12.
Tetrachloro-M-Xylene		84.5	%					
Decachlorobiphenyl		79.4	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6618-7
Client ID: DSY-SD-RB10-100511
Project: NAVSTA Newport CTO WE(
SDG: DSY-19

Sample Date: 05-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 21-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		62.4	%					
Decachlorobiphenyl		51.5	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Newport
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. 112G02747
SDG No. DSY-19
No. of Samples/Matrix 19 sediment

SOW/Method No. 8270D, 8082A
Sampling Date(s) 10/5/11 10/6/11
Shipping Date(s) _____
Date Rec'd by lab 10/7/11

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. DSY-SD-W26-2418 | DSY-SD-DUP27-100511
DSY-SD-W24-0012 | DSY-SD-DUP28-100611
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Ann Cognetti Company Name TetraTech Phone Number _____

Date Validation Started 12/16/11 Date Validation Completed 12/16/11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	✓
VOA/SV-III	INITIAL CALIBRATION	✓
VOA/SV-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	✓
SV-VI	SV SURROGATE SPIKE RECOVERIES	✓
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	✓
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	✓
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	✓
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	✓
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	✓
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	✓
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB-III	INITIAL CALIBRATION	✓
Pest/PCB-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	✓
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	✓
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	✓
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above.

Signature: Ann Cognetti Name: Ann Cognetti

Date: 12-16-11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		NA			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: John Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
	See data validation report				

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: SVOC, PAH, PCB

Missing Information	Date Lab Contacted	Date Received

Validator: Ann Cognetti Date: 12-16-11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler: Michael Horton Company: Tetra Tech Contacted: Yes (No) Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action
				See data validation report												

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Ann Cognetti Date: 12-16-11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments: See data validation report							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments: See data validation report

Validator: John Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet

VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

See data validation report

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:_____

Sampler: Michael Horton Company: TetraTech

Contacted: Yes (No) Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
			See data validation report			

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Ann Cognetta Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: See data Validation report

Validator: Ann Cognetti

Date: 12-16-11

12/96

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		NA			

Validator: Ann Cognetti

Date: 12/16/11

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	$NBZ\text{-}d_5$	2-FBP	$TPH\text{-}d_{14}$	$1,2\text{-}DCB\text{-}d_4$*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		See data validation report				

Method	Acid Method QC Acceptance Criteria					
	$Phenol\text{-}d_5$	2-FP	2,4,6-TBP	$2\text{-}CP\text{-}d_4$*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
		See data validation report						

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
		See Data Validation Report									

Validator: Ann Coquette

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: See (data) (validation) (report

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: (Ann Cognetti) Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Ann Cognetti

Date: 12-16-11

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Ann Cognetti Date: 12-16-11

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Ann Cognetti

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y N**
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		See data validation report
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: John Cognetta

Date: 12-16-11

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Lenn Cognetta

Date: 12-16-11

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Ann Cognetta Date: 12-16-11

APPENDIX D

SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-19
SE6618

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6618 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6618-1	DSY-SD-Q25-1224
SE6618-2	DSY-SD-Q25-2448
SE6618-3	DSY-SD-W26-0012
SE6618-4	DSY-SD-W26-1224
SE6618-5	DSY-SD-W26-2448
SE6618-6	DSY-SD-DUP27-100511
SE6618-7	DSY-SD-RB10-100511
SE6618-8	DSY-SD-T25-0012
SE6618-9	DSY-SD-T25-1224
SE6618-10	DSY-SD-T25-2448
SE6618-11	DSY-SD-Q29-0012
SE6618-12	DSY-SD-Q29-1224
SE6618-13	DSY-SD-Q29-2448
SE6618-14	DSY-SD-T29-0012
SE6618-15	DSY-SD-T29-1224
SE6618-16	DSY-SD-T29-2448
SE6618-17	DSY-SD-W24-0012
SE6618-18	DSY-SD-W24-1224
SE6618-19	DSY-SD-W24-2448
SE6618-20	DSY-SD-DUP28-100611

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-19 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6618-16 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.
All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6618-7 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

Samples SE6618-1, 3, 5, 6, 9, 10, 12DL, 13, 14, 15, 17, 18 and 20 were manually integrated for the surrogates fluorene-d10 and pyrene-d10 and/or the internal standards phenanthrene-d10 and/or chyresene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The laboratory method blank WG101701-1 had a low response for the internal standard perylene-d12 that resulted in a %D which was outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The LCS and LCSD WG98968-2 and 3 had low recoveries for the compound benzo(a)pyrene, which were outside of the laboratory established acceptance limits. Also, the LCS had a low recovery for one surrogate.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Samples SE6618-3, 12 and 17 were manually integrated for the analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6618-17 and 18 had low responses and the laboratory method blank WG98966-1 and the LCSD WG98966-3 had high low responses for the internal standard perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The initial calibration analyzed on the U instrument on 11/12/11 had a %RSD value for the target analyte indeno(1,2,3-cd)pyrene that exceeded the method acceptance limit of 15%. The analyte failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990, respectively. This compound was calibrated using the average model.

The CV (file N2613) had high responses for the target analytes pyrene, benzo(g,h,i)perylene and the surrogate terphenyl-d14. The CV (file U8602) had a low response for benzo(g, h, i)perylene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCS WG98966-2 and the LCSD WG98966-3 had four and seven spiked target analytes, respectively, with recoveries that were low and outside of the laboratory established acceptance limits. The LCSD also had a low recovery for the surrogate nitrobenzene-d5, which was outside the laboratory established acceptance limits. DoD QSM Version 4.1 Section G.7 lists the acceptance limits of the SW-846 Method 8270 target analytes. If the DoD QSM acceptance limits are applied, the LCS had acceptable recoveries for all of the target analytes. Therefore, no further action was taken.

8082 Analysis

Surrogate recoveries for the samples and QC were evaluated using laboratory established acceptance limits.

All soil samples and associated QC were put through a sulfur cleanup according to SW-846 method 3660 using the copper powder technique. The cleanup did not completely remove the sulfur. Consequently, some of the samples may have sulfur interference affecting the quantitation of target analytes.

Samples SE6618-3, 4, 5, 7, 9, 12, 13, 16 and 20, were manually integrated for Aroclor 1242, Aroclor 1254 and/or the surrogate TCX. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6618-1, 8, and 20 had low recoveries for DCB on channel A, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channel, no further action was taken.

Samples SE6618-3 and 19 had low recoveries for DCB on both channels and a low recovery for TCX on channel A, which were outside the laboratory established acceptance limits.

Samples SE6618-7 and 18 had low recoveries for TCX and DCB on one channel, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channels, no further action was taken.

The method blank WG98971-1, LCS/LCSD WG98971-2 and 3 had low recoveries for TCX on both channels which were outside of the laboratory established acceptance limits. Since the recoveries for DCB were acceptable, the associated sample was not reextracted. The LCS WG98971-2 also had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

The opening calibration verification (CV) (file 7EJ945) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EJ996) had a high response for Aroclor 1242 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EZ011) had a high response for TCX on both channels, as well as high responses for Aroclor 1016, Aroclor 1260, and DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016, Aroclor 1260, and DCB were acceptable on channel B, the associated samples were not reanalyzed. The associated samples may be biased high for TCX.

The closing CV (file 7EZ014) had a high response for Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The MS and MSD WG99552-4 and 5 had high recoveries for Aroclor 1016 which were outside of the laboratory established acceptance limits. Since the associated LCS had acceptable recoveries and the high recoveries in the MS/MSD are likely due to interference from Aroclor 1242 in the sample, the MS/MSD were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-19 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6618-7 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6618-(1-6 and 8-20) were digested for ICP analysis on 10/25/11 (QC Batch BJ25ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6618-16 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-19 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6618-16 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6618-16 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6618-16 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6618-16 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-19 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recoveries, relative to both the TOC (1) and TOC(2) results for the unspiked sample, for the matrix spike aliquot of Katahdin Sample No. SE6618-3 are outside the laboratory's acceptance limits of 75% - 125%.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond

12.01.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61 Deactivation SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SFlele17 / SFlele18

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TAL	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-N26-2448	10/5/11/0856	SED	2	X	X		X						
	DSY-SD-N28-0012	/0945		3	X	X	X	X						
	DSY-SD-N28-1224	/0948		2	X	X		X						
	DSY-SD-N28-2448	/0951		4	X	X		X						
	DSY-SD-N30-0012	/1000		3	X	X	X	X						
	DSY-SD-N30-1224	/1003		2	X	X		X						
	DSY-SD-N30-2448	/1006		2	X	X		X						
	DSY-SD-Q25-0012	/1015		3	X	X	X	X						
	DSY-SD-Q25-1224	/1018		2	X	X		X						
	DSY-SD-Q25-2448	/1021		2	X	X		X						
	DSY-SD-W26-0012	/1035		3	X	X	X	X						
	DSY-SD-W26-1224	/1038		2	X	X		X						
	DSY-SD-W26-2448	/1041		2	X	X		X						
	DSY-SD-DUP27-100511	/	↓	2	X	X		X						
	DSY-SD-RB10-100511	/1215	AQ	5	X	X		X						
	DSY-SD-T25-0012	↓ /1055	SED	3	X	X	X	X						

COMMENTS

DSY-SD-N28-2448 is designated as LabQC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000017

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE		SEE PAGE ONE ( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	STOWE61, Deerfield SY	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton / [signature]

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE6618 / SE6619

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)						
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-T25-1224	10/5/11 / 1058	SED	2	X	X		X						
	DSY-SD-T25-2448	↓ / 1101		2	X	X		X						
	DSY-SD-Q29-0012	10/6/11 / 1045		3	X	X	X	X						
	DSY-SD-Q29-1224	/ 1048		2	X	X		X						
	DSY-SD-Q29-2448	/ 1051		2	X	X		X						
	DSY-SD-T29-0012	/ 1116		3	X	X	X	X						
	DSY-SD-T29-1224	/ 1113		2	X	X		X						
	DSY-SD-T29-2448	/ 1116		4	X	X		X						
	DSY-SD-W24-0012	/ 1225		3	X	X	X	X						
	DSY-SD-W24-1224	/ 1228		2	X	X		X						
	DSY-SD-W24-2448	/ 1231		2	X	X		X						
	DSY-SD-DUP28-100611	/ —		3	X	X	X	X						
	DSY-SD-W30-0012	/ 1245		3	X	X	X	X						
	DSY-SD-W30-1224	/ 1248		2	X	X		X						
	DSY-SD-W30-2448	/ 1251		2	X	X		X						
	DSY-SD-W28-0012	↓ / 1300	↓	3	X	X	X	X						

COMMENTS
DSY-SD-T29-2448 is designated as the lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	10/7/11 1330	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000018

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Project: Deracklon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE16016 to SE16020	KIMS Review By:	Received By: DM
SDG #:	Cooler: 1 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.3
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace:				✓	
Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?				✓	
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Directorion	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66630	KIMS Review By:	Received By: DM
SDG #:	Cooler: 2 of 67 WEW 10/7/11	Date/Time Rec.: 10/7/11 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace:				✓	
Aqueous: No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?				✓	
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Dereckton	KIMS Entry By: DM	Delivered By: KAS	
KAS Work Order#: SEL6611 to SEL6620	KIMS Review By:	Received By: DM	
SDG #:	Cooler: 3 of 7	Date/Time Rec.: 10/7/11 / 1730	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,	✓				
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Dereckton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE16116 to SE16620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 4 of 7	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Directorton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66116 to 66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 5 of 67 10/7/11 WCW	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓	~~X~~ QP 10.10.11			Temp (°C): 8.2
Samples received at <6 °C w/o freezing?		X			Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?	✓			QP 10.10.11	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

2 Bags of ice - partially melted

No Temp Blanks

called client - temp. was greater than 6°C - Samples in cooler collected on same day as delivery to lab. Cooling process started.

QP 10.10.11

Project: Directon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 6 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: TetraTech NUS	KAS PM: JU	Samples By: Client
Project: Deer Park	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 7 of 7	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 4.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample ID DSY-SD-03-2448 labeled time 2 jars 1006, 2 jars 1106
Time on COC = 1106

0000016

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-20	OS	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	UG/KG	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	SIM	UG/KG	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-19	PCB	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-19	PCB	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W26-2446	UNITS	DSY-SD-DUP27-100611	RPD	D
OS	BENZO(A)ANTHRACENE	200 J	UG/KG	240 J	18.18	40.00
OS	CHRYSENE	230 J	UG/KG	260 J	12.24	30.00
OS	FLUORANTHENE	ND	UG/KG	170 J	200.00	170.00
OS	PYRENE	700	UG/KG	890	23.90	190.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W26-2448	UNITS	DSY-SD-DUP27-100511	RPD	D
PAH	BENZO(A)PYRENE	140	UG/KG	160	13.33	20.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W26-2468	UNITS	DSY-SD-DUP27-100511	RPD	D
PCB	AROCLOR-1254	260	UG/KG	620	81.82	360.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W24-0012	UNITS	DSY-SD-DUP28-100611	RPD	D
OS	BENZO(A)ANTHRACENE	560 J	UG/KG	360 J	43.48	200.00
OS	BENZO(B)FLUORANTHENE	780 J	UG/KG	580 J	29.41	200.00
OS	BENZO(K)FLUORANTHENE	340 J	UG/KG	250 J	30.51	90.00
OS	CHRYSENE	710 J	UG/KG	530 J	29.03	180.00
OS	FLUORANTHENE	750 J	UG/KG	820	8.92	70.00
OS	PYRENE	1800	UG/KG	1600	11.76	200.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W24-0012	UNITS	DSY-SD-DUP28-100611	RPD	D
PAH	BENZO(A)PYRENE	400	UG/KG	310	25.35	90.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-19

FRACTION	CHEMICAL	DSY-SD-W24-0012	UNITS	DSY-SD-DUP28-100611	RPD	D
PCB	AROCLOR-1254	1600	UG/KG	1400	13.33	200.00
PCB	AROCLOR-1260	660	UG/KG	440	40.00	220.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: ND180 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP Injection Time: 1604

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4	(73.4)2
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6	(19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08					
09					
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16					
17					
18					
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20					

Katahdin Analytical Services A0000035

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-N Calibration Date(s): 11/15/11 11/15/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1623 2007

LAB FILE ID: RF10: N2556 RF25: N2557 RF50: N2555
RF75: N2558 RF100: N2559 RF125: N2560

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	558750	1422000	2304200	4306500	5112000	6314100	2ORDR	-8.16e-003	0.95099360	0.20144842	0.99971	0.99000
Pyrene	1.357	1.330	1.166	1.102	1.028	0.985	AVRG		1.16124550		13.290	15.000
Benzo(a)anthracene	0.958	0.946	0.876	0.871	0.856	0.841	AVRG		0.89147189		5.458	15.000
Chrysene	0.929	0.900	0.788	0.795	0.771	0.762	AVRG		0.82417809		8.660	15.000
Benzo(b)fluoranthene	1.034	0.996	1.019	1.021	1.000	1.115	AVRG		1.03081703		4.219	15.000
Benzo(k)fluoranthene	1.018	1.079	0.982	0.925	0.909	0.950	AVRG		0.97732205		6.492	15.000
Benzo(a)pyrene	0.871	0.900	0.849	0.842	0.854	0.832	AVRG		0.85810014		2.824	30.000
Indeno(1,2,3-cd)pyrene	0.626	0.699	0.652	0.612	0.651	0.543	AVRG		0.63045692		8.279	15.000
Dibenzo(a,h)anthracene	0.666	0.740	0.694	0.651	0.695	0.591	AVRG		0.67276396		7.465	15.000
Benzo(g,h,i)perylene	0.662	0.722	0.665	0.602	0.624	0.533	AVRG		0.63463680		10.159	15.000
Nitrobenzene-D5	0.327	0.339	0.307	0.304	0.301	0.289	AVRG		0.31118704		5.881	15.000
2-Fluorobiphenyl	1.184	1.186	1.041	0.972	0.948	0.888	AVRG		1.03665605		12.072	15.000
Terphenyl-D14	0.769	0.770	0.688	0.683	0.648	0.639	AVRG		0.69942059		8.229	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: ND183 DFTPP Injection Date: 11/18/11

Instrument ID: GCMS-N DFTPP Injection Time: 1105

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.8
68	Less than 2.0% of mass 69	0.5 (1.4)1
69	Less than 100.0% of mass 198	33.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.7
365	1.0 - 100.0% of mass 198	2.4
441	0.0 - 100.0% of mass 443	11.7 (73.3)2
442	40.0 - 100.0% of mass 198	81.5
443	17.0 - 23.0% of mass 442	15.9 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1118	N2613	11/18/11	1129
02	WG99335-BLANK	WG99335-1	N2614	11/18/11	1215
03	WG99335-LCS	WG99335-2	N2615	11/18/11	1257
04	WG99335-LCSD	WG99335-3	N2616	11/18/11	1339
05	DSY-SD-Q25-1224	SE6618-1	N2619	11/18/11	1546
06	DSY-SD-Q25-2448	SE6618-2	N2620	11/18/11	1628
07	DSY-SD-W26-0012	SE6618-3	N2621	11/18/11	1711
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Katahdin Analytical Services A0000036

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-N Calibration Date: 11/18/11 Time: 1129

Lab File ID: N2613 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	46.944000	50.000000	0.8172600	0.01	-6.11	20.01	2RDR	
Pyrene	1.1610000	1.4782000	1.4782000	0.01	27.32	20.00	AVRG	<-
Benzo(a)anthracene	0.8910000	0.9198000	0.9198000	0.01	3.23	20.00	AVRG	
Chrysene	0.8240000	0.9197900	0.9197900	0.01	11.62	20.00	AVRG	
Benzo(b)fluoranthene	1.0310000	1.0676000	1.0676000	0.01	3.55	20.00	AVRG	
Benzo(k)fluoranthene	0.9770000	1.1204000	1.1204000	0.01	14.68	20.00	AVRG	
Benzo(a)pyrene	0.8580000	0.9537900	0.9537900	0.01	11.16	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6300000	0.7036600	0.7036600	0.01	11.69	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6730000	0.7467400	0.7467400	0.01	10.96	20.00	AVRG	
Benzo(g,h,i)perylene	0.6350000	0.7823600	0.7823600	0.01	23.21	20.00	AVRG	<-
Nitrobenzene-D5	0.3110000	0.3227100	0.3227100	0.01	3.76	20.00	AVRG	
2-Fluorobiphenyl	1.0360000	1.1185000	1.1185000	0.01	7.96	20.00	AVRG	
Terphenyl-D14	0.7000000	0.8462400	0.8462400	0.01	20.89	20.00	AVRG	<-

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99335-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: N2614 Lab Sample ID: WG99335-1

Instrument ID: GCMS-N Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/18/11

Level: (low/med) LOW Time Analyzed: 1215

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG99335-LCS	WG99335-2	N2615	11/18/11	1257
02	WG99335-LCSD	WG99335-3	N2616	11/18/11	1339
03	DSY-SD-Q25-1224	SE6618-1	N2619	11/18/11	1546
04	DSY-SD-Q25-2448	SE6618-2	N2620	11/18/11	1628
05	DSY-SD-W26-0012	SE6618-3	N2621	11/18/11	1711
06	DSY-SD-W26-1224	SE6618-4	N2634	11/19/11	1716
07	DSY-SD-W26-2448	SE6618-5	N2635	11/19/11	1758
08	DSY-SD-DUP27-100511	SE6618-6	N2636	11/19/11	1840
09	DSY-SD-T25-0012	SE6618-8	N2637	11/19/11	1922
10	DSY-SD-T25-1224	SE6618-9	N2638	11/19/11	2004
11	DSY-SD-T25-2448	SE6618-10	N2644	11/20/11	0946
12	DSY-SD-Q29-0012	SE6618-11	N2645	11/20/11	1028
13	DSY-SD-Q29-1224	SE6618-12	N2646	11/20/11	1110
14	DSY-SD-Q29-2448	SE6618-13	N2647	11/20/11	1152
15	DSY-SD-T29-0012	SE6618-14	N2648	11/20/11	1234
16	DSY-SD-T29-1224	SE6618-15	N2649	11/20/11	1316
17	DSY-SD-T29-2448	SE6618-16	N2650	11/20/11	1358
18	DSY-SD-T29-2448MS	WG99335-4	N2651	11/20/11	1441
19	DSY-SD-T29-2448MSD	WG99335-5	N2652	11/20/11	1523
20	DSY-SD-W24-0012	SE6618-17	N2653	11/20/11	1605
21	DSY-SD-W24-1224	SE6618-18	N2654	11/20/11	1647
22	DSY-SD-W24-2448	SE6618-19	N2655	11/20/11	1729
23	DSY-SD-DUP28-100611	SE6618-20	N2656	11/20/11	1811
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000033

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99335-1
Client ID: Method Blank Sample
Project:
SDG: DSY-19

Sample Date:
Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 29-nov-2011 08:36

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		54.3	%					
2-Fluorobiphenyl		65.1	%					
Terphenyl-d14		91.3	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: ND184 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-N DFTPP Injection Time: 0827

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.5
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	35.2
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	54.4
197	Less than 1.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.1
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	9.4 (71.5)2
442	40.0 - 100.0% of mass 198	69.2
443	17.0 - 23.0% of mass 442	13.1 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1119	N2622	11/19/11	0851
02	DSY-SD-W26-1224	SE6618-4	N2634	11/19/11	1716
03	DSY-SD-W26-2448	SE6618-5	N2635	11/19/11	1758
04	DSY-SD-DUP27-100511	SE6618-6	N2636	11/19/11	1840
05	DSY-SD-T25-0012	SE6618-8	N2637	11/19/11	1922
06	DSY-SD-T25-1224	SE6618-9	N2638	11/19/11	2004
07					
08					
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10					
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17					
18					
19					
20					

Katahdin Analytical Services A0000037

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-N Calibration Date: 11/19/11 Time: 0851

Lab File ID: N2622 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	52.531000	50.000000	0.8980600	0.01	5.06	20.01	2RDR
Pyrene	1.1610000	1.2815000	1.2815000	0.01	10.38	20.00	AVRG
Benzo(a)anthracene	0.8910000	0.9189100	0.9189100	0.01	3.13	20.00	AVRG
Chrysene	0.8240000	0.8432000	0.8432000	0.01	2.33	20.00	AVRG
Benzo(b)fluoranthene	1.0310000	1.0282000	1.0282000	0.01	-0.27	20.00	AVRG
Benzo(k)fluoranthene	0.9770000	1.0130000	1.0130000	0.01	3.68	20.00	AVRG
Benzo(a)pyrene	0.8580000	0.8894700	0.8894700	0.01	3.67	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6300000	0.7033500	0.7033500	0.01	11.64	20.00	AVRG
Dibenzo(a,h)anthracene	0.6730000	0.7405800	0.7405800	0.01	10.04	20.00	AVRG
Benzo(g,h,i)perylene	0.6350000	0.7533800	0.7533800	0.01	18.64	20.00	AVRG
Nitrobenzene-D5	0.3110000	0.3148900	0.3148900	0.01	1.25	20.00	AVRG
2-Fluorobiphenyl	1.0360000	1.0396000	1.0396000	0.01	0.35	20.00	AVRG
Terphenyl-D14	0.7000000	0.7465000	0.7465000	0.01	6.64	20.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: ND185 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-N DFTPP Injection Time: 0846

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.9
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	33.6
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	40.0 - 60.0% of mass 198	53.3
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.6 (72.6)2
442	40.0 - 100.0% of mass 198	74.7
443	17.0 - 23.0% of mass 442	14.6 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1120	N2643	11/20/11	0904
02	DSY-SD-T25-2448	SE6618-10	N2644	11/20/11	0946
03	DSY-SD-Q29-0012	SE6618-11	N2645	11/20/11	1028
04	DSY-SD-Q29-1224	SE6618-12	N2646	11/20/11	1110
05	DSY-SD-Q29-2448	SE6618-13	N2647	11/20/11	1152
06	DSY-SD-T29-0012	SE6618-14	N2648	11/20/11	1234
07	DSY-SD-T29-1224	SE6618-15	N2649	11/20/11	1316
08	DSY-SD-T29-2448	SE6618-16	N2650	11/20/11	1358
09	DSY-SD-T29-2448MS	WG99335-4	N2651	11/20/11	1441
10	DSY-SD-T29-2448MSD	WG99335-5	N2652	11/20/11	1523
11	DSY-SD-W24-0012	SE6618-17	N2653	11/20/11	1605
12	DSY-SD-W24-1224	SE6618-18	N2654	11/20/11	1647
13	DSY-SD-W24-2448	SE6618-19	N2655	11/20/11	1729
14	DSY-SD-DUP28-100611	SE6618-20	N2656	11/20/11	1811
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-N Calibration Date: 11/20/11 Time: 0904

Lab File ID: N2643 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	44.183000	50.000000	0.7764300	0.01	-11.63	20.01	2RDR
Pyrene	1.1610000	1.3732000	1.3732000	0.01	18.28	20.00	AVRG
Benzo(a)anthracene	0.8910000	0.9092400	0.9092400	0.01	2.05	20.00	AVRG
Chrysene	0.8240000	0.8544400	0.8544400	0.01	3.69	20.00	AVRG
Benzo(b)fluoranthene	1.0310000	0.9742300	0.9742300	0.01	-5.51	20.00	AVRG
Benzo(k)fluoranthene	0.9770000	0.9759500	0.9759500	0.01	-0.11	20.00	AVRG
Benzo(a)pyrene	0.8580000	0.8676000	0.8676000	0.01	1.12	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6300000	0.7024500	0.7024500	0.01	11.50	20.00	AVRG
Dibenzo(a,h)anthracene	0.6730000	0.7328600	0.7328600	0.01	8.89	20.00	AVRG
Benzo(g,h,i)perylene	0.6350000	0.7398800	0.7398800	0.01	16.52	20.00	AVRG
Nitrobenzene-D5	0.3110000	0.2955300	0.2955300	0.01	-4.97	20.00	AVRG
2-Fluorobiphenyl	1.0360000	1.0351000	1.0351000	0.01	-0.09	20.00	AVRG
Terphenyl-D14	0.7000000	0.7579700	0.7579700	0.01	8.28	20.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: UD722 DFTPP Injection Date: 11/12/11

Instrument ID: GCMS-U DFTPP Injection Time: 0905

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	25.1
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.3 (81.6)2
442	40.0 - 100.0% of mass 198	87.6
443	17.0 - 23.0% of mass 442	16.3 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1112	U8539	11/12/11	0925
02		SSTD010U1112	U8540	11/12/11	1009
03		SSTD025U1112	U8541	11/12/11	1053
04		SSTD075U1112	U8542	11/12/11	1138
05		SSTD100U1112	U8543	11/12/11	1222
06		SSTD125U1112	U8544	11/12/11	1307
07		8270 IND CHECK	U8545	11/12/11	1352
08					
09					
10					
11					
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13					
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15					
16					
17					
18					
19					
20					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-U Calibration Date(s): 11/12/11 11/12/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0925 1307

LAB FILE ID: RF10: U8540 RF25: U8541 RF50: U8539
RF75: U8542 RF100: U8543 RF125: U8544

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2	
Fluoranthene	0.846	0.849	0.922	0.854	0.740	0.710	AVRG	0.82028951	9.685	30.000	
Pyrene	1.574	1.420	1.691	1.452	1.565	1.802	AVRG	1.58392524	9.095	15.000	
Benzo(a)anthracene	0.985	0.989	1.100	1.002	0.938	0.959	AVRG	0.99552486	5.647	15.000	
Chrysene	1.020	0.944	1.034	0.914	0.855	0.872	AVRG	0.93981116	7.942	15.000	
Benzo(b)fluoranthene	0.866	0.962	1.283	1.148	1.005	1.023	AVRG	1.04784339	14.033	15.000	
Benzo(k)fluoranthene	1.618	1.555	1.615	1.468	1.252	1.374	AVRG	1.48031152	9.842	15.000	
Benzo(a)pyrene	0.869	1.021	1.149	1.052	0.942	1.017	AVRG	1.00839806	9.484	30.000	
Indeno(1,2,3-cd)pyrene	0.650	0.758	0.397	0.751	0.563	0.621	AVRG	0.62346504	21.495	15.000	<-
Dibenzo(a,h)anthracene	0.487	0.624	0.621	0.648	0.715	0.669	AVRG	0.62736016	12.246	15.000	
Benzo(g,h,i)perylene	0.533	0.604	0.600	0.639	0.690	0.667	AVRG	0.62216363	9.007	15.000	
Nitrobenzene-D5	0.339	0.342	0.376	0.336	0.311	0.322	AVRG	0.33760836	6.558	15.000	
2-Fluorobiphenyl	1.308	1.225	1.284	1.200	1.058	1.040	AVRG	1.18601809	9.535	15.000	
Terphenyl-D14	0.912	0.843	1.010	0.896	0.954	1.072	AVRG	0.94783144	8.752	15.000	

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: UD723 DFTPP Injection Date: 11/13/11

Instrument ID: GCMS-U DFTPP Injection Time: 0933

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.8
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.6
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.2 (79.9)2
442	40.0 - 100.0% of mass 198	90.1
443	17.0 - 23.0% of mass 442	17.7 (19.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1113	U8562	11/13/11	0953
02	WG98966-BLANK	WG98966-1	U8565	11/13/11	1206
03	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
04	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
05					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-U Calibration Date: 11/13/11 Time: 0953

Lab File ID: U8562 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8628800	0.01	5.23	20.01	AVRG
Pyrene	1.5840000	1.3117000	0.01	-17.19	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9761800	0.01	-1.99	20.00	AVRG
Chrysene	0.9400000	0.8921600	0.01	-5.09	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0438000	0.01	-0.40	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.3342000	0.01	-9.85	20.00	AVRG
Benzo(a)pyrene	1.0080000	1.0022000	0.01	-0.58	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.5385100	0.01	-13.56	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.6103800	0.01	-2.65	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.5912900	0.01	-4.94	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3131300	0.01	-7.36	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1084000	0.01	-6.54	20.00	AVRG
Terphenyl-D14	0.9480000	0.8075400	0.01	-14.82	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98966-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: U8565 Lab Sample ID: WG98966-1

Instrument ID: GCMS-U Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/13/11

Level:(low/med) LOW Time Analyzed: 1206

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
02	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
03	DSY-SD-RB10-100511	SE6618-7	U8604	11/15/11	0924
04					
05					
06					
07					
08					
09					
10					
11					
12					
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29					
30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98966-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 29-nov-2011 08:36

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		42.6						
2-Fluorobiphenyl		50.3						
Terphenyl-d14		61.3						

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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http://www.katahdinlab.com

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: UD725 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-U DFTPP Injection Time: 0733

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	13.2 (80.8)2
442	40.0 - 100.0% of mass 198	86.1
443	17.0 - 23.0% of mass 442	16.4 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1115	U8602	11/15/11	0754
02	DSY-SD-RB10-100511	SE6618-7	U8604	11/15/11	0924
03					
04					
05					
06					
07					
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FORM V SV

Katahdin Analytical Services A0000041

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-U Calibration Date: 11/15/11 Time: 0754

Lab File ID: U8602 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.6604500	0.01	-19.46	20.01	AVRG	
Pyrene	1.5840000	1.7244000	0.01	8.86	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9291400	0.01	-6.71	20.00	AVRG	
Chrysene	0.9400000	0.8601200	0.01	-8.50	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.0448000	0.01	-0.30	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3734000	0.01	-7.20	20.00	AVRG	
Benzo(a)pyrene	1.0080000	0.9161700	0.01	-9.11	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6230000	0.6212100	0.01	-0.29	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6270000	0.5021200	0.01	-19.92	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.4882800	0.01	-21.50	20.00	AVRG	<-
Nitrobenzene-D5	0.3380000	0.3146100	0.01	-6.92	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.0799000	0.01	-8.95	20.00	AVRG	
Terphenyl-D14	0.9480000	1.0064000	0.01	6.16	20.00	AVRG	

FORM VII PEST

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-19

Client Sample ID	Lab Sample ID	2FBP #	NBZ #	TPH #	Total Out
DSY-SD-Q25-1224	SE6618-1	68.4	62.3	82.7	0
DSY-SD-T25-2448	SE6618-10	57.2	45.7	34.5	0
DSY-SD-Q29-0012	SE6618-11	51.9	39.7	57.7	0
DSY-SD-Q29-1224	SE6618-12	50.1	35.2	43.8	0
DSY-SD-Q29-2448	SE6618-13	59.4	47.7	65.3	0
DSY-SD-T29-0012	SE6618-14	47.8	37.3	62.1	0
DSY-SD-T29-1224	SE6618-15	56.2	46.5	61.7	0
DSY-SD-T29-2448	SE6618-16	60.4	52.7	78.1	0
DSY-SD-W24-0012	SE6618-17	58.4	39.2	42.6	0
DSY-SD-W24-1224	SE6618-18	59.4	43.0	57.0	0
DSY-SD-W24-2448	SE6618-19	55.2	47.5	74.8	0
DSY-SD-Q25-2448	SE6618-2	73.2	68.3	91.2	0
DSY-SD-DUP28-100611	SE6618-20	50.9	33.1	38.2	0
DSY-SD-W26-0012	SE6618-3	51.8	39.0	58.5	0
DSY-SD-W26-1224	SE6618-4	60.9	50.4	64.7	0
DSY-SD-W26-2448	SE6618-5	62.6	45.4	56.3	0
DSY-SD-DUP27-100511	SE6618-6	59.4	45.8	60.1	0
DSY-SD-T25-0012	SE6618-8	53.7	42.6	69.8	0
DSY-SD-T25-1224	SE6618-9	73.5	58.3	74.3	0
Method Blank Sample	WG99335-1	65.1	54.3	91.3	0
Laboratory Control S	WG99335-2	76.5	64.5	95.3	0
Laboratory Control S	WG99335-3	75.6	62.7	97.0	0
Matrix Spike	WG99335-4	64.9	55.0	81.2	0
Matrix Spike Duplica	WG99335-5	75.4	65.1	93.8	0

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-19

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-19

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB10-100511	SE6618-7	55.3		49.6		66.3		0
Method Blank Sample	WG98966-1	50.3		42.6		61.3		0
Laboratory Control S	WG98966-2	65.0		55.0		58.1		0
Laboratory Control S	WG98966-3	44.8		37.0	*	51.0		1

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98966-2
LCSD ID: WG98966-3
Project:
SDG: DSY-18
Report Date: 29-nov-2011 08:37

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	29.8	59.6*	26.8	53.6*	ug/L	11	30	66-109
Benzo(a)pyrene	50.0	33.8	67.6	28.7	57.4*	ug/L	16	30	63-118
Benzo(b)fluoranthene	50.0	30.5	61.0	26.5	53.0*	ug/L	14	30	60-108
Benzo(k)fluoranthene	50.0	28.8	57.6*	26.1	52.2*	ug/L	10	30	59-125
Benzo(g,h,i)perylene	50.0	34.9	69.8	31.3	62.6	ug/L	11	30	58-115
Chrysene	50.0	33.3	66.6*	29.7	59.4*	ug/L	11	30	68-114
Dibenzo(a,h)anthracene	50.0	31.5	63.0	30.6	61.2	ug/L	3	30	61-111
Fluoranthene	50.0	39.5	79.0	32.0	64.0*	ug/L	21	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	41.7	83.4	37.2	74.4	ug/L	11	30	55-111
Pyrene	50.0	27.2	54.4*	26.1	52.2*	ug/L	4	30	58-135
Nitrobenzene-d5			55.0		37.0*				41-91
2-Fluorobiphenyl			65.0		44.8				43-90
Terphenyl-d14			58.1		51.0				36-156

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99335-2
LCSD ID: WG99335-3
Project:
SDG: DSY-19
Report Date: 29-nov-2011 08:37

Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1240	74.2	1280	76.6	ug/Kgdrywt	3	30	40-100
Benzo(a)pyrene	1670	1380	82.6	1390	83.2	ug/Kgdrywt	1	30	40-100
Benzo(b)fluoranthene	1670	1210	72.4	1270	76.0	ug/Kgdrywt	5	30	40-100
Benzo(g,h,i)perylene	1670	1460	87.4	1480	88.6	ug/Kgdrywt	1	30	40-100
Benzo(k)fluoranthene	1670	1410	84.4	1470	88.0	ug/Kgdrywt	4	30	40-100
Chrysene	1670	1440	86.2	1470	88.0	ug/Kgdrywt	2	30	40-100
Dibenzo(a,h)anthracene	1670	1370	82.0	1390	83.2	ug/Kgdrywt	1	30	40-100
Fluoranthene	1670	1400	83.8	1320	79.0	ug/Kgdrywt	6	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1350	80.8	1360	81.4	ug/Kgdrywt	1	30	40-100
Pyrene	1670	1620	97.0	1640	98.2	ug/Kgdrywt	1	30	40-100
Nitrobenzene-d5			64.5		62.7				24-81
2-Fluorobiphenyl			76.5		75.6				29-83
Terphenyl-d14			95.3		97.0				24-136

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

MS/MSD Recovery Report

MS ID: WG99335-4
MSD ID: WG99335-5
Sample ID: SE6618-16
Client ID: DSY-SD-T29-2448
Project:
SDG: DSY-19

Received Date: 07-OCT-11
Extract Date: 18-oct-0011 00:00
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99335
Report Date: 29-nov-2011 08:37

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 83.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1910	1950	ug/Kgdrywt	U280	1300	1400	70.2	73.2	6	30	40-100
Benzo(b)fluoranthene	1910	1950	ug/Kgdrywt	U280	1400	1500	72.8	77.3	8	30	40-100
Benzo(g,h,i)perylene	1910	1950	ug/Kgdrywt	U280	1100	1300	58.6	65.5	13	30	40-100
Benzo(k)fluoranthene	1910	1950	ug/Kgdrywt	U280	1600	1600	81.2	82.4	4	30	40-100
Chrysene	1910	1950	ug/Kgdrywt	U280	1400	1600	75.9	83.5	12	30	40-100
Dibenzo(a,h)anthracene	1910	1950	ug/Kgdrywt	U280	1200	1300	60.7	68.1	14	30	40-100
Fluoranthene	1910	1950	ug/Kgdrywt	U280	1300	1400	69.1	71.2	5	30	40-100
Indeno(1,2,3-cd)pyrene	1910	1950	ug/Kgdrywt	U280	1100	1300	59.2	66.0	13	30	40-100
Pyrene	1910	1950	ug/Kgdrywt	U280	1700	2200	90.1	112.*	24	30	40-100
Nitrobenzene-d5							55.0	65.1			24-81
2-Fluorobiphenyl							64.9	75.4			29-83
Terphenyl-d14							81.2	93.8			24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		600003		8.76		2389440		11.57		1317918		15.69	
UPPER LIMIT		1200006		9.26		4778880		12.07		2635836		16.19	
LOWER LIMIT		300002		8.26		1194720		11.07		658959		15.19	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD050N1118		682872		8.74		2595372		11.56		1421991		15.68	
02	WG99335-BLANK	WG99335-1		750458		8.76		2777624		11.54		1564145		15.67	
03	WG99335-LCS	WG99335-2		705659		8.76		2667602		11.56		1504046		15.67	
04	WG99335-LCSD	WG99335-3		708663		8.76		2680437		11.56		1504398		15.67	
05	DSY-SD-Q25-1224	SE6618-1		655306		8.74		2485852		11.54		1428366		15.67	
06	DSY-SD-Q25-2448	SE6618-2		692435		8.74		2614280		11.54		1495301		15.67	
07	DSY-SD-W26-0012	SE6618-3		722576		8.74		2747624		11.54		1584832		15.67	
08		SSTD050N1119		637391		8.74		2420851		11.54		1347143		15.67	
09	DSY-SD-W26-1224	SE6618-4		625693		8.74		2413884		11.54		1420099		15.67	
10	DSY-SD-W26-2448	SE6618-5		594802		8.74		2358215		11.54		1393091		15.67	
11	DSY-SD-DUP27-100511	SE6618-6		577433		8.74		2269161		11.54		1341622		15.67	
12	DSY-SD-T25-0012	SE6618-8		609853		8.74		2344975		11.54		1385095		15.67	
13	DSY-SD-T25-1224	SE6618-9		602954		8.74		2318590		11.54		1309652		15.68	
14		SSTD050N1120		658795		8.74		2521119		11.54		1397409		15.67	
15	DSY-SD-T25-2448	SE6618-10		633846		8.74		2436167		11.53		1391062		15.66	
16	DSY-SD-Q29-0012	SE6618-11		578267		8.73		2231916		11.53		1317063		15.66	
17	DSY-SD-Q29-1224	SE6618-12		654445		8.74		2583408		11.53		1456648		15.66	
18	DSY-SD-Q29-2448	SE6618-13		631914		8.74		2507057		11.53		1431477		15.67	
19	DSY-SD-T29-0012	SE6618-14		613999		8.74		2380317		11.53		1405507		15.66	
20	DSY-SD-T29-1224	SE6618-15		650257		8.74		2547698		11.53		1505060		15.66	

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		600003	8.76	2389440	11.57	1317918	15.69
UPPER LIMIT		1200006	9.26	4778880	12.07	2635836	16.19
LOWER LIMIT		300002	8.26	1194720	11.07	658959	15.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-T29-2448	SE6618-16	589512	8.73	2311831	11.53	1347952	15.66
02	DSY-SD-T29-2448MS	WG99335-4	655348	8.74	2609267	11.54	1554942	15.67
03	DSY-SD-T29-2448MSD	WG99335-5	579553	8.74	2276600	11.54	1337453	15.67
04	DSY-SD-W24-0012	SE6618-17	652136	8.73	2519572	11.53	1325257	15.66
05	DSY-SD-W24-1224	SE6618-18	744866	8.74	2758409	11.54	1417792	15.67
06	DSY-SD-W24-2448	SE6618-19	571462	8.73	2182715	11.53	1236617	15.66
07	DSY-SD-DUP28-100611	SE6618-20	693698	8.74	2668595	11.53	1473809	15.67
08								
09								
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12								
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15								
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18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		2174245	19.23	1621980	25.55	1257422	28.69
UPPER LIMIT		4348490	19.73	3243960	26.05	2514844	29.19
LOWER LIMIT		1087123	18.73	810990	25.05	628711	28.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050N1118	2014889	19.21	1125613	25.52	821889	28.67
02	WG99335-BLANK	WG99335-1	2497821	19.20	1897866	25.52	1358318	28.68
03	WG99335-LCS	WG99335-2	2437415	19.20	1665346	25.52	1171249	28.68
04	WG99335-LCSD	WG99335-3	2333074	19.20	1491606	25.52	1069180	28.67
05	DSY-SD-Q25-1224	SE6618-1	2225283	19.20	1385990	25.52	868152	28.67
06	DSY-SD-Q25-2448	SE6618-2	2425775	19.19	1748297	25.52	1173167	28.68
07	DSY-SD-W26-0012	SE6618-3	2408018	19.20	1384055	25.52	717473	28.68
08		SSTD050N1119	2211669	19.21	1598713	25.53	1207219	28.68
09	DSY-SD-W26-1224	SE6618-4	2376823	19.20	1613060	25.53	909648	28.69
10	DSY-SD-W26-2448	SE6618-5	2094235	19.21	1500106	25.56	878646	28.70
11	DSY-SD-DUP27-100511	SE6618-6	2099093	19.21	1497199	25.55	930040	28.70
12	DSY-SD-T25-0012	SE6618-8	2303256	19.20	1523704	25.52	949809	28.68
13	DSY-SD-T25-1224	SE6618-9	1906673	19.21	1233423	25.55	693986	28.70
14		SSTD050N1120	2105163	19.20	1193705	25.52	945263	28.67
15	DSY-SD-T25-2448	SE6618-10	1973501	19.19	1257910	25.52	868442	28.68
16	DSY-SD-Q29-0012	SE6618-11	2092197	19.19	1279685	25.51	790363	28.67
17	DSY-SD-Q29-1224	SE6618-12	1976352	19.19	1262144	25.52	779977	28.68
18	DSY-SD-Q29-2448	SE6618-13	2053333	19.19	1176029	25.52	713868	28.68
19	DSY-SD-T29-0012	SE6618-14	2133851	19.19	1351165	25.51	863772	28.67
20	DSY-SD-T29-1224	SE6618-15	2241051	19.19	1270172	25.51	748191	28.67

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		2174245		19.23		1621980		25.55		1257422		28.69	
UPPER LIMIT		4348490		19.73		3243960		26.05		2514844		29.19	
LOWER LIMIT		1087123		18.73		810990		25.05		628711		28.19	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-T29-2448	SE6618-16		2106196		19.19		1268338		25.51		852474		28.67	
02	DSY-SD-T29-2448MS	WG99335-4		2495132		19.20		1586201		25.52		1005820		28.67	
03	DSY-SD-T29-2448MSD	WG99335-5		2081848		19.20		1098093		25.52		649189		28.67	
04	DSY-SD-W24-0012	SE6618-17		1736169		19.19		932497		25.52		518465	*	28.67	
05	DSY-SD-W24-1224	SE6618-18		2004408		19.20		1027367		25.53		463119	*	28.69	
06	DSY-SD-W24-2448	SE6618-19		1976660		19.19		1280757		25.51		785002		28.67	
07	DSY-SD-DUP28-100611	SE6618-20		2074672		19.20		1279872		25.52		732361		28.68	
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	307490	8.41	1143270	11.24	599281	15.37
02	WG98966-BLANK	WG98966-1	273283	8.42	1012026	11.23	507801	15.36
03	WG98966-LCS	WG98966-2	259048	8.41	890555	11.23	413905	15.36
04	WG98966-LCSD	WG98966-3	294768	8.41	1044629	11.24	575991	15.36
05		SSTD050U1115	364715	8.38	1381025	11.21	721495	15.34
06	DSY-SD-RB10-100511	SE6618-7	317996	8.38	1206165	11.21	634460	15.33
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		697814	18.82	379609	25.12	180449	28.26
UPPER LIMIT		1395628	19.32	759218	25.62	360898	28.76
LOWER LIMIT		348907	18.32	189805	24.62	90225	27.76
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	883737	18.81	594632	25.10	343868	28.24
02	WG98966-BLANK	WG98966-1	740773	18.80	543526	25.09	430393*	28.24
03	WG98966-LCS	WG98966-2	601159	18.80	473013	25.09	305766	28.24
04	WG98966-LCSD	WG98966-3	852425	18.81	558202	25.09	392639*	28.24
05		SSTD050U1115	928379	18.78	345890	25.06	142086	28.20
06	DSY-SD-RB10-100511	SE6618-7	951940	18.77	572895	25.06	333927	28.20
07								
08								
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16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Standard Reference

Data File: \\target_server\GG\chem\gcms-n.i\N112011.b\N2643.D
Report Date: 28-Nov-2011 15:58

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-n.i\N112011.b\N2643.D
Lab Smp Id: SSTD050N1120
Inj Date : 20-NOV-2011 09:04 MS Autotune Date: 20-SEP-2006 12:50
Operator : WAS Inst ID: gcms-n.i
Smp Info : WG101676-1
Misc Info : WG101676,WG1011676,WG101161-3,SE6618-16
Comment :
Method : \\target_server\GG\chem\gcms-n.i\N112011.b\N8270C16.m
Meth Date : 28-Nov-2011 15:54 gcms-n.i Quant Type: ISTD
Cal Date : 15-NOV-2011 20:07 Cal File: N2560.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariabl

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 19	1,4-Dichlorobenzene-D4	152	8.744	8.744	(1.000)	658795	40.0000		
149	Benzo(a)pyrene	252	28.552	28.552	(0.996)	1025139	50.0000	50.6(a)	
$ 33	Nitrobenzene-D5	82	9.967	9.967	(0.863)	931322	50.0000	47.5	
* 44	Naphthalene-D8	136	11.544	11.544	(1.000)	2521119	40.0000		
$ 62	2-Fluorobiphenyl	172	14.162	14.162	(0.904)	1808110	50.0000	49.9	
* 77	Acenaphthene-D10	164	15.670	15.670	(1.000)	1397409	40.0000		
* 114	Phenanthrene-D10	188	19.202	19.202	(1.000)	2105163	40.0000		
126	Fluoranthene	202	22.082	22.082	(1.150)	2043142	50.0000	44.2(a)	
128	Pyrene	202	22.597	22.597	(0.885)	2048948	50.0000	59.1(a)	
$ 129	Terphenyl-D14	244	23.134	23.134	(0.906)	1130997	50.0000	54.2	
139	Benzo(a)anthracene	228	25.500	25.500	(0.999)	1356700	50.0000	51.0(a)	
* 140	Chrysene-D12	240	25.523	25.523	(1.000)	1193705	40.0000		
142	Chrysene	228	25.580	25.580	(1.002)	1274934	50.0000	51.8(a)	
145	Benzo(b)fluoranthene	252	27.900	27.900	(0.973)	1151125	50.0000	47.2(a)	
147	Benzo(k)fluoranthene	252	27.969	27.969	(0.976)	1153167	50.0000	49.9(a)	
* 150	Perylene-D12	264	28.666	28.666	(1.000)	945263	40.0000		
153	Indeno(1,2,3-cd)pyrene	276	30.963	30.963	(1.080)	830000	50.0000	55.7(a)	
154	Dibenzo(a,h)anthracene	278	31.055	31.055	(1.083)	865938	50.0000	54.5(a)	
155	Benzo(g,h,i)perylene	276	31.615	31.615	(1.103)	874228	50.0000	58.3(a)	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
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Katahdin Analytical Services A0000083

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD889 DFTPP Injection Date: 10/16/11

Instrument ID: GCMS-G DFTPP Injection Time: 1105

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.1
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	40.1
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	8.9 (71.7)2
442	40.0 - 100.0% of mass 198	65.5
443	17.0 - 23.0% of mass 442	12.4 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1016	G3327	10/16/11	1124
02	WG98968-BLANK	WG98968-1	G3329	10/16/11	1253
03					
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FORM V SV

Katahdin Analytical Services A0000084

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date: 10/16/11 Time: 1124

Lab File ID: G3327 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.3416000	0.01	-4.24	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.2291000	0.01	10.13	20.00	AVRG
Fluorene-D10	0.8720000	0.9242500	0.01	5.99	20.00	AVRG
Pyrene-D10	1.2360000	1.4523000	0.01	17.50	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98968-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: G3329 Lab Sample ID: WG98968-1

Instrument ID: GCMS-G Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 10/16/11

Level:(low/med) LOW Time Analyzed: 1253

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
02	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
03	DSY-SD-RB10-100511	SE6618-7	G3946	11/15/11	1400
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98968-1
Client ID: Method Blank Sample
Project:
SDG: DSY-19

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 16-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 29-nov-2011 11:41

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		46.8	%					
Fluorene-D10		57.3	%					
Pyrene-D10		72.4	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD890 DFTPP Injection Date: 10/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0825

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	39.6
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	55.3
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	9.2 (73.8)2
442	40.0 - 100.0% of mass 198	64.2
443	17.0 - 23.0% of mass 442	12.5 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1017	G3344	10/17/11	0845
02	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
03	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date: 10/17/11 Time: 0845

Lab File ID: G3344 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2822000	0.01	-8.48	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1507000	0.01	3.11	20.00	AVRG
Fluorene-D10	0.8720000	0.8635900	0.01	-0.96	20.00	AVRG
Pyrene-D10	1.2360000	1.4072000	0.01	13.85	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD927 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-G DFTPP Injection Time: 0826

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (74.8)2
442	40.0 - 100.0% of mass 198	93.7
443	17.0 - 23.0% of mass 442	17.6 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1115	G3939	11/15/11	0845
02		SSTD8.00G1115	G3940	11/15/11	0929
03		SSTD5.00G1115	G3941	11/15/11	1014
04		SSTD2.00G1115	G3942	11/15/11	1100
05		SSTD0.50G1115	G3943	11/15/11	1145
06		SSTD0.20G1125	G3944	11/15/11	1230
07		SIM IND CHECK	G3945	11/15/11	1315
08	DSY-SD-RB10-100511	SE6618-7	G3946	11/15/11	1400
09					
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Katahdin Analytical Services A0000086

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date(s): 11/15/11 11/15/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0845 1230

LAB FILE ID: RF0.2: G3944 RF0.5: G3943 RF1: G3939
RF2: G3942 RF5: G3941 RF8: G3940

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.508	1.247	1.215	1.172	1.292	1.338	AVRG	1.29521840	9.192	15.000
2-Methylnaphthalene-D10	0.923	1.101	1.030	0.963	1.043	1.054	AVRG	1.01913546	6.344	15.000
Fluorene-D10	0.738	0.967	0.928	0.888	0.967	0.967	AVRG	0.90897353	9.855	15.000
Pyrene-D10	0.961	1.035	0.948	0.886	1.008	1.065	AVRG	0.98380939	6.600	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date: 11/15/11 Time: 0845

Lab File ID: G3939 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.2148000	0.01	-6.19	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0298000	0.01	1.06	20.00	AVRG
Fluorene-D10	0.9090000	0.9275700	0.01	2.04	20.00	AVRG
Pyrene-D10	0.9840000	0.9475900	0.01	-3.70	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
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FORM V SV

Katahdin Analytical Services A0000087

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date(s): 11/19/11 11/19/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1147 1527

LAB FILE ID: RF0.2: G4023 RF0.5: G4022 RF1: G4018
RF2: G4021 RF5: G4020 RF8: G4019

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.226	1.334	1.377	1.285	1.319	1.367	AVRG	1.31790301	4.260	15.000
2-Methylnaphthalene-D10	0.894	1.105	1.150	1.062	1.072	1.103	AVRG	1.06431855	8.374	15.000
Fluorene-D10	0.704	0.898	0.928	0.975	0.995	1.041	AVRG	0.92347346	12.868	15.000
Pyrene-D10	0.963	1.125	1.161	1.028	1.131	1.150	AVRG	1.09297445	7.249	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD934 DFTPP Injection Date: 11/21/11

Instrument ID: GCMS-G DFTPP Injection Time: 0809

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.9
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	40.6
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	57.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	3.7
441	0.0 - 100.0% of mass 443	12.8 (77.3)2
442	40.0 - 100.0% of mass 198	87.1
443	17.0 - 23.0% of mass 442	16.6 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1121	G4051	11/21/11	0829
02	WG101701-BLANK	WG101701-1	G4052	11/21/11	0914
03	DSY-SD-Q25-1224	SE6618-1	G4057	11/21/11	1258
04	DSY-SD-Q25-2448	SE6618-2	G4058	11/21/11	1342
05	DSY-SD-W26-0012	SE6618-3	G4059	11/21/11	1427
06	DSY-SD-W26-1224	SE6618-4	G4060	11/21/11	1511
07	DSY-SD-W26-2448	SE6618-5	G4061	11/21/11	1555
08	DSY-SD-DUP27-100511	SE6618-6	G4062	11/21/11	1639
09	DSY-SD-T25-0012	SE6618-8	G4063	11/21/11	1722
10	DSY-SD-T25-1224	SE6618-9	G4064	11/21/11	1807
11	DSY-SD-T25-2448	SE6618-10	G4065	11/21/11	1851
12	DSY-SD-Q29-0012	SE6618-11	G4066	11/21/11	1933
13					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date: 11/21/11 Time: 0829

Lab File ID: G4051 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.1226000	0.01	-14.82	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	0.9804300	0.01	-7.85	20.00	AVRG
Fluorene-D10	0.9240000	0.8880000	0.01	-3.90	20.00	AVRG
Pyrene-D10	1.0930000	0.9905800	0.01	-9.37	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101701-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: G4052 Lab Sample ID: WG101701-1

Instrument ID: GCMS-G Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/21/11

Level:(low/med) LOW Time Analyzed: 0914

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-Q25-1224	SE6618-1	G4057	11/21/11	1258
02	DSY-SD-Q25-2448	SE6618-2	G4058	11/21/11	1342
03	DSY-SD-W26-0012	SE6618-3	G4059	11/21/11	1427
04	DSY-SD-W26-1224	SE6618-4	G4060	11/21/11	1511
05	DSY-SD-W26-2448	SE6618-5	G4061	11/21/11	1555
06	DSY-SD-DUP27-100511	SE6618-6	G4062	11/21/11	1639
07	DSY-SD-T25-0012	SE6618-8	G4063	11/21/11	1722
08	DSY-SD-T25-1224	SE6618-9	G4064	11/21/11	1807
09	DSY-SD-T25-2448	SE6618-10	G4065	11/21/11	1851
10	DSY-SD-Q29-0012	SE6618-11	G4066	11/21/11	1933
11	DSY-SD-Q29-2448	SE6618-13	G4082	11/22/11	1126
12	DSY-SD-T29-0012	SE6618-14	G4083	11/22/11	1211
13	DSY-SD-T29-1224	SE6618-15	G4084	11/22/11	1255
14	DSY-SD-T29-2448	SE6618-16	G4085	11/22/11	1340
15	DSY-SD-W24-0012	SE6618-17	G4087	11/22/11	1509
16	DSY-SD-W24-1224	SE6618-18	G4088	11/22/11	1553
17	DSY-SD-W24-2448	SE6618-19	G4089	11/22/11	1638
18	DSY-SD-DUP28-100611	SE6618-20	G4090	11/22/11	1723
19	DSY-SD-Q29-1224	SE6618-12DL	G4091	11/22/11	1807
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000082

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101701-1
Client ID: Method Blank Sample
Project:
SDG: DSY-19

Sample Date:
Received Date: 29-NOV-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101701

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 29-nov-2011 11:41

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		50.4	%					
Fluorene-D10		60.3	%					
Pyrene-D10		93.5	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID: GD935 DFTPP Injection Date: 11/22/11

Instrument ID: GCMS-G DFTPP Injection Time: 0932

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.5
68	Less than 2.0% of mass 69	0.8 (1.9)1
69	Less than 100.0% of mass 198	42.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	58.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	11.8 (72.0)2
442	40.0 - 100.0% of mass 198	84.8
443	17.0 - 23.0% of mass 442	16.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1122	G4080	11/22/11	0952
02	DSY-SD-Q29-2448	SE6618-13	G4082	11/22/11	1126
03	DSY-SD-T29-0012	SE6618-14	G4083	11/22/11	1211
04	DSY-SD-T29-1224	SE6618-15	G4084	11/22/11	1255
05	DSY-SD-T29-2448	SE6618-16	G4085	11/22/11	1340
06	DSY-SD-W24-0012	SE6618-17	G4087	11/22/11	1509
07	DSY-SD-W24-1224	SE6618-18	G4088	11/22/11	1553
08	DSY-SD-W24-2448	SE6618-19	G4089	11/22/11	1638
09	DSY-SD-DUP28-100611	SE6618-20	G4090	11/22/11	1723
10	DSY-SD-Q29-1224	SE6618-12DL	G4091	11/22/11	1807
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Katahdin Analytical Services A0000089

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Instrument ID: GCMS-G Calibration Date: 11/22/11 Time: 0952

Lab File ID: G4080 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.1811000	0.01	-10.39	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.1087000	0.01	4.20	20.00	AVRG
Fluorene-D10	0.9240000	0.9995900	0.01	8.18	20.00	AVRG
Pyrene-D10	1.0930000	1.1996000	0.01	9.75	20.00	AVRG

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-19

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-Q25-1224	SE6618-1	60.0		64.9		77.6		0
DSY-SD-T25-2448	SE6618-10	40.8		50.5		66.7		0
DSY-SD-Q29-0012	SE6618-11	42.2		61.2		68.2		0
DSY-SD-Q29-1224	SE6618-12DL	30.7		37.6		43.4		0
DSY-SD-Q29-2448	SE6618-13	35.6		40.7		57.6		0
DSY-SD-T29-0012	SE6618-14	39.6		50.2		59.5		0
DSY-SD-T29-1224	SE6618-15	45.0		62.5		80.5		0
DSY-SD-T29-2448	SE6618-16	46.1		59.9		74.3		0
DSY-SD-W24-0012	SE6618-17	36.5		48.7		63.0		0
DSY-SD-W24-1224	SE6618-18	35.6		46.4		79.4		0
DSY-SD-W24-2448	SE6618-19	38.3		54.5		66.4		0
DSY-SD-Q25-2448	SE6618-2	67.6		71.4		74.1		0
DSY-SD-DUP28-100611	SE6618-20	29.2		47.8		72.2		0
DSY-SD-W26-0012	SE6618-3	47.6		56.2		61.7		0
DSY-SD-W26-1224	SE6618-4	49.8		60.0		65.4		0
DSY-SD-W26-2448	SE6618-5	45.2		58.0		71.2		0
DSY-SD-DUP27-100511	SE6618-6	28.9		38.7		61.6		0
DSY-SD-T25-0012	SE6618-8	41.0		58.1		60.2		0
DSY-SD-T25-1224	SE6618-9	34.6		40.7		53.9		0
Method Blank Sample	WG101701-1	50.4		60.3		93.5		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-19

PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-19

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB10-100511	SE6618-7	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG98968-1	46.8		57.3		72.4		0
Laboratory Control S	WG98968-2	40.5		51.0		58.1		1
Laboratory Control S	WG98968-3	43.8		51.7		57.7		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98968-2
LCSD ID: WG98968-3
Project:
SDG: DSY-19
Report Date: 29-nov-2011 11:42

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 17-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.17	58.5*	1.13	56.5*	ug/L	3	30	63-98
2-Methylnaphthalene-D10			40.5*		43.8				43-92
Fluorene-D10			51.0		51.7				29-101
Pyrene-D10			58.1		57.7				53-166

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		40725		9.17		99977		12.13		46587		16.45	
UPPER LIMIT		81450		9.71		199954		12.67		93174		16.99	
LOWER LIMIT		20363		8.63		49989		11.59		23294		15.91	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1016		48557		9.14		120803		12.10		54980	16.42
02	WG98968-BLANK	WG98968-1		50750		9.16		134196		12.11		67169	16.42
03		SSTD1.00G1017		39324		9.14		102062		12.09		48369	16.41
04	WG98968-LCS	WG98968-2		44447		9.14		116697		12.10		57824	16.41
05	WG98968-LCSD	WG98968-3		41433		9.14		113990		12.09		58056	16.41
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		64726		20.09		32119		26.71		23689		30.04	
UPPER LIMIT		129452		20.63		64238		27.25		47378		30.58	
LOWER LIMIT		32363		19.55		16060		26.17		11845		29.50	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1016		67816		20.05		28319		26.68		18809	30.00
02	WG98968-BLANK	WG98968-1		88848		20.06		45162		26.68		28279	30.00
03		SSTD1.00G1017		58271		20.03		22735		26.65		20437	29.98
04	WG98968-LCS	WG98968-2		75106		20.03		45184		26.65		37176	29.98
05	WG98968-LCSD	WG98968-3		76069		20.03		41299		26.65		35793	29.98
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		54590	8.47	163072	11.41	86969	15.71
UPPER LIMIT		109180	9.01	326144	11.95	173938	16.25
LOWER LIMIT		27295	7.93	81536	10.87	43485	15.17
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-RB10-100511	SE6618-7	43215	8.47	143847	11.41	77561	15.71
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		127329	19.32	92483	25.90	69188	29.21
UPPER LIMIT		254658	19.86	184966	26.44	138376	29.75
LOWER LIMIT		63665	18.78	46242	25.36	34594	28.67
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-RB10-100511	SE6618-7	104986	19.32	75809	25.90	54947	29.21
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1121	50986	8.27	172659	11.23	88499	15.51
02	WG101701-BLANK	WG101701-1	50666	8.29	163614	11.23	76790	15.51
03	DSY-SD-Q25-1224	SE6618-1	44752	8.29	159476	11.23	81398	15.51
04	DSY-SD-Q25-2448	SE6618-2	48323	8.29	159951	11.23	79754	15.51
05	DSY-SD-W26-0012	SE6618-3	44201	8.29	157146	11.23	83749	15.52
06	DSY-SD-W26-1224	SE6618-4	44465	8.29	160308	11.23	92294	15.52
07	DSY-SD-W26-2448	SE6618-5	44844	8.29	158225	11.23	94485	15.54
08	DSY-SD-DUP27-100511	SE6618-6	48998	8.29	175047	11.23	121526	15.53
09	DSY-SD-T25-0012	SE6618-8	51455	8.29	187923	11.23	105185	15.52
10	DSY-SD-T25-1224	SE6618-9	48149	8.29	175574	11.24	155987	15.55
11	DSY-SD-T25-2448	SE6618-10	52625	8.29	190423	11.23	100322	15.52
12	DSY-SD-Q29-0012	SE6618-11	57091	8.29	197352	11.23	104280	15.52
13		SSTD1.00G1122	49182	8.27	163310	11.22	83934	15.49
14	DSY-SD-Q29-2448	SE6618-13	45188	8.27	161264	11.22	95825	15.49
15	DSY-SD-T29-0012	SE6618-14	43653	8.27	153172	11.22	79632	15.49
16	DSY-SD-T29-1224	SE6618-15	43323	8.27	154981	11.22	80368	15.49
17	DSY-SD-T29-2448	SE6618-16	49414	8.27	157057	11.22	85103	15.49
18	DSY-SD-W24-0012	SE6618-17	52300	8.27	177853	11.22	109259	15.50
19	DSY-SD-W24-1224	SE6618-18	52867	8.27	177133	11.22	114353	15.52
20	DSY-SD-W24-2448	SE6618-19	50920	8.27	172409	11.22	86817	15.49

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
	CLIENT SAMPLE ID / LAB SAMPLE ID						
01	DSY-SD-DUP28-100611 / SE6618-20	54137	8.27	180467	11.22	102700	15.51
02	DSY-SD-Q29-1224 / SE6618-12DL	42883	8.27	154351	11.22	84914	15.51
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		118014	19.19	75564	25.77	53419	29.09
UPPER LIMIT		236028	19.73	151128	26.31	106838	29.63
LOWER LIMIT		59007	18.65	37782	25.23	26710	28.55
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1121	131530	19.10	75311	25.67	49379	28.97
02	WG101701-BLANK	WG101701-1	96551	19.10	38578	25.69	23587*	28.98
03	DSY-SD-Q25-1224	SE6618-1	121425	19.10	68842	25.69	45962	28.98
04	DSY-SD-Q25-2448	SE6618-2	118180	19.10	73327	25.69	48396	29.00
05	DSY-SD-W26-0012	SE6618-3	130665	19.10	76577	25.70	37893	28.99
06	DSY-SD-W26-1224	SE6618-4	144194	19.10	82168	25.70	42318	28.99
07	DSY-SD-W26-2448	SE6618-5	141438	19.17	78745	25.78	51886	29.04
08	DSY-SD-DUP27-100511	SE6618-6	162408	19.16	86688	25.75	55746	29.03
09	DSY-SD-T25-0012	SE6618-8	168438	19.12	96856	25.70	48653	28.99
10	DSY-SD-T25-1224	SE6618-9	146286	19.16	105530	25.74	30953	29.05
11	DSY-SD-T25-2448	SE6618-10	175141	19.12	86016	25.71	47307	29.01
12	DSY-SD-Q29-0012	SE6618-11	184036	19.10	85427	25.70	40127	28.99
13		SSTD1.00G1122	130100	19.09	77756	25.67	62590	28.97
14	DSY-SD-Q29-2448	SE6618-13	125908	19.09	67386	25.67	36597	28.98
15	DSY-SD-T29-0012	SE6618-14	129722	19.09	69772	25.66	36809	28.96
16	DSY-SD-T29-1224	SE6618-15	147708	19.09	70175	25.67	39862	28.97
17	DSY-SD-T29-2448	SE6618-16	143385	19.09	75716	25.67	42931	28.96
18	DSY-SD-W24-0012	SE6618-17	164191	19.10	69302	25.70	39548	28.99
19	DSY-SD-W24-1224	SE6618-18	142572	19.13	58229	25.73	35331	29.03
20	DSY-SD-W24-2448	SE6618-19	137736	19.09	74360	25.67	50689	28.96

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-19

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

			IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD		118014	19.19	75564	25.77	53419	29.09
	UPPER LIMIT		236028	19.73	151128	26.31	106838	29.63
	LOWER LIMIT		59007	18.65	37782	25.23	26710	28.55
	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	DSY-SD-DUP28-100611	SE6618-20	152566	19.10	59741	25.70	34693	29.00
02	DSY-SD-Q29-1224	SE6618-12DL	136276	19.09	67364	25.67	37959	28.98
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1242 0.05	09/22/11	1633		
11		AR1242 0.1	09/22/11	1659		
12		AR1242 0.25	09/22/11	1725		
13		AR1242 2.5	09/22/11	1751		
14		AR1242 10	09/22/11	1817		
15		AR1248 1.0	09/22/11	1843		
16		AR1254 1.0	09/22/11	2118		
17		AR1254 0.05	09/22/11	2143		
18		AR1254 0.1	09/22/11	2209		
19		AR1254 0.25	09/22/11	2234		
20		AR1254 2.5	09/22/11	2300		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000203

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1254 10	09/22/11	2326		
02		AR1221 1.0	09/22/11	2352		
03		AR1232 1.0	09/23/11	0226		
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	13.28	3.82
02	WG98971-BLANK	WG98971-1	10/25/11	1259	13.29	3.83
03	WG98971-LCS	WG98971-2	10/25/11	1325	13.30	3.83
04	WG98971-LCSD	WG98971-3	10/25/11	1351	13.29	3.83
05		AR1660 0.25	10/25/11	1509	13.29	3.82
06		AR1660 1.0	10/25/11	2137	13.29	3.81
07	DSY-SD-RB10-100511	SE6618-7	10/25/11	2319	13.29	3.81
08		AR1660 0.25	10/26/11	0218	13.29	3.81
09		AR1660 1.0	10/27/11	0518	13.29	3.82
10	WG99552-BLANK	WG99552-1	10/27/11	1029	13.29	3.82
11	WG99552-LCS	WG99552-2	10/27/11	1055	13.29	3.82
12	WG99552-LCSD	WG99552-3	10/27/11	1121	13.29	3.82
13	DSY-SD-T29-2448MS	WG99552-4	10/27/11	1147	13.29	3.82
14	DSY-SD-T29-2448MSD	WG99552-5	10/27/11	1213	13.29	3.82
15		AR1660 1.0	10/27/11	1514	13.31	3.82
16		AR1660 0.25	10/27/11	2140	13.29	3.82
17		AR1254 1.0	10/27/11	2257		
18	DSY-SD-Q25-1224	SE6618-1	10/28/11	0312	13.29	3.82
19		AR1660 1.0	10/28/11	0403	13.29	3.82
20		AR1254 1.0	10/28/11	0521		

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000205

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/28/11	1029	13.27	3.81
02		AR1254 1.0	10/28/11	1219		
03	DSY-SD-Q25-2448	SE6618-2	10/28/11	1521	13.26	3.80
04	DSY-SD-W26-0012	SE6618-3	10/28/11	1547	13.26	3.81
05	DSY-SD-W26-1224	SE6618-4	10/28/11	1613	13.26	3.81
06	DSY-SD-W26-2448	SE6618-5	10/28/11	1639	13.26	3.81
07		AR1660 0.25	10/28/11	1731	13.27	3.81
08		AR1242 1.0	10/28/11	1757		
09		AR1254 1.0	10/28/11	1849		
10	DSY-SD-DUP27-100511	SE6618-6	10/28/11	1915	13.25	3.81
11	DSY-SD-T25-0012	SE6618-8	10/28/11	1941	13.26	3.81
12	DSY-SD-T25-1224	SE6618-9	10/28/11	2007	13.25	3.81
13	DSY-SD-T25-2448	SE6618-10	10/28/11	2033	13.25	3.81
14	DSY-SD-Q29-0012	SE6618-11	10/28/11	2059	13.25	3.81
15	DSY-SD-Q29-1224	SE6618-12	10/28/11	2125	13.25	3.81
16	DSY-SD-Q29-2448	SE6618-13	10/28/11	2151	13.25	3.81
17	DSY-SD-T29-0012	SE6618-14	10/28/11	2217	13.25	3.80
18	DSY-SD-T29-1224	SE6618-15	10/28/11	2243	13.25	3.81
19	DSY-SD-T29-2448	SE6618-16	10/28/11	2309	13.25	3.80
20		AR1660 1.0	10/29/11	0001	13.26	3.81

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000206

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1242 1.0	10/29/11	0027		
02		AR1254 1.0	10/29/11	0119		
03	DSY-SD-W24-0012	SE6618-17	10/29/11	0145	13.25	3.80
04	DSY-SD-W24-1224	SE6618-18	10/29/11	0211	13.25	3.80
05	DSY-SD-W24-2448	SE6618-19	10/29/11	0237	13.25	3.80
06	DSY-SD-DUP28-100611	SE6618-20	10/29/11	0303	13.25	3.80
07		AR1660 0.25	10/29/11	0631	13.26	3.80
08		AR1254 1.0	10/29/11	0749		
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000207

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1242 0.05	09/22/11	1633		
11		AR1242 0.1	09/22/11	1659		
12		AR1242 0.25	09/22/11	1725		
13		AR1242 2.5	09/22/11	1751		
14		AR1242 10	09/22/11	1817		
15		AR1248 1.0	09/22/11	1843		
16		AR1254 1.0	09/22/11	2118		
17		AR1254 0.05	09/22/11	2143		
18		AR1254 0.1	09/22/11	2209		
19		AR1254 0.25	09/22/11	2234		
20		AR1254 2.5	09/22/11	2300		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000208

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1254 10	09/22/11	2326		
02		AR1221 1.0	09/22/11	2352		
03		AR1232 1.0	09/23/11	0226		
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000209

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	17.03	4.31
02	WG98971-BLANK	WG98971-1	10/25/11	1259	17.04	4.32
03	WG98971-LCS	WG98971-2	10/25/11	1325	17.04	4.32
04	WG98971-LCSD	WG98971-3	10/25/11	1351	17.04	4.32
05		AR1660 0.25	10/25/11	1509	17.03	4.31
06		AR1660 1.0	10/25/11	2137	17.03	4.31
07	DSY-SD-RB10-100511	SE6618-7	10/25/11	2319	17.03	4.31
08		AR1660 0.25	10/26/11	0218	17.03	4.31
09		AR1660 1.0	10/27/11	0518	17.03	4.31
10	WG99552-BLANK	WG99552-1	10/27/11	1029	17.03	4.31
11	WG99552-LCS	WG99552-2	10/27/11	1055	17.03	4.31
12	WG99552-LCSD	WG99552-3	10/27/11	1121	17.04	4.32
13	DSY-SD-T29-2448MS	WG99552-4	10/27/11	1147	17.03	4.32
14	DSY-SD-T29-2448MSD	WG99552-5	10/27/11	1213	17.03	4.32
15		AR1660 1.0	10/27/11	1514	17.05	4.32
16		AR1660 0.25	10/27/11	2140	17.03	4.31
17		AR1254 1.0	10/27/11	2257		
18	DSY-SD-Q25-1224	SE6618-1	10/28/11	0312	17.03	4.31
19		AR1660 1.0	10/28/11	0403	17.03	4.32
20		AR1254 1.0	10/28/11	0521		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000210

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/28/11	1029	17.00	4.30
02		AR1254 1.0	10/28/11	1219		
03	DSY-SD-Q25-2448	SE6618-2	10/28/11	1521	16.99	4.30
04	DSY-SD-W26-0012	SE6618-3	10/28/11	1547	16.99	4.30
05	DSY-SD-W26-1224	SE6618-4	10/28/11	1613	16.99	4.30
06	DSY-SD-W26-2448	SE6618-5	10/28/11	1639	16.99	4.30
07		AR1660 0.25	10/28/11	1731	16.99	4.30
08		AR1242 1.0	10/28/11	1757		
09		AR1254 1.0	10/28/11	1849		
10	DSY-SD-DUP27-100511	SE6618-6	10/28/11	1915	16.98	4.30
11	DSY-SD-T25-0012	SE6618-8	10/28/11	1941	16.99	4.30
12	DSY-SD-T25-1224	SE6618-9	10/28/11	2007	16.98	4.30
13	DSY-SD-T25-2448	SE6618-10	10/28/11	2033	16.98	4.30
14	DSY-SD-Q29-0012	SE6618-11	10/28/11	2059	16.98	4.30
15	DSY-SD-Q29-1224	SE6618-12	10/28/11	2125	16.98	4.30
16	DSY-SD-Q29-2448	SE6618-13	10/28/11	2151	16.98	4.30
17	DSY-SD-T29-0012	SE6618-14	10/28/11	2217	16.98	4.29
18	DSY-SD-T29-1224	SE6618-15	10/28/11	2243	16.98	4.30
19	DSY-SD-T29-2448	SE6618-16	10/28/11	2309	16.98	4.29
20		AR1660 1.0	10/29/11	0001	16.98	4.30

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000211

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1242 1.0	10/29/11	0027		
02		AR1254 1.0	10/29/11	0119		
03	DSY-SD-W24-0012	SE6618-17	10/29/11	0145	16.98	4.29
04	DSY-SD-W24-1224	SE6618-18	10/29/11	0211	16.98	4.30
05	DSY-SD-W24-2448	SE6618-19	10/29/11	0237	16.98	4.30
06	DSY-SD-DUP28-100611	SE6618-20	10/29/11	0303	16.98	4.30
07		AR1660 0.25	10/29/11	0631	16.98	4.29
08		AR1254 1.0	10/29/11	0749		
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000212

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1830000	1.0000000	37768000	0.001	18.30	20.00	2RDR
(2)	1.1354000	1.0000000	21264000	0.001	13.54	20.00	2RDR
(3)	1.0897000	1.0000000	53895000	0.001	8.97	20.00	2RDR
(4)	1.0366000	1.0000000	30635000	0.001	3.66	20.00	2RDR
(5)	0.9511900	1.0000000	25113000	0.001	-4.88	20.00	2RDR
Average %D: 7.9200							
Aroclor-1260	0.8772200	1.0000000	43989000	0.001	-12.28	20.00	2RDR
(2)	0.9016300	1.0000000	58365000	0.001	-9.84	20.00	2RDR
(3)	0.9620000	1.0000000	45532000	0.001	-3.80	20.00	2RDR
(4)	0.8836600	1.0000000	41669000	0.001	-11.63	20.00	2RDR
(5)	0.8547600	1.0000000	26401000	0.001	-14.52	20.00	2RDR
Average %D: -10.41							
Decachlorobiphenyl	1.75e-002	2.e-002	522250000	0.001	-12.50	20.00	2RDR
Tetrachloro-m-xylene	2.24e-002	2.e-002	1.3e+009	0.001	12.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1076000	1.0000000	3861800.0	0.001	10.76	20.00	2RDR
(2)	1.1020000	1.0000000	6314600.0	0.001	10.20	20.00	2RDR
(3)	1.0410000	1.0000000	10786000	0.001	4.10	20.00	2RDR
(4)	1.0197000	1.0000000	5610900.0	0.001	1.97	20.00	2RDR
(5)	1.0098000	1.0000000	4961400.0	0.001	0.98	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	1.0331000	1.0000000	7258000.0	0.001	3.31	20.00	2RDR
(2)	1.0394000	1.0000000	8839300.0	0.001	3.94	20.00	2RDR
(3)	1.0611000	1.0000000	6314800.0	0.001	6.11	20.00	2RDR
(4)	1.0261000	1.0000000	5859400.0	0.001	2.61	20.00	2RDR
(5)	1.0370000	1.0000000	5911400.0	0.001	3.70	20.00	2RDR
Average %D: 3.9400							
Decachlorobiphenyl	1.91e-002	2.e-002	91785000	0.001	-4.50	20.00	2RDR
Tetrachloro-m-xylene	2.17e-002	2.e-002	236440000	0.001	8.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2735100	0.2500000	34489000	0.001	9.40	20.00	2RDR
(2)	0.2769800	0.2500000	20424000	0.001	10.79	20.00	2RDR
(3)	0.2394900	0.2500000	41239000	0.001	-4.20	20.00	2RDR
(4)	0.2595400	0.2500000	28584000	0.001	3.82	20.00	2RDR
(5)	0.2543200	0.2500000	24379000	0.001	1.73	20.00	2RDR
Average %D: 4.3200							
Aroclor-1260	0.2717700	0.2500000	49175000	0.001	8.71	20.00	2RDR
(2)	0.2671800	0.2500000	59586000	0.001	6.87	20.00	2RDR
(3)	0.2742700	0.2500000	45441000	0.001	9.71	20.00	2RDR
(4)	0.2710200	0.2500000	46132000	0.001	8.41	20.00	2RDR
(5)	0.2979600	0.2500000	35279000	0.001	19.18	20.00	2RDR
Average %D: 10.560							
Decachlorobiphenyl	5.71e-003	5.e-003	640580000	0.001	14.20	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	1.13e+009	0.001	0.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2471500	0.2500000	3488200.0	0.001	-1.14	20.00	2RDR
(2)	0.2518000	0.2500000	5857500.0	0.001	0.72	20.00	2RDR
(3)	0.2368700	0.2500000	9583300.0	0.001	-5.25	20.00	2RDR
(4)	0.2359300	0.2500000	5042500.0	0.001	-5.63	20.00	2RDR
(5)	0.2542900	0.2500000	4956100.0	0.001	1.72	20.00	2RDR
Average %D: -1.920							
Aroclor-1260	0.2510600	0.2500000	6928600.0	0.001	0.42	20.00	2RDR
(2)	0.2392400	0.2500000	7753400.0	0.001	-4.30	20.00	2RDR
(3)	0.2469500	0.2500000	5555000.0	0.001	-1.22	20.00	2RDR
(4)	0.2535000	0.2500000	5604300.0	0.001	1.40	20.00	2RDR
(5)	0.2414000	0.2500000	5165200.0	0.001	-3.44	20.00	2RDR
Average %D: -1.440							
Decachlorobiphenyl	4.97e-003	5.e-003	93873000	0.001	-0.60	20.00	2RDR
Tetrachloro-m-xylene	4.64e-003	5.e-003	198710000	0.001	-7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1320000	1.0000000	36153000	0.001	13.20	20.00	2RDR
(2)	1.1266000	1.0000000	21101000	0.001	12.66	20.00	2RDR
(3)	1.0274000	1.0000000	50675000	0.001	2.74	20.00	2RDR
(4)	1.0853000	1.0000000	32111000	0.001	8.53	20.00	2RDR
(5)	1.0609000	1.0000000	28130000	0.001	6.09	20.00	2RDR
Average %D: 8.6400							
Aroclor-1260	1.1455000	1.0000000	58212000	0.001	14.55	20.00	2RDR
(2)	1.1247000	1.0000000	73535000	0.001	12.47	20.00	2RDR
(3)	1.1560000	1.0000000	55336000	0.001	15.60	20.00	2RDR
(4)	1.1523000	1.0000000	55069000	0.001	15.23	20.00	2RDR
(5)	1.1983000	1.0000000	37467000	0.001	19.83	20.00	2RDR
Average %D: 15.540							
Decachlorobiphenyl	2.37e-002	2.e-002	714850000	0.001	18.50	20.00	2RDR
Tetrachloro-m-xylene	2.05e-002	2.e-002	1.19e+009	0.001	2.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9821600	1.0000000	3427800.0	0.001	-1.78	20.00	2RDR
(2)	1.0035000	1.0000000	5756200.0	0.001	0.35	20.00	2RDR
(3)	0.9733700	1.0000000	10084000	0.001	-2.66	20.00	2RDR
(4)	0.9545600	1.0000000	5249500.0	0.001	-4.54	20.00	2RDR
(5)	1.0030000	1.0000000	4928000.0	0.001	0.30	20.00	2RDR
Average %D: -1.670							
Aroclor-1260	1.0067000	1.0000000	7071600.0	0.001	0.67	20.00	2RDR
(2)	0.9734300	1.0000000	8269900.0	0.001	-2.66	20.00	2RDR
(3)	0.9749700	1.0000000	5792600.0	0.001	-2.50	20.00	2RDR
(4)	1.0067000	1.0000000	5747400.0	0.001	0.67	20.00	2RDR
(5)	0.9626400	1.0000000	5477400.0	0.001	-3.74	20.00	2RDR
Average %D: -1.510							
Decachlorobiphenyl	1.99e-002	2.e-002	95610000	0.001	-0.50	20.00	2RDR
Tetrachloro-m-xylene	1.9e-002	2.e-002	206810000	0.001	-5.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2803200	0.2500000	35374000	0.001	12.13	20.00	2RDR
(2)	0.2813800	0.2500000	20760000	0.001	12.55	20.00	2RDR
(3)	0.2535500	0.2500000	44095000	0.001	1.42	20.00	2RDR
(4)	0.2553800	0.2500000	28081000	0.001	2.15	20.00	2RDR
(5)	0.2580300	0.2500000	24782000	0.001	3.21	20.00	2RDR
Average %D: 6.2800							
Aroclor-1260	0.2715700	0.2500000	49133000	0.001	8.63	20.00	2RDR
(2)	0.2705600	0.2500000	60518000	0.001	8.22	20.00	2RDR
(3)	0.2747000	0.2500000	45525000	0.001	9.88	20.00	2RDR
(4)	0.2694600	0.2500000	45828000	0.001	7.78	20.00	2RDR
(5)	0.2759900	0.2500000	32539000	0.001	10.40	20.00	2RDR
Average %D: 9.0000							
Decachlorobiphenyl	5.56e-003	5.e-003	622780000	0.001	11.20	20.00	2RDR
Tetrachloro-m-xylene	5.46e-003	5.e-003	1.22e+009	0.001	9.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2638600	0.2500000	3721500.0	0.001	5.54	20.00	2RDR
(2)	0.2605800	0.2500000	6059600.0	0.001	4.23	20.00	2RDR
(3)	0.2489800	0.2500000	10092000	0.001	-0.41	20.00	2RDR
(4)	0.2452300	0.2500000	5249100.0	0.001	-1.91	20.00	2RDR
(5)	0.2581700	0.2500000	5032500.0	0.001	3.27	20.00	2RDR
Average %D: 2.1600							
Aroclor-1260	0.2589400	0.2500000	7151500.0	0.001	3.58	20.00	2RDR
(2)	0.2541200	0.2500000	8266700.0	0.001	1.65	20.00	2RDR
(3)	0.2570300	0.2500000	5798200.0	0.001	2.81	20.00	2RDR
(4)	0.2586700	0.2500000	5723600.0	0.001	3.47	20.00	2RDR
(5)	0.2563700	0.2500000	5511200.0	0.001	2.55	20.00	2RDR
Average %D: 2.8000							
Decachlorobiphenyl	5.15e-003	5.e-003	97352000	0.001	3.00	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	216340000	0.001	0.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0568000	1.0000000	33769000	0.001	5.68	20.00	2RDR
(2)	0.9379300	1.0000000	17587000	0.001	-6.21	20.00	2RDR
(3)	1.0722000	1.0000000	52991000	0.001	7.22	20.00	2RDR
(4)	0.9271100	1.0000000	27320000	0.001	-7.29	20.00	2RDR
(5)	0.8455800	1.0000000	22214000	0.001	-15.44	20.00	2RDR
Average %D: -3.210							
Aroclor-1260	0.8304700	1.0000000	41522000	0.001	-16.95	20.00	2RDR
(2)	0.8770600	1.0000000	56691000	0.001	-12.29	20.00	2RDR
(3)	0.9754000	1.0000000	46206000	0.001	-2.46	20.00	2RDR
(4)	0.8297200	1.0000000	38992000	0.001	-17.03	20.00	2RDR
(5)	1.0154000	1.0000000	31554000	0.001	1.54	20.00	2RDR
Average %D: -9.440							
Decachlorobiphenyl	1.62e-002	2.e-002	481100000	0.001	-19.00	20.00	2RDR
Tetrachloro-m-xylene	1.99e-002	2.e-002	1.15e+009	0.001	-0.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9688000	1.0000000	3381600.0	0.001	-3.12	20.00	2RDR
(2)	0.9852400	1.0000000	5652900.0	0.001	-1.48	20.00	2RDR
(3)	0.9685300	1.0000000	10034000	0.001	-3.15	20.00	2RDR
(4)	0.9472300	1.0000000	5208800.0	0.001	-5.28	20.00	2RDR
(5)	0.9356600	1.0000000	4596200.0	0.001	-6.43	20.00	2RDR
Average %D: -3.890							
Aroclor-1260	0.9532300	1.0000000	6693900.0	0.001	-4.68	20.00	2RDR
(2)	0.9705600	1.0000000	8245100.0	0.001	-2.94	20.00	2RDR
(3)	1.0507000	1.0000000	6251800.0	0.001	5.07	20.00	2RDR
(4)	0.9373600	1.0000000	5347000.0	0.001	-6.26	20.00	2RDR
(5)	0.9893200	1.0000000	5633000.0	0.001	-1.07	20.00	2RDR
Average %D: -1.980							
Decachlorobiphenyl	1.77e-002	2.e-002	85224000	0.001	-11.50	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196580000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 1514

Lab File ID: 7EJ930 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1123000	1.0000000	35528000	0.001	11.23	20.00	2RDR
(2)	1.1032000	1.0000000	20667000	0.001	10.32	20.00	2RDR
(3)	1.0561000	1.0000000	52156000	0.001	5.61	20.00	2RDR
(4)	1.0072000	1.0000000	29744000	0.001	0.72	20.00	2RDR
(5)	0.9445300	1.0000000	24930000	0.001	-5.55	20.00	2RDR
Average %D: 4.4700							
Aroclor-1260	0.8472100	1.0000000	42405000	0.001	-15.28	20.00	2RDR
(2)	0.8687900	1.0000000	56127000	0.001	-13.12	20.00	2RDR
(3)	0.9174700	1.0000000	43291000	0.001	-8.25	20.00	2RDR
(4)	0.8437700	1.0000000	39689000	0.001	-15.62	20.00	2RDR
(5)	0.9588000	1.0000000	29734000	0.001	-4.12	20.00	2RDR
Average %D: -11.28							
Decachlorobiphenyl	1.67e-002	2.e-002	498060000	0.001	-16.50	20.00	2RDR
Tetrachloro-m-xylene	2.11e-002	2.e-002	1.23e+009	0.001	5.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 1514

Lab File ID: 7EJ930 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9769000	1.0000000	3409600.0	0.001	-2.31	20.00	2RDR
(2)	0.9539300	1.0000000	5475200.0	0.001	-4.61	20.00	2RDR
(3)	0.9079900	1.0000000	9405300.0	0.001	-9.20	20.00	2RDR
(4)	0.8744700	1.0000000	4805100.0	0.001	-12.55	20.00	2RDR
(5)	0.8841400	1.0000000	4342300.0	0.001	-11.59	20.00	2RDR
Average %D: -8.050							
Aroclor-1260	0.9064400	1.0000000	6363400.0	0.001	-9.36	20.00	2RDR
(2)	0.9115300	1.0000000	7735800.0	0.001	-8.85	20.00	2RDR
(3)	0.9436400	1.0000000	5602700.0	0.001	-5.64	20.00	2RDR
(4)	0.9181400	1.0000000	5236000.0	0.001	-8.19	20.00	2RDR
(5)	0.9280500	1.0000000	5275800.0	0.001	-7.20	20.00	2RDR
Average %D: -7.840							
Decachlorobiphenyl	1.67e-002	2.e-002	79954000	0.001	-16.50	20.00	2RDR
Tetrachloro-m-xylene	1.9e-002	2.e-002	205960000	0.001	-5.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 2140

Lab File ID: 7EJ945 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2635600	0.2500000	33196000	0.001	5.42	20.00	2RDR	
(2)	0.2540800	0.2500000	18675000	0.001	1.63	20.00	2RDR	
(3)	0.2268600	0.2500000	38676000	0.001	-9.26	20.00	2RDR	
(4)	0.1772200	0.2500000	18651000	0.001	-29.11	20.00	2RDR	<-
(5)	0.1935100	0.2500000	17789000	0.001	-22.60	20.00	2RDR	<-
Average %D: -10.80 OK								
Aroclor-1260	0.1992800	0.2500000	34142000	0.001	-20.29	20.00	2RDR	<-
(2)	0.2168900	0.2500000	45719000	0.001	-13.24	20.00	2RDR	
(3)	0.2266900	0.2500000	36113000	0.001	-9.32	20.00	2RDR	
(4)	0.1946600	0.2500000	31268000	0.001	-22.14	20.00	2RDR	<-
(5)	0.2137800	0.2500000	24795000	0.001	-14.49	20.00	2RDR	
Average %D: -15.88 OK								
Decachlorobiphenyl	3.86e-003	5.e-003	415760000	0.001	-22.80	20.00	2RDR	<-
Tetrachloro-m-xylene	5.28e-003	5.e-003	1.18e+009	0.001	5.60	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 2140

Lab File ID: 7EJ945 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2359100	0.2500000	3331200.0	0.001	-5.64	20.00	2RDR
(2)	0.2307500	0.2500000	5373300.0	0.001	-7.70	20.00	2RDR
(3)	0.2243800	0.2500000	9059300.0	0.001	-10.25	20.00	2RDR
(4)	0.2210700	0.2500000	4712400.0	0.001	-11.57	20.00	2RDR
(5)	0.2397000	0.2500000	4668600.0	0.001	-4.12	20.00	2RDR
Average %D: -7.840							
Aroclor-1260	0.2184800	0.2500000	6007200.0	0.001	-12.61	20.00	2RDR
(2)	0.2275100	0.2500000	7349200.0	0.001	-9.00	20.00	2RDR
(3)	0.2349300	0.2500000	5264700.0	0.001	-6.03	20.00	2RDR
(4)	0.2231300	0.2500000	4903800.0	0.001	-10.75	20.00	2RDR
(5)	0.2414000	0.2500000	5165200.0	0.001	-3.44	20.00	2RDR
Average %D: -8.360							
Decachlorobiphenyl	4.11e-003	5.e-003	77213000	0.001	-17.80	20.00	2RDR
Tetrachloro-m-xylene	5.05e-003	5.e-003	216440000	0.001	1.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 2257

Lab File ID: 7EJ948 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.4524000	1.0000000	60428000	0.001	45.24	20.00	2RDR	<-
(2)	1.1976000	1.0000000	60681000	0.001	19.76	20.00	2RDR	
(3)	1.1087000	1.0000000	36527000	0.001	10.87	20.00	2RDR	
(4)	0.9905000	1.0000000	35412000	0.001	-0.95	20.00	2RDR	
(5)	1.0551000	1.0000000	38791000	0.001	5.51	20.00	2RDR	
Average %D: 16.080								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 2257

Lab File ID: 7EJ948 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.9121400	1.0000000	3693600.0	0.001	-8.79	20.00	2RDR	
(2)	1.2562000	1.0000000	8292900.0	0.001	25.62	20.00	2RDR	<-
(3)	1.0304000	1.0000000	7721500.0	0.001	3.04	20.00	2RDR	
(4)	0.9382000	1.0000000	8841400.0	0.001	-6.18	20.00	2RDR	
(5)	0.9702500	1.0000000	5462300.0	0.001	-2.98	20.00	2RDR	
Average %D: 2.1400								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 0403

Lab File ID: 7EJ960 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2156000	1.0000000	38799000	0.001	21.56	20.00	2RDR	<-
(2)	1.2184000	1.0000000	22803000	0.001	21.84	20.00	2RDR	<-
(3)	1.1185000	1.0000000	55391000	0.001	11.85	20.00	2RDR	
(4)	1.0696000	1.0000000	31634000	0.001	6.96	20.00	2RDR	
(5)	1.0220000	1.0000000	27058000	0.001	2.20	20.00	2RDR	
Average %D: 12.880 OK								
Aroclor-1260	0.8992300	1.0000000	45152000	0.001	-10.08	20.00	2RDR	
(2)	0.9268500	1.0000000	60083000	0.001	-7.32	20.00	2RDR	
(3)	0.9824000	1.0000000	46559000	0.001	-1.76	20.00	2RDR	
(4)	0.8835000	1.0000000	41660000	0.001	-11.65	20.00	2RDR	
(5)	0.9682300	1.0000000	30036000	0.001	-3.18	20.00	2RDR	
Average %D: -6.800								
Decachlorobiphenyl	1.61e-002	2.e-002	478840000	0.001	-19.50	20.00	2RDR	
Tetrachloro-m-xylene	2.39e-002	2.e-002	1.4e+009	0.001	19.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 0403

Lab File ID: 7EJ960 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1056000	1.0000000	3855100.0	0.001	10.56	20.00	2RDR
(2)	1.0788000	1.0000000	6183200.0	0.001	7.88	20.00	2RDR
(3)	1.0035000	1.0000000	10398000	0.001	0.35	20.00	2RDR
(4)	0.9575600	1.0000000	5266200.0	0.001	-4.24	20.00	2RDR
(5)	0.9670500	1.0000000	4750900.0	0.001	-3.30	20.00	2RDR
Average %D: 2.2500							
Aroclor-1260	0.9982700	1.0000000	7012000.0	0.001	-0.17	20.00	2RDR
(2)	0.9994000	1.0000000	8493900.0	0.001	-0.06	20.00	2RDR
(3)	1.0554000	1.0000000	6280200.0	0.001	5.54	20.00	2RDR
(4)	1.0076000	1.0000000	5752300.0	0.001	0.76	20.00	2RDR
(5)	1.0241000	1.0000000	5835700.0	0.001	2.41	20.00	2RDR
Average %D: 1.6900							
Decachlorobiphenyl	1.81e-002	2.e-002	86892000	0.001	-9.50	20.00	2RDR
Tetrachloro-m-xylene	2.19e-002	2.e-002	238020000	0.001	9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 0521

Lab File ID: 7EJ963 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1133000	1.0000000	45816000	0.001	11.33	20.00	2RDR
(2)	1.0412000	1.0000000	52316000	0.001	4.12	20.00	2RDR
(3)	1.0079000	1.0000000	32994000	0.001	0.79	20.00	2RDR
(4)	0.9508300	1.0000000	33925000	0.001	-4.92	20.00	2RDR
(5)	1.0174000	1.0000000	37292000	0.001	1.74	20.00	2RDR
Average %D: 2.6100							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE64 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 0521

Lab File ID: 7EJ963 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9159200	1.0000000	3708900.0	0.001	-8.41	20.00	2RDR
(2)	1.0467000	1.0000000	6909500.0	0.001	4.67	20.00	2RDR
(3)	0.9328500	1.0000000	6983500.0	0.001	-6.72	20.00	2RDR
(4)	0.9060000	1.0000000	8530900.0	0.001	-9.40	20.00	2RDR
(5)	0.9628200	1.0000000	5419100.0	0.001	-3.72	20.00	2RDR
Average %D: -4.710							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1029

Lab File ID: 7EJ965 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1445000	1.0000000	36551000	0.001	14.45	20.00	2RDR
(2)	1.1532000	1.0000000	21594000	0.001	15.32	20.00	2RDR
(3)	1.0733000	1.0000000	53047000	0.001	7.33	20.00	2RDR
(4)	1.1144000	1.0000000	32993000	0.001	11.44	20.00	2RDR
(5)	1.0464000	1.0000000	27730000	0.001	4.64	20.00	2RDR
Average %D: 10.640							
Aroclor-1260	1.0301000	1.0000000	52082000	0.001	3.01	20.00	2RDR
(2)	1.0206000	1.0000000	66463000	0.001	2.06	20.00	2RDR
(3)	1.0540000	1.0000000	50172000	0.001	5.40	20.00	2RDR
(4)	1.0402000	1.0000000	49464000	0.001	4.02	20.00	2RDR
(5)	1.0807000	1.0000000	33659000	0.001	8.07	20.00	2RDR
Average %D: 4.5100							
Decachlorobiphenyl	2.15e-002	2.e-002	646150000	0.001	7.50	20.00	2RDR
Tetrachloro-m-xylene	2.11e-002	2.e-002	1.23e+009	0.001	5.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1029

Lab File ID: 7EJ965 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9925300	1.0000000	3463700.0	0.001	-0.75	20.00	2RDR
(2)	0.9825300	1.0000000	5637500.0	0.001	-1.75	20.00	2RDR
(3)	0.9691900	1.0000000	10041000	0.001	-3.08	20.00	2RDR
(4)	0.9577800	1.0000000	5267400.0	0.001	-4.22	20.00	2RDR
(5)	0.9671900	1.0000000	4751600.0	0.001	-3.28	20.00	2RDR
Average %D: -2.620							
Aroclor-1260	0.9328100	1.0000000	6549700.0	0.001	-6.72	20.00	2RDR
(2)	0.9477200	1.0000000	8048000.0	0.001	-5.23	20.00	2RDR
(3)	0.9379400	1.0000000	5568200.0	0.001	-6.21	20.00	2RDR
(4)	0.9523900	1.0000000	5433700.0	0.001	-4.76	20.00	2RDR
(5)	0.8955000	1.0000000	5086200.0	0.001	-10.45	20.00	2RDR
Average %D: -6.670							
Decachlorobiphenyl	1.86e-002	2.e-002	89141000	0.001	-7.00	20.00	2RDR
Tetrachloro-m-xylene	1.93e-002	2.e-002	210060000	0.001	-3.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1219

Lab File ID: 7EJ968 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0590000	1.0000000	43485000	0.001	5.90	20.00	2RDR
(2)	1.0552000	1.0000000	53061000	0.001	5.52	20.00	2RDR
(3)	1.0755000	1.0000000	35360000	0.001	7.55	20.00	2RDR
(4)	1.1141000	1.0000000	40054000	0.001	11.41	20.00	2RDR
(5)	1.1179000	1.0000000	41295000	0.001	11.79	20.00	2RDR
Average %D: 8.4300							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1219

Lab File ID: 7EJ968 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9246600	1.0000000	3744300.0	0.001	-7.53	20.00	2RDR
(2)	0.9468800	1.0000000	6249700.0	0.001	-5.31	20.00	2RDR
(3)	0.9390100	1.0000000	7030100.0	0.001	-6.10	20.00	2RDR
(4)	0.9281200	1.0000000	8744200.0	0.001	-7.19	20.00	2RDR
(5)	0.9293200	1.0000000	5224000.0	0.001	-7.07	20.00	2RDR
Average %D: -6.640							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1731

Lab File ID: 7EJ980 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2730300	0.2500000	34427000	0.001	9.21	20.00	2RDR
(2)	0.2752500	0.2500000	20292000	0.001	10.10	20.00	2RDR
(3)	0.2579200	0.2500000	44983000	0.001	3.17	20.00	2RDR
(4)	0.2754400	0.2500000	30502000	0.001	10.18	20.00	2RDR
(5)	0.2435800	0.2500000	23214000	0.001	-2.57	20.00	2RDR
Average %D: 6.0000							
Aroclor-1260	0.2509600	0.2500000	44856000	0.001	0.38	20.00	2RDR
(2)	0.2565400	0.2500000	56654000	0.001	2.62	20.00	2RDR
(3)	0.2612000	0.2500000	42876000	0.001	4.48	20.00	2RDR
(4)	0.2561000	0.2500000	43223000	0.001	2.44	20.00	2RDR
(5)	0.2493200	0.2500000	29217000	0.001	-0.27	20.00	2RDR
Average %D: 1.9200							
Decachlorobiphenyl	5.18e-003	5.e-003	576000000	0.001	3.60	20.00	2RDR
Tetrachloro-m-xylene	5.58e-003	5.e-003	1.25e+009	0.001	11.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1731

Lab File ID: 7EJ980 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2561900	0.2500000	3614400.0	0.001	2.48	20.00	2RDR
(2)	0.2500600	0.2500000	5817500.0	0.001	0.02	20.00	2RDR
(3)	0.2480000	0.2500000	10051000	0.001	-0.80	20.00	2RDR
(4)	0.2502300	0.2500000	5360100.0	0.001	0.09	20.00	2RDR
(5)	0.2538200	0.2500000	4946700.0	0.001	1.53	20.00	2RDR
Average %D: 0.6800							
Aroclor-1260	0.2464600	0.2500000	6798700.0	0.001	-1.42	20.00	2RDR
(2)	0.2469300	0.2500000	8018400.0	0.001	-1.23	20.00	2RDR
(3)	0.2452300	0.2500000	5513400.0	0.001	-1.91	20.00	2RDR
(4)	0.2400400	0.2500000	5293800.0	0.001	-3.98	20.00	2RDR
(5)	0.2347500	0.2500000	5011400.0	0.001	-6.10	20.00	2RDR
Average %D: -2.920							
Decachlorobiphenyl	4.67e-003	5.e-003	88054000	0.001	-6.60	20.00	2RDR
Tetrachloro-m-xylene	5.06e-003	5.e-003	217100000	0.001	1.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1757

Lab File ID: 7EJ981 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1607 1817

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	___ RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1242	1.1894000	1.0000000	31156000	0.001	18.94	20.00	2RDR
(2)	1.1262000	1.0000000	18079000	0.001	12.62	20.00	2RDR
(3)	1.1197000	1.0000000	43876000	0.001	11.97	20.00	2RDR
(4)	1.1359000	1.0000000	27703000	0.001	13.59	20.00	2RDR
(5)	1.1403000	1.0000000	24643000	0.001	14.03	20.00	2RDR
Average %D: 14.230							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1757

Lab File ID: 7EJ981 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1607 1817

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1242	1.0474000	1.0000000	3085300.0	0.001	4.74	20.00	2RDR
(2)	1.0374000	1.0000000	4980400.0	0.001	3.74	20.00	2RDR
(3)	1.0158000	1.0000000	8746400.0	0.001	1.58	20.00	2RDR
(4)	1.0055000	1.0000000	4569600.0	0.001	0.55	20.00	2RDR
(5)	1.0325000	1.0000000	4273600.0	0.001	3.25	20.00	2RDR
Average %D: 2.7700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1849

Lab File ID: 7EJ983 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1119000	1.0000000	45755000	0.001	11.19	20.00	2RDR	
(2)	1.0910000	1.0000000	54976000	0.001	9.10	20.00	2RDR	
(3)	1.1282000	1.0000000	37213000	0.001	12.82	20.00	2RDR	
(4)	1.1641000	1.0000000	41935000	0.001	16.41	20.00	2RDR	
(5)	1.2271000	1.0000000	45662000	0.001	22.71	20.00	2RDR	<-
Average %D: 14.450								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/28/11 Time: 1849

Lab File ID: 7EJ983 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 .ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9922000	1.0000000	4018100.0	0.001	-0.78	20.00	2RDR
(2)	1.0115000	1.0000000	6677200.0	0.001	1.15	20.00	2RDR
(3)	1.0161000	1.0000000	7613400.0	0.001	1.61	20.00	2RDR
(4)	1.0052000	1.0000000	9487600.0	0.001	0.52	20.00	2RDR
(5)	1.0228000	1.0000000	5768100.0	0.001	2.28	20.00	2RDR
Average %D: 0.9600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0001

Lab File ID: 7EJ995 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1837000	1.0000000	37788000	0.001	18.37	20.00	2RDR
(2)	1.1633000	1.0000000	21781000	0.001	16.33	20.00	2RDR
(3)	1.1059000	1.0000000	54736000	0.001	10.59	20.00	2RDR
(4)	1.1320000	1.0000000	33527000	0.001	13.20	20.00	2RDR
(5)	1.0938000	1.0000000	29037000	0.001	9.38	20.00	2RDR
Average %D: 13.570							
Aroclor-1260	1.0231000	1.0000000	51709000	0.001	2.31	20.00	2RDR
(2)	1.0219000	1.0000000	66552000	0.001	2.19	20.00	2RDR
(3)	1.0548000	1.0000000	50212000	0.001	5.48	20.00	2RDR
(4)	1.0092000	1.0000000	47919000	0.001	0.92	20.00	2RDR
(5)	1.1072000	1.0000000	34517000	0.001	10.72	20.00	2RDR
Average %D: 4.3300							
Decachlorobiphenyl	2.15e-002	2.e-002	646520000	0.001	7.50	20.00	2RDR
Tetrachloro-m-xylene	2.29e-002	2.e-002	1.34e+009	0.001	14.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0001

Lab File ID: 7EJ995 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0732000	1.0000000	3743100.0	0.001	7.32	20.00	2RDR
(2)	1.0497000	1.0000000	6018100.0	0.001	4.97	20.00	2RDR
(3)	1.0120000	1.0000000	10485000	0.001	1.20	20.00	2RDR
(4)	0.9852400	1.0000000	5419700.0	0.001	-1.48	20.00	2RDR
(5)	1.0195000	1.0000000	5009500.0	0.001	1.95	20.00	2RDR
Average %D: 2.7900							
Aroclor-1260	0.9966200	1.0000000	7000400.0	0.001	-0.34	20.00	2RDR
(2)	1.0024000	1.0000000	8519900.0	0.001	0.24	20.00	2RDR
(3)	1.0014000	1.0000000	5952800.0	0.001	0.14	20.00	2RDR
(4)	0.9989600	1.0000000	5702600.0	0.001	-0.10	20.00	2RDR
(5)	0.9640100	1.0000000	5485400.0	0.001	-3.60	20.00	2RDR
Average %D: -0.730							
Decachlorobiphenyl	1.9e-002	2.e-002	91412000	0.001	-5.00	20.00	2RDR
Tetrachloro-m-xylene	2.08e-002	2.e-002	226340000	0.001	4.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0027

Lab File ID: 7EJ996 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1607 1817

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1242	1.3608000	1.0000000	35590000	0.001	36.08	20.00	2RDR	<-
(2)	1.2703000	1.0000000	20390000	0.001	27.03	20.00	2RDR	<-
(3)	1.2598000	1.0000000	49655000	0.001	25.98	20.00	2RDR	<-
(4)	1.2731000	1.0000000	31140000	0.001	27.31	20.00	2RDR	<-
(5)	1.2522000	1.0000000	27175000	0.001	25.22	20.00	2RDR	<-
Average %D: 28.320								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0027

Lab File ID: 7EJ996 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1607 1817

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1242	1.2272000	1.0000000	3608700.0	0.001	22.72	20.00	2RDR	<-
(2)	1.1786000	1.0000000	5646800.0	0.001	17.86	20.00	2RDR	
(3)	1.1322000	1.0000000	9746500.0	0.001	13.22	20.00	2RDR	
(4)	1.1321000	1.0000000	5147800.0	0.001	13.21	20.00	2RDR	
(5)	1.1277000	1.0000000	4667300.0	0.001	12.77	20.00	2RDR	
Average %D: 15.960								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0119

Lab File ID: 7EJ998 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1619000	1.0000000	47904000	0.001	16.19	20.00	2RDR	
(2)	1.1634000	1.0000000	58851000	0.001	16.34	20.00	2RDR	
(3)	1.1824000	1.0000000	39120000	0.001	18.24	20.00	2RDR	
(4)	1.1888000	1.0000000	42865000	0.001	18.88	20.00	2RDR	
(5)	1.2626000	1.0000000	47087000	0.001	26.26	20.00	2RDR	<-
Average %D: 19.180								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0119

Lab File ID: 7EJ998 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0885000	1.0000000	4408300.0	0.001	8.85	20.00	2RDR
(2)	1.0633000	1.0000000	7019300.0	0.001	6.33	20.00	2RDR
(3)	1.0538000	1.0000000	7898000.0	0.001	5.38	20.00	2RDR
(4)	1.0479000	1.0000000	9898900.0	0.001	4.79	20.00	2RDR
(5)	1.0629000	1.0000000	6001600.0	0.001	6.29	20.00	2RDR
Average %D: 6.3300							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0631

Lab File ID: 7EZ011 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3327800	0.2500000	42185000	0.001	33.11	20.00	2RDR	<-
(2)	0.2992200	0.2500000	22121000	0.001	19.69	20.00	2RDR	
(3)	0.3250200	0.2500000	58622000	0.001	30.01	20.00	2RDR	<-
(4)	0.3189700	0.2500000	35757000	0.001	27.59	20.00	2RDR	<-
(5)	0.2898900	0.2500000	28238000	0.001	15.96	20.00	2RDR	
Average %D: 25.280								
Aroclor-1260	0.2803600	0.2500000	50958000	0.001	12.14	20.00	2RDR	
(2)	0.2879000	0.2500000	65295000	0.001	15.16	20.00	2RDR	
(3)	0.3069800	0.2500000	51860000	0.001	22.79	20.00	2RDR	<-
(4)	0.2790600	0.2500000	47698000	0.001	11.62	20.00	2RDR	
(5)	0.2977300	0.2500000	35251000	0.001	19.09	20.00	2RDR	
Average %D: 16.160								
Decachlorobiphenyl	6.04e-003	5.e-003	680730000	0.001	20.80	20.00	2RDR	<-
Tetrachloro-m-xylene	7.01e-003	5.e-003	1.58e+009	0.001	40.20	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0631

Lab File ID: 7EZ011 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3261700	0.2500000	4591400.0	0.001	30.47	20.00	2RDR	<-
(2)	0.2997900	0.2500000	6960900.0	0.001	19.92	20.00	2RDR	
(3)	0.2915200	0.2500000	11877000	0.001	16.61	20.00	2RDR	
(4)	0.2947400	0.2500000	6348700.0	0.001	17.90	20.00	2RDR	
(5)	0.2839200	0.2500000	5539900.0	0.001	13.57	20.00	2RDR	
Average %D: 19.680								
Aroclor-1260	0.2718100	0.2500000	7515500.0	0.001	8.72	20.00	2RDR	
(2)	0.2825100	0.2500000	9245400.0	0.001	13.00	20.00	2RDR	
(3)	0.2845900	0.2500000	6463800.0	0.001	13.84	20.00	2RDR	
(4)	0.2826500	0.2500000	6276700.0	0.001	13.06	20.00	2RDR	
(5)	0.2700600	0.2500000	5827700.0	0.001	8.02	20.00	2RDR	
Average %D: 11.320								
Decachlorobiphenyl	5.07e-003	5.e-003	95803000	0.001	1.40	20.00	2RDR	
Tetrachloro-m-xylene	6.2e-003	5.e-003	266570000	0.001	24.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0749

Lab File ID: 7EZ014 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2811000	1.0000000	53035000	0.001	28.11	20.00	2RDR	<-
(2)	1.3229000	1.0000000	67417000	0.001	32.29	20.00	2RDR	<-
(3)	1.3644000	1.0000000	45547000	0.001	36.44	20.00	2RDR	<-
(4)	1.3122000	1.0000000	47518000	0.001	31.22	20.00	2RDR	<-
(5)	1.4638000	1.0000000	55200000	0.001	46.38	20.00	2RDR	<-
Average %D: 34.890								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Instrument ID: GC07 Calibration Date: 10/29/11 Time: 0749

Lab File ID: 7EZ014 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	___ RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2108000	1.0000000	4903600.0	0.001	21.08	20.00	2RDR	<-
(2)	1.1951000	1.0000000	7890200.0	0.001	19.51	20.00	2RDR	
(3)	1.1853000	1.0000000	8891700.0	0.001	18.53	20.00	2RDR	
(4)	1.1863000	1.0000000	11231000	0.001	18.63	20.00	2RDR	
(5)	1.2176000	1.0000000	6902400.0	0.001	21.76	20.00	2RDR	<-
Average %D: 19.900								

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98971-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Lab Sample ID: WG98971-1 Lab File ID: 7EJ837

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/11/11

Date Analyzed (1): 10/25/11 Date Analyzed (2): 10/25/11

Time Analyzed (1): 1259 Time Analyzed (2): 1259

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98971-LCS	WG98971-2	7EJ838	10/25/11	10/25/11
02	WG98971-LCSD	WG98971-3	7EJ839	10/25/11	10/25/11
03	DSY-SD-RB10-100511	SE6618-7	7EJ861	10/25/11	10/25/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98971-1
Client ID: Method Blank Sample
Project:
SDG: DSY-19

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 21-nov-2011 16:31

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	45.6	%					
Decachlorobiphenyl		59.5	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99552-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

Lab Sample ID: WG99552-1 Lab File ID: 7EJ919

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/21/11

Date Analyzed (1): 10/27/11 Date Analyzed (2): 10/27/11

Time Analyzed (1): 1029 Time Analyzed (2): 1029

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99552-LCS	WG99552-2	7EJ920	10/27/11	10/27/11
02	WG99552-LCSD	WG99552-3	7EJ921	10/27/11	10/27/11
03	DSY-SD-T29-2448MS	WG99552-4	7EJ922	10/27/11	10/27/11
04	DSY-SD-T29-2448MSD	WG99552-5	7EJ923	10/27/11	10/27/11
05	DSY-SD-Q25-1224	SE6618-1	7EJ958	10/28/11	10/28/11
06	DSY-SD-Q25-2448	SE6618-2	7EJ975	10/28/11	10/28/11
07	DSY-SD-W26-0012	SE6618-3	7EJ976	10/28/11	10/28/11
08	DSY-SD-W26-1224	SE6618-4	7EJ977	10/28/11	10/28/11
09	DSY-SD-W26-2448	SE6618-5	7EJ978	10/28/11	10/28/11
10	DSY-SD-DUP27-100511	SE6618-6	7EJ984	10/28/11	10/28/11
11	DSY-SD-T25-0012	SE6618-8	7EJ985	10/28/11	10/28/11
12	DSY-SD-T25-1224	SE6618-9	7EJ986	10/28/11	10/28/11
13	DSY-SD-T25-2448	SE6618-10	7EJ987	10/28/11	10/28/11
14	DSY-SD-Q29-0012	SE6618-11	7EJ988	10/28/11	10/28/11
15	DSY-SD-Q29-1224	SE6618-12	7EJ989	10/28/11	10/28/11
16	DSY-SD-Q29-2448	SE6618-13	7EJ990	10/28/11	10/28/11
17	DSY-SD-T29-0012	SE6618-14	7EJ991	10/28/11	10/28/11
18	DSY-SD-T29-1224	SE6618-15	7EJ992	10/28/11	10/28/11
19	DSY-SD-T29-2448	SE6618-16	7EJ993	10/28/11	10/28/11
20	DSY-SD-W24-0012	SE6618-17	7EJ999	10/29/11	10/29/11
21	DSY-SD-W24-1224	SE6618-18	7EZ001	10/29/11	10/29/11
22	DSY-SD-W24-2448	SE6618-19	7EZ002	10/29/11	10/29/11
23	DSY-SD-DUP28-100611	SE6618-20	7EZ003	10/29/11	10/29/11
24					

COMMENTS: _____

Katahdin Analytical Services A0000156

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99552-1
Client ID: Method Blank Sample
Project:
SDG: DSY-19

Sample Date:
Received Date: 21-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 21-nov-2011 16:31

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		91.3	%					
Decachlorobiphenyl		95.5	%					

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FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm) GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99552-BLANK	WG99552-1	91	90	95	90			0
02	WG99552-LCS	WG99552-2	86	87	94	87			0
03	WG99552-LCSD	WG99552-3	78	78	94	86			0
04	DSY-SD-T29-2448MS	WG99552-4	83	90	93	91			0
05	DSY-SD-T29-2448MSD	WG99552-5	83	94	96	98			0
06	DSY-SD-Q25-1224	SE6618-1	72	88	58*	76			1
07	DSY-SD-Q25-2448	SE6618-2	81	88	105	84			0
08	DSY-SD-W26-0012	SE6618-3	52*	64	49*	49*			3
09	DSY-SD-W26-1224	SE6618-4	66	81	73	77			0
10	DSY-SD-W26-2448	SE6618-5	57	85	62	79			0
11	DSY-SD-DUP27-100511	SE6618-6	60	95	66	85			0
12	DSY-SD-T25-0012	SE6618-8	56	86	58*	79			1
13	DSY-SD-T25-1224	SE6618-9	73	99	72	84			0
14	DSY-SD-T25-2448	SE6618-10	62	84	69	84			0
15	DSY-SD-Q29-0012	SE6618-11	76	92	73	81			0
16	DSY-SD-Q29-1224	SE6618-12	64	91	61	75			0
17	DSY-SD-Q29-2448	SE6618-13	57	82	62	78			0
18	DSY-SD-T29-0012	SE6618-14	76	95	74	86			0
19	DSY-SD-T29-1224	SE6618-15	65	85	73	84			0
20	DSY-SD-T29-2448	SE6618-16	64	75	68	68			0
21	DSY-SD-W24-0012	SE6618-17	60	80	64	79			0
22	DSY-SD-W24-1224	SE6618-18	44*	64	49*	67			2
23	DSY-SD-W24-2448	SE6618-19	51*	63	50*	56*			3
24	DSY-SD-DUP28-100611	SE6618-20	58	79	57*	78			1
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000144

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-19

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98971-BLANK	WG98971-1	38*	46*	59	51			2
02	WG98971-LCS	WG98971-2	38*	45*	86	73			2
03	WG98971-LCSD	WG98971-3	45*	53*	77	65			2
04	DSY-SD-RB10-100511	SE6618-7	62	59*	52	41*			2
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM II PCB-1

Katahdin Analytical Services A0000145

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98971-2
LCSD ID: WG98971-3
Project:
SDG: DSY-19
Report Date: 22-nov-2011 09:56

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	1.00	0.572	57.2*	0.693	69.3	ug/L	19	30	65-112
Aroclor-1260	1.00	0.654	65.4	0.677	67.7	ug/L	3	30	62-104
Tetrachloro-M-Xylene			45.1*		53.0*				62-111
Decachlorobiphenyl			86.5		77.0				44-135

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LCS/LCSD Recovery Report

LCS ID: WG99552-2
LCSD ID: WG99552-3
Project:
SDG: DSY-19
Report Date: 21-nov-2011 16:31

Received Date: 21-OCT-11
Extract Date: 21-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	145.	86.8	142.	85.0	ug/Kgdrywt	2	50	53-123
Aroclor-1260	167.	153.	91.6	151.	90.4	ug/Kgdrywt	1	50	58-120
Tetrachloro-M-Xylene			86.8		78.1				56-115
Decachlorobiphenyl			94.6		93.7				59-124

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

MS/MSD Recovery Report

MS ID: WG99552-4
MSD ID: WG99552-5
Sample ID: SE6618-16
Client ID: DSY-SD-T29-2448
Project:
SDG: DSY-19

Received Date: 07-OCT-11
Extract Date: 21-oct-0011 00:00
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99552
Report Date: 21-nov-2011 16:32

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 83.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	195.	188.	ug/Kgdrywt	U10.	280	J310	141.*	166.	13	30	53-123
Aroclor-1260	195.	188.	ug/Kgdrywt	U10.	200	200	100.	108.	4	30	58-120
Tetrachloro-M-Xylene							89.5	93.6			56-115
Decachlorobiphenyl							93.0	97.6			59-124

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-DU
P27-100511

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-6 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	342		
Aroclor-1254	2	6.48	6.42	6.56	413		
	3	6.84	6.79	6.93	429		
COLUMN 1	4	7.68	7.63	7.77	452		
	5	8.14	8.10	8.24	490	425	
	1	6.38	6.30	6.44	635		
	2	7.34	7.27	7.41	792		
	3	7.63	7.56	7.70	617		
COLUMN 2	4	8.45	8.38	8.52	497		
	5	10.15	10.08	10.22	568	622	37.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-DU
P28-100611

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-20 Date(s) Analyzed: 10/29/11 10/29/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.09	6.23	511		
Aroclor-1254	2	6.48	6.42	6.56	680		
	3	6.84	6.79	6.93	730		
COLUMN 1	4	7.72	7.63	7.77	2070		
	5	8.18	8.10	8.24	2680	1330	
	1	6.37	6.30	6.44	984		
	2	7.34	7.27	7.41	922		
	3	7.62	7.56	7.70	877		
COLUMN 2	4	8.44	8.38	8.52	907		
	5	10.13	10.08	10.22	3490	1440	7.9
	1	7.26	7.19	7.33	439		
Aroclor-1260	2	7.72	7.62	7.76	1170		
	3	8.16	8.09	8.23	35.1		
COLUMN 1	4	8.33	8.27	8.41	264		
	5	10.24	10.18	10.32	297	441	
	1	8.82	8.75	8.89	606		
	2	9.26	9.19	9.33	674		
	3	10.15	10.08	10.22	14.1		
COLUMN 2	4	11.16	11.11	11.25	443		
	5	13.00	12.94	13.08	448	437	0.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-Q25-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-1 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.25	6.10	6.24	68.6		
Aroclor-1254	2	6.50	6.43	6.57	79.7		
	3	6.86	6.80	6.94	51.0		
COLUMN 1	4	7.71	7.64	7.78	51.5		
	5	8.17	8.11	8.25	60.7	62.3	
	1	6.39	6.33	6.47	95.4		
	2	7.38	7.30	7.44	157		
	3	7.65	7.59	7.73	70.9		
COLUMN 2	4	8.48	8.42	8.56	60.3		
	5	10.18	10.13	10.27	59.2	88.6	34.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-Q29-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-12 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	127		
Aroclor-1254	2	6.49	6.42	6.56	189		
	3	6.84	6.79	6.93	210		
COLUMN 1	4	7.68	7.63	7.77	254		
	5	8.15	8.10	8.24	307	218	
	1	6.37	6.30	6.44	266		
	2	7.34	7.27	7.41	202		
	3	7.63	7.56	7.70	178		
COLUMN 2	4	8.45	8.38	8.52	182		
	5	10.14	10.08	10.22	461	258	16.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000126

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-Q29-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-13 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.09	6.23	49.4		
Aroclor-1254	2	6.49	6.42	6.56	90.3		
	3	6.84	6.79	6.93	95.3		
COLUMN 1	4	7.68	7.63	7.77	98.0		
	5	8.18	8.10	8.24	138	94.2	
	1	6.37	6.30	6.44	67.4		
	2	7.34	7.27	7.41	76.0		
	3	7.62	7.56	7.70	76.6		
COLUMN 2	4	8.45	8.38	8.52	82.6		
	5	10.14	10.08	10.22	189	98.2	4.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000128

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T25-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-8 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	323		
Aroclor-1254	2	6.48	6.42	6.56	505		
	3	6.84	6.79	6.93	735		
COLUMN 1	4	7.72	7.63	7.77	2310		
	5	8.18	8.10	8.24	3730	1520	
	1	6.38	6.30	6.44	605		
	2	7.35	7.27	7.41	907		
	3	7.63	7.56	7.70	794		
COLUMN 2	4	8.45	8.38	8.52	567		
	5	10.13	10.08	10.22	4630	1500	1.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T25-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-9 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	70.8		
Aroclor-1254	2	6.49	6.42	6.56	87.8		
	3	6.85	6.79	6.93	94.2		
COLUMN 1	4	7.68	7.63	7.77	92.9		
	5	8.15	8.10	8.24	113	91.7	
	1	6.38	6.30	6.44	128		
	2	7.34	7.27	7.41	82.5		
	3	7.63	7.56	7.70	65.4		
COLUMN 2	4	8.45	8.38	8.52	78.5		
	5	10.14	10.08	10.22	102	91.4	0.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T25-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-10 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	48.6		
Aroclor-1254	2	6.49	6.42	6.56	81.6		
	3	6.84	6.79	6.93	110		
COLUMN 1	4	7.72	7.63	7.77	208		
	5	8.15	8.10	8.24	84.7	107	
	1	6.38	6.30	6.44	92.6		
	2	7.35	7.27	7.41	104		
	3	7.63	7.56	7.70	72.9		
COLUMN 2	4	8.45	8.38	8.52	72.9		
	5	10.14	10.08	10.22	89.6	86.4	21.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T29-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-14 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.09	6.23	51.8		
Aroclor-1254	2	6.49	6.42	6.56	82.7		
	3	6.84	6.79	6.93	55.0		
COLUMN 1	4	7.68	7.63	7.77	68.5		
	5	8.18	8.10	8.24	254	102	
	1	6.37	6.30	6.44	82.8		
	2	7.34	7.27	7.41	82.8		
	3	7.63	7.56	7.70	61.3		
COLUMN 2	4	8.45	8.38	8.52	66.6		
	5	10.13	10.08	10.22	267	112	9.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000130

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T29-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-15 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.52	4.45	4.59	43.6		
Aroclor-1242	2	4.75	4.68	4.82	5.37		
	3	5.07	4.99	5.13	54.5		
COLUMN 1	4	5.22	5.15	5.29	46.3		
	5	5.69	5.62	5.76	124	54.7	
	1	4.89	4.79	4.93	41.4		
	2	5.36	5.29	5.43	40.2		
	3	5.96	5.89	6.03	54.4		
COLUMN 2	4	6.13	6.06	6.20	43.3		
	5	6.74	6.67	6.81	107	57.2	4.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-T29-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-16 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	4.52	4.45	4.59	92.8		
Aroclor-1242	2	4.74	4.68	4.82	65.8		
	3	5.07	4.99	5.13	117		
COLUMN 1	4	5.23	5.15	5.29	89.3		
	5	5.69	5.62	5.76	219	117	
	1	4.86	4.79	4.93	29.2		
	2	5.36	5.29	5.43	95.7		
	3	5.96	5.89	6.03	122		
COLUMN 2	4	6.13	6.06	6.20	78.3		
	5	6.74	6.67	6.81	223	110	6.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W24-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-17 Date(s) Analyzed: 10/29/11 10/29/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.09	6.23	961		
Aroclor-1254	2	6.48	6.42	6.56	1310		
	3	6.84	6.79	6.93	981		
COLUMN 1	4	7.68	7.63	7.77	1470		
	5	8.14	8.10	8.24	1420	1230	
	1	6.37	6.30	6.44	1480		
	2	7.34	7.27	7.41	1650		
	3	7.62	7.56	7.70	1640		
COLUMN 2	4	8.44	8.38	8.52	1660		
	5	10.14	10.08	10.22	1540	1590	25.5
	1	7.25	7.19	7.33	631		
Aroclor-1260	2	7.68	7.62	7.76	829		
	3	8.14	8.09	8.23	1120		
COLUMN 1	4	8.33	8.27	8.41	162		
	5	10.26	10.18	10.32	98.1	569	
	1	8.81	8.75	8.89	901		
	2	9.26	9.19	9.33	924		
	3	10.14	10.08	10.22	1470		
COLUMN 2	4	13.01	12.94	13.08	15.0		
	5					663	15.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W24-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-18 Date(s) Analyzed: 10/29/11 10/29/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.09	6.23	307		
Aroclor-1254	2	6.48	6.42	6.56	419		
	3	6.84	6.79	6.93	561		
COLUMN 1	4	7.68	7.63	7.77	704		
	5	8.14	8.10	8.24	718	542	
	1	6.37	6.30	6.44	524		
	2	7.34	7.27	7.41	543		
	3	7.62	7.56	7.70	561		
COLUMN 2	4	8.44	8.38	8.52	592		
	5	10.14	10.08	10.22	908	626	14.4
	1	7.26	7.19	7.33	301		
Aroclor-1260	2	7.68	7.62	7.76	398		
	3	8.14	8.09	8.23	566		
COLUMN 1	4	8.33	8.27	8.41	222		
	5	10.24	10.18	10.32	187	335	
	1	8.82	8.75	8.89	441		
	2	9.26	9.19	9.33	498		
	3	10.14	10.08	10.22	866		
COLUMN 2	4	11.17	11.11	11.25	318		
	5	13.01	12.94	13.08	390	503	40.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000138

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W26-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-3 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	105		
Aroclor-1254	2	6.49	6.42	6.56	134		
	3	6.85	6.79	6.93	139		
COLUMN 1	4	7.68	7.63	7.77	159		
	5	8.15	8.10	8.24	193	146	
	1	6.38	6.30	6.44	204		
	2	7.34	7.27	7.41	157		
	3	7.63	7.56	7.70	110		
COLUMN 2	4	8.45	8.38	8.52	118		
	5	10.15	10.08	10.22	178	153	4.7
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-4 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	164		
Aroclor-1254	2	6.48	6.42	6.56	205		
	3	6.85	6.79	6.93	242		
COLUMN 1	4	7.68	7.63	7.77	219		
	5	8.15	8.10	8.24	251	216	
	1	6.38	6.30	6.44	284		
	2	7.34	7.27	7.41	238		
	3	7.63	7.56	7.70	186		
COLUMN 2	4	8.45	8.38	8.52	214		
	5	10.15	10.08	10.22	260	237	9.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-19

Lab Sample ID: SE6618-5 Date(s) Analyzed: 10/28/11 10/28/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.16	6.09	6.23	144		
Aroclor-1254	2	6.48	6.42	6.56	192		
	3	6.84	6.79	6.93	218		
COLUMN 1	4	7.72	7.63	7.77	442		
	5	8.15	8.10	8.24	215	242	
	1	6.38	6.30	6.44	297		
	2	7.35	7.27	7.41	280		
	3	7.63	7.56	7.70	226		
COLUMN 2	4	8.45	8.38	8.52	234		
	5	10.15	10.08	10.22	242	256	5.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE: JANUARY 13, 2012**

FROM: **A. COGNETTI** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: SELECT SVOC/SELECT PAH/PCB**
CTO WE61, NAVSTA NEWPORT- DERECKTOR SHIPYARD
SAMPLE DELIVERY GROUP (SDG) – DSY-20

SAMPLES: 19/Sediment/Select SVOC/PCB

DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
DSY-SD-C25-0012	DSY-SD-C25-1224	DSY-SD-C25-2448
DSY-SD-DUP29-100711	DSY-SD-W28-0012	DSY-SD-W28-1224
DSY-SD-W28-2448	DSY-SD-W30-0012	DSY-SD-W30-1224
DSY-SD-W30-2448		

16/Sediment/Select PAH

DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
DSY-SD-C25-1224	DSY-SD-C25-2448	
DSY-SD-DUP29-100711	DSY-SD-W28-0012	DSY-SD-W28-2448
DSY-SD-W30-1224	DSY-SD-W30-2448	

1/Aqueous/Select SVOC/Select PAH/PCB

DSY-SD-RB11-100611

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-20 consists of nineteen (19) environmental sediment samples and a rinsate blank. All samples were analyzed for select semivolatile organic compounds (SVOC), select polycyclic aromatic hydrocarbon (PAH) and polychlorinated biphenyls (PCBs). The select SVOCs are benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene and pyrene. The select PAH is benzo(a)pyrene. There is one (1) field duplicate pair contained within this SDG: DSY-SD-C25-1224 and DSY-SD-DUP29-100711.

The samples were collected on October 6 and 7, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270D for SVOCs, 8270D SIM for PAH, and 8082A for PCB analytical and reporting protocol. A Tier 2 data validation was performed on the analyses.

The data contained in this SDG were validated with regard to the following parameters:

*	• Data Completeness
*	• Holding Times
*	• GC/MS Tuning
	• Initial and Continuing Calibration
*	• Laboratory Method and/or Field Quality Control Blanks
	• Surrogate Spike Recoveries
	• Laboratory Control Spike / Laboratory Control Spike Duplicate Recoveries
	• Internal Standards Performance
*	• Matrix Spike/Matrix Spike Duplicate Results
*	• Detection Limits
	• Field Duplicate Precision

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

CALIBRATIONS

The initial calibration relative percent deviation (%RSD) for indeno(1,2,3-cd)pyrene was greater than the 15% quality control limit on November 12, 2011 on instrument GCMS-U. The positive and nondetected indeno(1,2,3-cd)pyrene results were qualified as estimated (J) and (UJ), respectively in the affected samples. All samples are affected by this noncompliance.

The continuing calibration percent difference (%D) for benzo(g,h,i)perylene was greater than the 20% quality control limit on November 15, 2011 @ 7:54 on instrument GCMS-U. The nondetected benzo(g,h,i)perylene result in the affected sample DSY-SD- RB11-100611 was qualified as estimated (UJ).

The continuing calibration %Ds for indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene were greater than the 20% quality control limit on November 16, 2011 @ 7:01 on instrument GCMS-U. The nondetected indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene results were qualified as estimated (UJ) in the affected samples DSY-SD-W30-0012 and DSY-SD-W30-1224.

The continuing calibration %D for Aroclor 1254 was greater than the 20% quality control limit on November 23, 2011 @ 1:43 on columns 1 and 2. The positive Aroclor 1254 result in sample DSY-SD-C21-0012 was qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The percent recoveries (%Rs) of all surrogates in the PAH fraction for sample DSY-SD-RB11-100611 were 0%. The nondetected benzo(a)pyrene result in sample DSY-SD-RB11-100611was qualified as

rejected (UR).

The %Rs of PCB surrogate DCB were less than the lower quality control limit on both columns and the %R of TCX was less than the lower quality control limit on column 1 in sample DSY-SD-C25-0012. The positive and nondetected Aroclor results were qualified as estimated (J) and (UJ), respectively in sample DSY-SD-C25-0012.

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

The SVOC laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) %Rs of benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were less than the lower quality control limit in batch WG98966 affecting the rinsate blank. The nondetected benzo(a)anthracene, benzo(k)fluoranthene, chrysene and pyrene were qualified as estimated (UJ) in sample DSY-SD-RB11-100611. In addition, the LCSD %Rs of benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were less than the quality control limit. The LCS %Rs and relative percent differences (RPDs) for benzo(a)pyrene, benzo(b)fluoranthene and fluoranthene were within quality control limits. No action was taken.

The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB11-100611. The nondetected benzo(a)pyrene result was qualified as rejected due to a more severe noncompliance. No further validation action was taken.

INTERNAL STANDARDS

Several samples in the SVOC fraction had internal standard areas outside of quality control limits. A copy of the continuing calibration raw data is included in Appendix D. The following table outlines the internal standard noncompliances and the resulting validation action to target analytes quantified using these internal standards.

Sample	Internal Standard Noncompliance	Qualification
DSY-SD-C21-244	Perylene-d12 >UL	No action
DSY-SD-C25-1224	Perylene-d12 >UL	No action
DSY-SD-W28-2448	Perylene-d12 >UL	No action
DSY-SD-C25-2448	Perylene-d12 >UL	No action
DSY-SD-W28-1224	Chrysene-d12, perylene-d12 <LL	J, UJ
DSY-SD-18-1224	Chrysene-d12, perylene-d12 >UL	No action
DSY-SD-18-2448	Chrysene-d12, perylene-d12 >UL	No action
DSY-SD-C09-1224	Perylene-d12 >UL	No action
DSY-SD-C09-2448	Chrysene-d12, perylene-d12 >UL	No action

FIELD DUPLICATE PRECISION

Field duplicate precision was noted in the field duplicate pair DSY-SD-C25-1224 and DSY-SD-DUP29-100711 for benzo(a)pyrene and Aroclor 1254. The positive and nondetected benzo(a)pyrene and Aroclor 1254 results were qualified as estimated (J) and (UJ), respectively in the field duplicate pair DSY-SD-C25-1224 and DSY-SD-DUP29-10711.

ADDITIONAL COMMENTS

It was noted by the laboratory on the sample receipt form that cooler #5 of 7 had a temperature of 8.2 °C. The samples were collected on the same day as they were delivered to the laboratory. According to the

Region 1 EPA "Data Validation Functional Guidelines - Part II" (12/96), professional judgment should be used when a transportation cooler temperature exceeds the quality control limit of 6°C. It is the judgment of the data reviewer, that the PAHs analyzed in this SDG would not be impacted by the minimal temperature exceedance. Therefore, no action was taken.

Benzo(a)pyrene in samples DSY-SD-C25-0012, DSY-SD-W28-1224 and DSY-SD-W30-0012 was analyzed via full scan mode because the concentrations of benzo(a)pyrene were detected above the limit of quantitiation.

The %R of SVOC surrogate nitrobenzene was less than the lower quality control limit but greater than 10% in sample DSY-SD-W28-0012. No action was taken. In addition, the %R of SVOC surrogate terphenyl-d14 was less than the lower quality control limit but greater than 10% in sample DSY-SD-W28-2448. No action was taken.

The %R of PAH surrogate pyrene-d10 was less than the lower quality control limit but greater than 10% in sample DSY-SD-C21-2448. No action was taken.

The continuing calibration %Ds for Aroclor 1016 and Aroclor 1260 were greater than the 20% quality control limit on column 1 on November 11, 2011 @ 13:53. No action was taken on the nondetected Aroclor 1016 and Aroclor 1260 results in the affected samples DSY-SD-W28-0012 and DSY-SD-W28-1224.

The continuing calibration %Ds for Aroclor 1016 and Aroclor 1254 were greater than the 20% quality control limit on column 1 on November 12, 2011 @ 2:54 and 4:10, respectively. No action was taken on the nondetected Aroclor 1016 results in the affected samples DSY-SD-W28-0012 and DSY-SD-W28-1224. No action was taken on the positive Aroclor 1254 results in the affected samples DSY-SD-W28-0012 and DSY-SD-W28-1224 because the results were reported from column 2.

The continuing calibration %Ds for Aroclor 1260 were greater than the 20% quality control limit on column 1 on November 22, 2011 @ 00:39, 17:55 and November 23, 2011 @ 00:25. No action was taken on the nondetected Aroclor 1260 result in the affected sample DSY-SD-C21-0012. In addition, the %D for Aroclor 1016 was greater than the 20% quality control limit on column 2 on November 23, 2011 @ 00:25. No action was taken on the nondetected Aroclor 1016 result in the affected sample DSY-SD-C21-0012.

The PCB surrogate recoveries of DCB and TCX were less than the lower quality control limit but greater than 10% on column 1 for samples DSY-SD-DUP29-100711 and DSY-SD-C21-1224. No action was taken because the positive PCB results in samples DSY-SD-DUP29-100711 and DSY-SD-C21-1224 were taken from column 2.

The PCB surrogate recoveries of DCB were less than the lower quality control limit but greater than 10% on column 2 in sample DSY-SD- RB11-100611 No action was taken.

The PCB LCS associated with batch WG98971 had a %R of Aroclor 1016 less than the lower quality control limit. The %R of Aroclor 1016 in the LCSD and the RPD were within quality control limits. No action was taken on the Aroclor 1016 results in the affected rinse blank.

According to the SAP for Derecktor Shipyard, August 2011, Total High Molecular Weight PAHs and Total PCBs were to be reported by the laboratory. The laboratory did not report them.
According to Worksheet #15 of the SAP, the laboratory first will analyze the samples in full scan mode. If the value associated with any J-flagged sample result or U-flagged (non-detected) sample result for any

HMW PAH is above the project LOQ goal, the laboratory will reanalyze the sample for that PAH in SIM mode. The laboratory only analyzed benzo(a)pyrene for all samples in the SIM mode. Several samples had PAH results in the full scan mode that were greater than the project limit of quantitation (LOQ).

Positive results reported at concentrations greater than the method detection limit (MDL) but less than the Reporting Limit (RL) were qualified as estimated (J).

Nondetected results were reported at the limit of detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: Continuing calibration noncompliances in the SVOC and PCB fractions resulted in the qualification of data. The percent recoveries of surrogates were outside quality control limits in the PAH and PCB fractions resulting in the qualification of data. The percent recoveries of several analytes in the LCS and LCSD were outside quality control limits in the SVOC fraction. The PAH LCS/ LCSD %Rs of benzo(a)pyrene were less than the lower quality control limit in batch WG98968 affecting the sample DSY-SD-RB11-100611. Internal standard noncompliances were noted in the SVOC.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted in the field duplicate pair DSY-SD-C25-1224 and DSY-SD-DUP29-100711 for Aroclor 1254 and benzo(a)pyrene.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96), and the Department of Defense (DoD) document entitled, "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

TetraTech NUS
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Chemist/Data Validator

TetraTech NUS
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Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012			DSY-SD-18-1224			DSY-SD-18-2448			DSY-SD-C09-0012		
SDG: DSY-20	LAB_ID	SE6619-15			SE6619-16			SE6619-17			SE6619-18		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.1			82.0			87.9			74.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		310	U		290	U		260	U		310	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		310	U		290	U		260	U		310	U	
BENZO(G,H,I)PERYLENE		310	U		290	U		260	U		310	U	
BENZO(K)FLUORANTHENE		310	U		290	U		260	U		310	U	
CHRYSENE		310	U		290	U		260	U		310	U	
DIBENZO(A,H)ANTHRACENE		310	U		290	U		260	U		310	U	
FLUORANTHENE		310	U		290	U		260	U		310	U	
INDENO(1,2,3-CD)PYRENE		310	UJ	C	290	UJ	C	260	UJ	C	310	UJ	C
PYRENE		310	U		290	U		260	U		310	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-C09-1224			DSY-SD-C09-2448			DSY-SD-C21-0012			DSY-SD-C21-1224		
SDG: DSY-20	LAB_ID	SE6619-19			SE6619-20			SE6619-12			SE6619-13		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.8			77.5			61.2			66.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		310	U		320	U		160	J	P	140	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		310	U		320	U		240	J	P	220	J	P
BENZO(G,H,I)PERYLENE		310	U		320	U		370	U		340	U	
BENZO(K)FLUORANTHENE		310	U		320	U		200	J	P	220	J	P
CHRYSENE		310	U		320	U		210	J	P	210	J	P
DIBENZO(A,H)ANTHRACENE		310	U		320	U		370	U		340	U	
FLUORANTHENE		310	U		320	U		180	J	P	340	U	
INDENO(1,2,3-CD)PYRENE		310	UJ	C	320	UJ	C	370	UJ	C	340	UJ	C
PYRENE		310	U		320	U		520			850		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C21-2448			DSY-SD-C25-0012			DSY-SD-C25-1224			DSY-SD-C25-2448		
SDG: DSY-20	LAB_ID	SE6619-14			SE6619-8			SE6619-9			SE6619-10		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.8			41.5			87.5			82.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		270	U		780			260	U		280	U	
BENZO(A)PYRENE					840								
BENZO(B)FLUORANTHENE		270	U		1200			260	U		280	U	
BENZO(G,H,I)PERYLENE		270	U		340	J	P	260	U		280	U	
BENZO(K)FLUORANTHENE		270	U		940			260	U		280	U	
CHRYSENE		270	U		1200			260	U		280	U	
DIBENZO(A,H)ANTHRACENE		270	U		570	U		260	U		280	U	
FLUORANTHENE		270	U		620	J	P	260	U		280	U	
INDENO(1,2,3-CD)PYRENE		270	UJ	C	430	J	CP	260	UJ	C	280	UJ	C
PYRENE		270	U		2900			260	U		280	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP29-100711			DSY-SD-W28-0012			DSY-SD-W28-1224			DSY-SD-W28-2448		
SDG: DSY-20	LAB_ID	SE6619-11			SE6619-4			SE6619-5			SE6619-6		
FRACTION: OS	SAMP_DATE	10/7/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.2			37.3			53.5			77.7		
	DUP_OF	DSY-SD-C25-1224											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		140	J	P	220	U		1000	J	N	300	U	
BENZO(A)PYRENE								930	J	N			
BENZO(B)FLUORANTHENE		260	J	P	630	U		920	J	N	300	U	
BENZO(G,H,I)PERYLENE		340	U		630	U		520	J	NP	300	U	
BENZO(K)FLUORANTHENE		160	J	P	630	U		1000	J	N	300	U	
CHRYSENE		190	J	P	280	J	P	1400	J	N	300	U	
DIBENZO(A,H)ANTHRACENE		340	U		630	U		440	UJ	N	300	U	
FLUORANTHENE		340	U		630	U		510	J	P	300	U	
INDENO(1,2,3-CD)PYRENE		340	UJ	C	630	UJ	C	380	J	CNP	300	UJ	C
PYRENE		760			640	J	P	3600	J	N	300	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-W30-0012			DSY-SD-W30-1224			DSY-SD-W30-2448		
SDG: DSY-20	LAB_ID	SE6619-1			SE6619-2			SE6619-3		
FRACTION: OS	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.7			83.1			80.5		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		750			300	U		290	U	
BENZO(A)PYRENE		500								
BENZO(B)FLUORANTHENE		610			300	U		290	U	
BENZO(G,H,I)PERYLENE		360	U		300	U		290	U	
BENZO(K)FLUORANTHENE		520			300	U		290	U	
CHRYSENE		780			300	U		290	U	
DIBENZO(A,H)ANTHRACENE		360	UJ	C	300	UJ	C	290	U	
FLUORANTHENE		1400			300	U		290	U	
INDENO(1,2,3-CD)PYRENE		360	UJ	C	300	UJ	C	290	UJ	C
PYRENE		2000			240	J	P	240	J	P

PROJ_NO: 02747 SDG: DSY-20 FRACTION: OS MEDIA: WATER	NSAMPLE	DSY-SD-RB11-100611		
	LAB_ID	SE6619-7		
	SAMP_DATE	10/6/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.1	UJ	E
BENZO(B)FLUORANTHENE		7.1	U	
BENZO(G,H,I)PERYLENE		7.1	UJ	C
BENZO(K)FLUORANTHENE		7.1	UJ	E
CHRYSENE		7.1	UJ	E
DIBENZO(A,H)ANTHRACENE		7.1	U	
FLUORANTHENE		7.1	U	
INDENO(1,2,3-CD)PYRENE		7.1	UJ	C
PYRENE		7.1	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012			DSY-SD-18-1224			DSY-SD-18-2448			DSY-SD-C09-0012		
SDG: DSY-20	LAB_ID	SE6619-15			SE6619-16			SE6619-17			SE6619-18		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.1			82.0			87.9			74.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		45			9.4	J	P	10	U		37		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C09-1224			DSY-SD-C09-2448			DSY-SD-C21-0012			DSY-SD-C21-1224		
SDG: DSY-20	LAB_ID	SE6619-19			SE6619-20			SE6619-12			SE6619-13		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.8			77.5			61.2			66.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		12	U		13	U		160			170		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C21-2448			DSY-SD-C25-1224			DSY-SD-C25-2448			DSY-SD-DUP29-100711		
SDG: DSY-20	LAB_ID	SE6619-14			SE6619-9			SE6619-10			SE6619-11		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.8			87.5			82.0			69.2		
	DUP_OF										DSY-SD-C25-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		11	U		10	UJ	G	11	U		190	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-W28-0012			DSY-SD-W28-2448			DSY-SD-W30-1224			DSY-SD-W30-2448		
SDG: DSY-20	LAB_ID	SE6619-4			SE6619-6			SE6619-2			SE6619-3		
FRACTION: PAH	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	37.3			77.7			83.1			80.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		230			11	J	P	34			55		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB11-100611		
SDG: DSY-20	LAB_ID	SE6619-7		
FRACTION: PAH	SAMP_DATE	10/6/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	UR	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012			DSY-SD-18-1224			DSY-SD-18-2448			DSY-SD-C09-0012		
SDG: DSY-20	LAB_ID	SE6619-15			SE6619-16			SE6619-17			SE6619-18		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.1			82.0			87.9			74.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		10	U		9.3	U		11	U	
AROCLOR-1221		10	U		10	U		9.3	U		11	U	
AROCLOR-1232		12	U		12	U		11	U		13	U	
AROCLOR-1242		10	U		10	U		9.3	U		11	U	
AROCLOR-1248		10	U		10	U		9.3	U		11	U	
AROCLOR-1254		10	U		10	U		9.3	U		11	U	
AROCLOR-1260		10	U		10	U		9.3	U		11	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-C09-1224			DSY-SD-C09-2448			DSY-SD-C21-0012			DSY-SD-C21-1224		
SDG: DSY-20	LAB_ID	SE6619-19			SE6619-20			SE6619-12			SE6619-13		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.8			77.5			61.2			66.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		9.4	U		14	U		12	U	
AROCLOR-1221		11	U		9.4	U		14	U		12	U	
AROCLOR-1232		12	U		11	U		16	U		14	U	
AROCLOR-1242		11	U		9.4	U		14	U		12	U	
AROCLOR-1248		11	U		9.4	U		14	U		12	U	
AROCLOR-1254		11	U		9.4	U		190	J	C	180		
AROCLOR-1260		11	U		9.4	U		14	U		180		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C21-2448			DSY-SD-C25-0012			DSY-SD-C25-1224			DSY-SD-C25-2448		
SDG: DSY-20	LAB_ID	SE6619-14			SE6619-8			SE6619-9			SE6619-10		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.8			41.5			87.5			82.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.8	U		20	UJ	R	9.2	U		10	U	
AROCLOR-1221		9.8	U		20	UJ	R	9.2	U		10	U	
AROCLOR-1232		12	U		24	UJ	R	11	U		12	U	
AROCLOR-1242		9.8	U		20	UJ	R	9.2	U		10	U	
AROCLOR-1248		9.8	U		20	UJ	R	9.2	U		10	U	
AROCLOR-1254		9.8	U		140	J	R	9.2	UJ	G	10	U	
AROCLOR-1260		9.8	U		20	UJ	R	9.2	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP29-100711			DSY-SD-W28-0012			DSY-SD-W28-1224			DSY-SD-W28-2448		
SDG: DSY-20	LAB_ID	SE6619-11			SE6619-4			SE6619-5			SE6619-6		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.2			37.3			53.5			77.7		
	DUP_OF	DSY-SD-C25-1224											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		22	U		16	U		11	U	
AROCLOR-1221		12	U		22	U		16	U		11	U	
AROCLOR-1232		14	U		26	U		18	U		13	U	
AROCLOR-1242		12	U		22	U		16	U		11	U	
AROCLOR-1248		12	U		22	U		16	U		11	U	
AROCLOR-1254		380	J	G	280			1400			11	U	
AROCLOR-1260		12	U		22	U		16	U		11	U	

PROJ_NO: 02747 SDG: DSY-20 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W30-0012			DSY-SD-W30-1224			DSY-SD-W30-2448		
	LAB_ID	SE6619-1			SE6619-2			SE6619-3		
	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.7			83.1			80.5		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		8.6	U		10	U	
AROCLOR-1221		12	U		8.6	U		10	U	
AROCLOR-1232		15	U		10	U		12	U	
AROCLOR-1242		12	U		8.6	U		10	U	
AROCLOR-1248		12	U		8.6	U		10	U	
AROCLOR-1254		89			420			67		
AROCLOR-1260		12	U		8.6	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB11-100611		
SDG: DSY-20	LAB_ID	SE6619-7		
FRACTION: PCB	SAMP_DATE	10/6/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	U	
AROCLOR-1221		0.24	U	
AROCLOR-1232		0.24	U	
AROCLOR-1242		0.24	U	
AROCLOR-1248		0.24	U	
AROCLOR-1254		0.24	U	
AROCLOR-1260		0.24	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-15
Client ID: DSY-SD-18-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	420	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	420	150	310
Pyrene	U	310	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		33.0	%					
2-Fluorobiphenyl		50.2	%					
Terphenyl-d14		55.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-16
Client ID: DSY-SD-18-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 82.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	290	ug/Kgdrywt	1	330	380	100	290
Benzo(b)fluoranthene	U	290	ug/Kgdrywt	1	330	380	160	290
Benzo(g,h,i)perylene	U	290	ug/Kgdrywt	1	330	380	120	290
Benzo(k)fluoranthene	U	290	ug/Kgdrywt	1	330	380	97.	290
Chrysene	U	290	ug/Kgdrywt	1	330	380	110	290
Dibenzo(a,h)anthracene	U	290	ug/Kgdrywt	1	330	380	150	290
Fluoranthene	U	290	ug/Kgdrywt	1	330	380	120	290
Indeno(1,2,3-cd)pyrene	U	290	ug/Kgdrywt	1	330	380	140	290
Pyrene	U	290	ug/Kgdrywt	1	330	380	120	290
Nitrobenzene-d5		50.9	%					
2-Fluorobiphenyl		55.4	%					
Terphenyl-d14		64.6	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-17
Client ID: DSY-SD-18-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 88.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	260	ug/Kgdrywt	1	330	340	89.	260
Benzo(b)fluoranthene	U	260	ug/Kgdrywt	1	330	340	140	260
Benzo(g,h,i)perylene	U	260	ug/Kgdrywt	1	330	340	110	260
Benzo(k)fluoranthene	U	260	ug/Kgdrywt	1	330	340	86.	260
Chrysene	U	260	ug/Kgdrywt	1	330	340	98.	260
Dibenzo(a,h)anthracene	U	260	ug/Kgdrywt	1	330	340	130	260
Fluoranthene	U	260	ug/Kgdrywt	1	330	340	110	260
Indeno(1,2,3-cd)pyrene	U	260	ug/Kgdrywt	1	330	340	130	260
Pyrene	U	260	ug/Kgdrywt	1	330	340	100	260
Nitrobenzene-d5		46.2	%					
2-Fluorobiphenyl		49.0	%					
Terphenyl-d14		55.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-18
Client ID: DSY-SD-C09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	420	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	420	150	310
Pyrene	U	310	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		52.8	%					
2-Fluorobiphenyl		61.0	%					
Terphenyl-d14		81.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-19
Client ID: DSY-SD-C09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	410	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	410	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	410	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	410	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	410	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	410	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	410	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	410	150	310
Pyrene	U	310	ug/Kgdrywt	1	330	410	120	310
Nitrobenzene-d5		50.2	%					
2-Fluorobiphenyl		57.0	%					
Terphenyl-d14		55.1	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-20
Client ID: DSY-SD-C09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	420	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	420	170	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	420	130	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	420	110	320
Chrysene	U	320	ug/Kgdrywt	1	330	420	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	420	160	320
Fluoranthene	U	320	ug/Kgdrywt	1	330	420	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	420	160	320
Pyrene	U	320	ug/Kgdrywt	1	330	420	130	320
Nitrobenzene-d5		54.0	%					
2-Fluorobiphenyl		58.7	%					
Terphenyl-d14		60.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-12
Client ID: DSY-SD-C21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 61.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	160	ug/Kgdrywt	1	330	490	130	370
Benzo(b)fluoranthene	J	240	ug/Kgdrywt	1	330	490	200	370
Benzo(g,h,i)perylene	U	370	ug/Kgdrywt	1	330	490	150	370
Benzo(k)fluoranthene	J	200	ug/Kgdrywt	1	330	490	120	370
Chrysene	J	210	ug/Kgdrywt	1	330	490	140	370
Dibenzo(a,h)anthracene	U	370	ug/Kgdrywt	1	330	490	190	370
Fluoranthene	J	180	ug/Kgdrywt	1	330	490	160	370
Indeno(1,2,3-cd)pyrene	U	370	ug/Kgdrywt	1	330	490	180	370
Pyrene		520	ug/Kgdrywt	1	330	490	150	370
Nitrobenzene-d5		28.2	%					
2-Fluorobiphenyl		41.9	%					
Terphenyl-d14		40.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-13
Client ID: DSY-SD-C21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 66.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	140	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	J	220	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	J	220	ug/Kgdrywt	1	330	450	110	340
Chrysene	J	210	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	180	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	450	140	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	170	340
Pyrene		850	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		37.6	%					
2-Fluorobiphenyl		57.6	%					
Terphenyl-d14		52.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-14
Client ID: DSY-SD-C21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 86.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	270	ug/Kgdrywt	1	330	350	92.	270
Benzo(b)fluoranthene	U	270	ug/Kgdrywt	1	330	350	140	270
Benzo(g,h,i)perylene	U	270	ug/Kgdrywt	1	330	350	110	270
Benzo(k)fluoranthene	U	270	ug/Kgdrywt	1	330	350	89.	270
Chrysene	U	270	ug/Kgdrywt	1	330	350	100	270
Dibenzo(a,h)anthracene	U	270	ug/Kgdrywt	1	330	350	140	270
Fluoranthene	U	270	ug/Kgdrywt	1	330	350	110	270
Indeno(1,2,3-cd)pyrene	U	270	ug/Kgdrywt	1	330	350	130	270
Pyrene	U	270	ug/Kgdrywt	1	330	350	110	270
Nitrobenzene-d5		32.2	%					
2-Fluorobiphenyl		37.5	%					
Terphenyl-d14		38.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-8
Client ID: DSY-SD-C25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		780	ug/Kgdrywt	1	330	760	200	570
Benzo(a)pyrene		840	ug/Kgdrywt	1	330	760	220	570
Benzo(b)fluoranthene		1200	ug/Kgdrywt	1	330	760	310	570
Benzo(g,h,i)perylene	J	340	ug/Kgdrywt	1	330	760	240	570
Benzo(k)fluoranthene		940	ug/Kgdrywt	1	330	760	190	570
Chrysene		1200	ug/Kgdrywt	1	330	760	220	570
Dibenzo(a,h)anthracene	U	570	ug/Kgdrywt	1	330	760	300	570
Fluoranthene	J	620	ug/Kgdrywt	1	330	760	240	570
Indeno(1,2,3-cd)pyrene	J	430	ug/Kgdrywt	1	330	760	280	570
Pyrene		2900	ug/Kgdrywt	1	330	760	230	570
Nitrobenzene-d5		27.7	%					
2-Fluorobiphenyl		41.7	%					
Terphenyl-d14		54.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-9
Client ID: DSY-SD-C25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 88.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	260	ug/Kgdrywt	1	330	340	88.	260
Benzo(b)fluoranthene	U	260	ug/Kgdrywt	1	330	340	140	260
Benzo(g,h,i)perylene	U	260	ug/Kgdrywt	1	330	340	110	260
Benzo(k)fluoranthene	U	260	ug/Kgdrywt	1	330	340	85.	260
Chrysene	U	260	ug/Kgdrywt	1	330	340	98.	260
Dibenzo(a,h)anthracene	U	260	ug/Kgdrywt	1	330	340	130	260
Fluoranthene	U	260	ug/Kgdrywt	1	330	340	110	260
Indeno(1,2,3-cd)pyrene	U	260	ug/Kgdrywt	1	330	340	120	260
Pyrene	U	260	ug/Kgdrywt	1	330	340	100	260
Nitrobenzene-d5		49.8	%					
2-Fluorobiphenyl		51.2	%					
Terphenyl-d14		49.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-10
Client ID: DSY-SD-C25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 82.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	280	ug/Kgdrywt	1	330	380	99.	280
Benzo(b)fluoranthene	U	280	ug/Kgdrywt	1	330	380	150	280
Benzo(g,h,i)perylene	U	280	ug/Kgdrywt	1	330	380	120	280
Benzo(k)fluoranthene	U	280	ug/Kgdrywt	1	330	380	95.	280
Chrysene	U	280	ug/Kgdrywt	1	330	380	110	280
Dibenzo(a,h)anthracene	U	280	ug/Kgdrywt	1	330	380	150	280
Fluoranthene	U	280	ug/Kgdrywt	1	330	380	120	280
Indeno(1,2,3-cd)pyrene	U	280	ug/Kgdrywt	1	330	380	140	280
Pyrene	U	280	ug/Kgdrywt	1	330	380	120	280
Nitrobenzene-d5		47.3	%					
2-Fluorobiphenyl		55.0	%					
Terphenyl-d14		56.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-11
Client ID: DSY-SD-DUP29-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 69.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	140	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	J	260	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	J	160	ug/Kgdrywt	1	330	450	110	340
Chrysene	J	190	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	170	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	450	140	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	160	340
Pyrene		760	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		47.8	%					
2-Fluorobiphenyl		61.9	%					
Terphenyl-d14		76.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-4
Client ID: DSY-SD-W28-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	220	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	U	630	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	U	630	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	280	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	320	630
Fluoranthene	U	630	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene	J	640	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5	*	23.9	%					
2-Fluorobiphenyl		35.2	%					
Terphenyl-d14		37.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-5
Client ID: DSY-SD-W28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 53.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1000	ug/Kgdrywt	1	330	580	150	440
Benzo(a)pyrene		930	ug/Kgdrywt	1	330	580	160	440
Benzo(b)fluoranthene		920	ug/Kgdrywt	1	330	580	240	440
Benzo(g,h,i)perylene	J	520	ug/Kgdrywt	1	330	580	180	440
Benzo(k)fluoranthene		1000	ug/Kgdrywt	1	330	580	150	440
Chrysene		1400	ug/Kgdrywt	1	330	580	170	440
Dibenzo(a,h)anthracene	U	440	ug/Kgdrywt	1	330	580	220	440
Fluoranthene	J	510	ug/Kgdrywt	1	330	580	190	440
Indeno(1,2,3-cd)pyrene	J	380	ug/Kgdrywt	1	330	580	220	440
Pyrene		3600	ug/Kgdrywt	1	330	580	180	440
Nitrobenzene-d5		44.6	%					
2-Fluorobiphenyl		58.8	%					
Terphenyl-d14		82.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-6
Client ID: DSY-SD-W28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		27.0	%					
2-Fluorobiphenyl		32.7	%					
Terphenyl-d14	*	21.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-1
Client ID: DSY-SD-W30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 67.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		750	ug/Kgdrywt	1	330	480	130	360
Benzo(a)pyrene		500	ug/Kgdrywt	1	330	480	140	360
Benzo(b)fluoranthene		610	ug/Kgdrywt	1	330	480	200	360
Benzo(g,h,i)perylene	U	360	ug/Kgdrywt	1	330	480	150	360
Benzo(k)fluoranthene		520	ug/Kgdrywt	1	330	480	120	360
Chrysene		780	ug/Kgdrywt	1	330	480	140	360
Dibenzo(a,h)anthracene	U	360	ug/Kgdrywt	1	330	480	190	360
Fluoranthene		1400	ug/Kgdrywt	1	330	480	160	360
Indeno(1,2,3-cd)pyrene	U	360	ug/Kgdrywt	1	330	480	180	360
Pyrene		2000	ug/Kgdrywt	1	330	480	150	360
Nitrobenzene-d5		44.5	%					
2-Fluorobiphenyl		55.5	%					
Terphenyl-d14		77.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-2
Client ID: DSY-SD-W30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 83.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	390	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	390	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	390	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	390	99.	300
Chrysene	U	300	ug/Kgdrywt	1	330	390	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	390	150	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	390	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	390	140	300
Pyrene	J	240	ug/Kgdrywt	1	330	390	120	300
Nitrobenzene-d5		54.8	%					
2-Fluorobiphenyl		60.8	%					
Terphenyl-d14		89.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-3
Client ID: DSY-SD-W30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 80.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	290	ug/Kgdrywt	1	330	390	100	290
Benzo(b)fluoranthene	U	290	ug/Kgdrywt	1	330	390	160	290
Benzo(g,h,i)perylene	U	290	ug/Kgdrywt	1	330	390	120	290
Benzo(k)fluoranthene	U	290	ug/Kgdrywt	1	330	390	98.	290
Chrysene	U	290	ug/Kgdrywt	1	330	390	110	290
Dibenzo(a,h)anthracene	U	290	ug/Kgdrywt	1	330	390	150	290
Fluoranthene	U	290	ug/Kgdrywt	1	330	390	120	290
Indeno(1,2,3-cd)pyrene	U	290	ug/Kgdrywt	1	330	390	140	290
Pyrene	J	240	ug/Kgdrywt	1	330	390	120	290
Nitrobenzene-d5		43.1	%					
2-Fluorobiphenyl		57.9	%					
Terphenyl-d14		65.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-7
Client ID: DSY-SD-RB11-100611
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		63.2						
2-Fluorobiphenyl		67.0						
Terphenyl-d14		63.9						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-15
Client ID: DSY-SD-18-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		45.	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10		38.3	%					
Fluorene-D10		56.5	%					
Pyrene-D10		69.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-16
Client ID: DSY-SD-18-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 82.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	9.4	ug/Kgdrywt	1	20	23.	3.8	12.
2-Methylnaphthalene-D10		48.0	%					
Fluorene-D10		56.7	%					
Pyrene-D10		69.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-17
Client ID: DSY-SD-18-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 88.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	21.	3.4	10.
2-Methylnaphthalene-D10		35.7	%					
Fluorene-D10		37.0	%					
Pyrene-D10		47.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-18
Client ID: DSY-SD-C09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		37.	ug/Kgdrywt	1	20	25.	4.2	12.
2-Methylnaphthalene-D10		51.0	%					
Fluorene-D10		67.1	%					
Pyrene-D10		81.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-19
Client ID: DSY-SD-C09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	25.	4.1	12.
2-Methylnaphthalene-D10		43.5	%					
Fluorene-D10		54.3	%					
Pyrene-D10		66.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-20
Client ID: DSY-SD-C09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	13.	ug/Kgdrywt	1	20	26.	4.2	13.
2-Methylnaphthalene-D10		55.9	%					
Fluorene-D10		68.0	%					
Pyrene-D10		72.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-12
Client ID: DSY-SD-C21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 61.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	30.	4.9	15.
2-Methylnaphthalene-D10		30.2	%					
Fluorene-D10		47.1	%					
Pyrene-D10		62.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-13
Client ID: DSY-SD-C21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 66.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	28.	4.5	14.
2-Methylnaphthalene-D10		40.3	%					
Fluorene-D10		49.3	%					
Pyrene-D10		68.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-14
Client ID: DSY-SD-C21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 86.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	21.	3.5	11.
2-Methylnaphthalene-D10		24.5	%					
Fluorene-D10		24.5	%					
Pyrene-D10	*	33.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-9
Client ID: DSY-SD-C25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 88.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.4	10.
2-Methylnaphthalene-D10		42.6	%					
Fluorene-D10		43.0	%					
Pyrene-D10		43.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-10
Client ID: DSY-SD-C25-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 82.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	23.	3.8	11.
2-Methylnaphthalene-D10		38.7	%					
Fluorene-D10		53.7	%					
Pyrene-D10		73.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-11
Client ID: DSY-SD-DUP29-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 69.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	27.	4.5	14.
2-Methylnaphthalene-D10		53.2	%					
Fluorene-D10		50.8	%					
Pyrene-D10		91.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-4
Client ID: DSY-SD-W28-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		230	ug/Kgdrywt	1	20	51.	8.4	25.
2-Methylnaphthalene-D10		30.7	%					
Fluorene-D10		41.5	%					
Pyrene-D10		49.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-6
Client ID: DSY-SD-W28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	11.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		27.9	%					
Fluorene-D10		34.2	%					
Pyrene-D10		40.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-2
Client ID: DSY-SD-W30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 83.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		34.	ug/Kgdrywt	1	20	24.	3.9	12.
2-Methylnaphthalene-D10		40.8	%					
Fluorene-D10		49.8	%					
Pyrene-D10		53.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-3
Client ID: DSY-SD-W30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 80.
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		55.	ug/Kgdrywt	1	20	24.	3.9	12.
2-Methylnaphthalene-D10		38.8	%					
Fluorene-D10		53.1	%					
Pyrene-D10		70.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-7
Client ID: DSY-SD-RB11-100611
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 28-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-15
Client ID: DSY-SD-18-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		70.4	%					
Decachlorobiphenyl		69.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-16
Client ID: DSY-SD-18-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 82.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		71.6	%					
Decachlorobiphenyl		76.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-17
Client ID: DSY-SD-18-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 88.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	19.	8.7	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	19.	6.4	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	19.	6.7	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	19.	5.2	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Tetrachloro-M-Xylene		78.9	%					
Decachlorobiphenyl		85.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-18
Client ID: DSY-SD-C09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.3	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Tetrachloro-M-Xylene		87.7	%					
Decachlorobiphenyl		85.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-19
Client ID: DSY-SD-C09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	21.	7.5	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	21.	9.8	11.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	12.	12.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	21.	7.2	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	21.	5.9	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	21.	7.5	11.
Tetrachloro-M-Xylene		80.0	%					
Decachlorobiphenyl		75.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-20
Client ID: DSY-SD-C09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.4	ug/Kgdrywt	1	17	19.	6.6	9.4
Aroclor-1221	U	9.4	ug/Kgdrywt	1	17	19.	8.7	9.4
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.4	ug/Kgdrywt	1	17	19.	6.4	9.4
Aroclor-1248	U	9.4	ug/Kgdrywt	1	17	19.	6.7	9.4
Aroclor-1254	U	9.4	ug/Kgdrywt	1	17	19.	5.2	9.4
Aroclor-1260	U	9.4	ug/Kgdrywt	1	17	19.	6.6	9.4
Tetrachloro-M-Xylene		90.2	%					
Decachlorobiphenyl		83.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-12
Client ID: DSY-SD-C21-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 61.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	27.	13.	14.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	27.	9.3	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	27.	9.7	14.
Aroclor-1254		190	ug/Kgdrywt	1	17	27.	7.5	14.
Aroclor-1260	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Tetrachloro-M-Xylene		80.3	%					
Decachlorobiphenyl		80.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-13
Client ID: DSY-SD-C21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 66.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.7	12.
Aroclor-1254		180	ug/Kgdrywt	1	17	24.	6.7	12.
Aroclor-1260		180	ug/Kgdrywt	1	17	24.	8.6	12.
Tetrachloro-M-Xylene		67.0	%					
Decachlorobiphenyl		68.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-14
Client ID: DSY-SD-C21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 86.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.8	ug/Kgdrywt	1	17	20.	6.9	9.8
Aroclor-1221	U	9.8	ug/Kgdrywt	1	17	20.	9.1	9.8
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	9.8	ug/Kgdrywt	1	17	20.	6.7	9.8
Aroclor-1248	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Aroclor-1254	U	9.8	ug/Kgdrywt	1	17	20.	5.4	9.8
Aroclor-1260	U	9.8	ug/Kgdrywt	1	17	20.	6.9	9.8
Tetrachloro-M-Xylene		75.7	%					
Decachlorobiphenyl		78.1	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-8
Client ID: DSY-SD-C25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	41.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1254		140	ug/Kgdrywt	1	17	41.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Tetrachloro-M-Xylene		65.3	%					
Decachlorobiphenyl	*	55.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-9
Client ID: DSY-SD-C25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 88.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254	U	9.2	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		80.7	%					
Decachlorobiphenyl		84.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-10
Client ID: DSY-SD-C25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 82.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		90.9	%					
Decachlorobiphenyl		85.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-11
Client ID: DSY-SD-DUP29-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 69.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.8	12.
Aroclor-1254		380	ug/Kgdrywt	1	17	24.	6.7	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Tetrachloro-M-Xylene		69.0	%					
Decachlorobiphenyl		73.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-4
Client ID: DSY-SD-W28-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254		280	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Tetrachloro-M-Xylene		100.	%					
Decachlorobiphenyl		93.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-5
Client ID: DSY-SD-W28-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 53.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	18.	ug/Kgdrywt	1	17	32.	17.	18.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1254		1400	ug/Kgdrywt	1	17	32.	8.7	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		85.0	%					
Decachlorobiphenyl		87.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-6
Client ID: DSY-SD-W28-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20
Lab File ID: 7EK210.D

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Tetrachloro-M-Xylene		80.4	%					
Decachlorobiphenyl		76.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-1
Client ID: DSY-SD-W30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 67.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	25.	8.8	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	25.	12.	12.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	25.	14.	15.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	25.	8.6	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	25.	9.0	12.
Aroclor-1254		89.	ug/Kgdrywt	1	17	25.	6.9	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	25.	8.8	12.
Tetrachloro-M-Xylene		94.1	%					
Decachlorobiphenyl		87.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-2
Client ID: DSY-SD-W30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 83.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.6	ug/Kgdrywt	1	17	17.	6.0	8.6
Aroclor-1221	U	8.6	ug/Kgdrywt	1	17	17.	8.0	8.6
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.4	10.
Aroclor-1242	U	8.6	ug/Kgdrywt	1	17	17.	5.8	8.6
Aroclor-1248	U	8.6	ug/Kgdrywt	1	17	17.	6.2	8.6
Aroclor-1254		420	ug/Kgdrywt	1	17	17.	4.7	8.6
Aroclor-1260	U	8.6	ug/Kgdrywt	1	17	17.	6.0	8.6
Tetrachloro-M-Xylene		77.7	%					
Decachlorobiphenyl		75.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-3
Client ID: DSY-SD-W30-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 80.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.1	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254		67.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		80.0	%					
Decachlorobiphenyl		81.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6619-7
Client ID: DSY-SD-RB11-100611
Project: NAVSTA Newport CTO WE
SDG: DSY-20

Sample Date: 06-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.48	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.48	0.085	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.48	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.48	0.078	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.48	0.16	0.24
Tetrachloro-M-Xylene		69.8	%					
Decachlorobiphenyl		45.1	%					

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APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. 112602747
SDG No. DSY-20
No. of Samples/Matrix 19-sediment

SOW/Method No. 8270D, 8082
Sampling Date(s) 10/6/11, 10/7/11
Shipping Date(s) _____
Date Rec'd by lab 10/7/11

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. DSY-SD-C25-1224 and DSY-SD-DUP29-100711

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier (II) or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name John Cognetti Company Name TetraTech Phone Number (412)921-8862

Date Validation Started Dec. 19, 2011 Date Validation Completed Dec. 20, 2011

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	✓
VOA/SV-III	INITIAL CALIBRATION	✓
VOA/SV-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	✓
SV-VI	SV SURROGATE SPIKE RECOVERIES	✓
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	✓
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	✓
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	✓
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB-III	INITIAL CALIBRATION	✓
Pest/PCB-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	✓
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	✓
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above.

Signature: Ann Cognetti Name: Ann Cognetti

Date: Dec. 20, 2011

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		NA			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: December 29 2011

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
	See data validation report				

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: Dec. 20, 2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: SVOC, PAH, PCB

Missing Information	Date Lab Contacted	Date Received

Validator: Ann Cognetti Date: 12/20/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

Sampler: Michael Horton Company: Tetra Tech Contacted: Yes (No) Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action
							See data validation report									

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Ann Cognetta Date: 12/20/11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments:

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments: See data validation report

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Ann Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments: See Data Validation Report

Validator: Ann Cognetta

Date: 12/20/11

12/96

EPA-NE - Data Validation Worksheet

VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

See data validation report

Validator: Ann Cognetta

Date: 12/20/11

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below. Concentration Level:_____

Sampler: Michael Gordon Company: Tetra Tech Contacted: Yes (No) Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
			See data validation report			

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Dawn Cognetta Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: See (data) Validation Report

Validator: Ann Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		NA			

Validator: Ann Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		See data validation report				

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Ann Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
		See Data Validation Report						

Validator: Ann Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
		See data validation report									

Validator: Ann Cognetti Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: See data validation report

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Ann Cognetti Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Ann Cognetti

Date: 12/20/11

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Lorn Cognetta Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Ann Cognetta

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y N**
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Ann Cognetta

Date: 12/20/11

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Lynn Cognetti

Date: 12/20/11

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Ann Cognetti Date: 12/20/11

APPENDIX D

SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-20
SE6619

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6619 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6619-1	DSY-SD-W30-0012
SE6619-2	DSY-SD-W30-1224
SE6619-3	DSY-SD-W30-2448
SE6619-4	DSY-SD-W28-0012
SE6619-5	DSY-SD-W28-1224
SE6619-6	DSY-SD-W28-2448
SE6619-7	DSY-SD-RB11-100611
SE6619-8	DSY-SD-C25-0012
SE6619-9	DSY-SD-C25-1224
SE6619-10	DSY-SD-C25-2448
SE6619-11	DSY-SD-DUP29-100711
SE6619-12	DSY-SD-C21-0012
SE6619-13	DSY-SD-C21-1224
SE6619-14	DSY-SD-C21-2448
SE6619-15	DSY-SD-18-0012
SE6619-16	DSY-SD-18-1224
SE6619-17	DSY-SD-18-2448
SE6619-18	DSY-SD-C09-0012
SE6619-19	DSY-SD-C09-1224
SE6619-20	DSY-SD-C09-2448

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-20 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6619-7 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

Samples SE6619-11 and 13 were manually integrated for the surrogate fluorene-d10 and the internal standard chyresene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6619-14 had a low recovery for the surrogate pyrene-d10, which was outside the laboratory established acceptance limits.

The laboratory method blank WG98968-1 had high responses for the internal standards chrysene-d12 and perylene-d12 that resulted in %D's, which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The CV (file G3923) had a high response for the surrogate fluorene-d10 which resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The LCS and LCSD WG98968-2 and 3 had low recoveries for the compound benzo(a)pyrene, which were outside of the laboratory established acceptance limits. Also, the LCS had a low recovery for one surrogate.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Samples SE6619-5, 11, 12 and 13 were manually integrated for the analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6619-4 and 6 had low recoveries for one surrogate, which were outside the laboratory established acceptance limits.

Samples SE6619-5, 6, 9, 10, 16, 17, 19 and 20, the laboratory method blanks WG98966-1, WG99336-1 and the LCSD WG98966-3 had high and/or low responses for the internal standards chyrsene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The initial calibration analyzed on the U instrument on 11/12/11 had a %RSD value for the target analyte indeno(1,2,3-cd)pyrene that exceeded the method acceptance limit of 15%. The analyte failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990, respectively. This compound was calibrated using the average model.

The CV (file U8602) had a low response for benzo(g,h,i)perylene. The CV (file U8631) had low responses for indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCS WG98966-2 and the LCSD WG98966-3 had four and seven spiked target analytes, respectively, with recoveries that were low and outside of the laboratory established acceptance limits. The LCSD also had a low recovery for the surrogate nitrobenzene-d5, which was outside the laboratory established acceptance limits. DoD QSM Version 4.1 Section G.7 lists the acceptance limits of the SW-846 Method 8270 target analytes. If the DoD QSM acceptance limits are applied, the LCS had acceptable recoveries for all of the target analytes. Therefore, no further action was taken.

8082 Analysis

Surrogate recoveries for the samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6619-2 and 8 were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6619-8 had low recoveries for DCB on both channels and a low recovery for TCX on channel A, which were outside the laboratory established acceptance limits.

Samples SE6619-11 and 13 had low recoveries for TCX and DCB on channel A, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channels, no further action was taken.

The method blank WG100719-1, LCS/LCSD WG100719-2 and 3 had high recoveries for TCX and DCB on channel A, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channels, no further action was taken.

The method blank WG98971-1, LCS/LCSD WG98971-2 and 3 had low recoveries for TCX on both channels which were outside of the laboratory established acceptance limits. Since the recoveries for DCB were acceptable, the associated sample was not reextracted. The LCS WG98971-2 also had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, no further action was taken.

The opening calibration verification standard (CV) (file 7EK188) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV (file 7EK218) had a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for TCX was acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EK434) had a high responses for Aroclor 1016, Aroclor 1260, TCX, and DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV (file 7EK449) had high responses for TCX and DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK464) had high responses for TCX on both channels and Aroclor 1016 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1016 was acceptable on channel B, the associated samples were not reanalyzed. The samples may be biased high for TCX.

The closing CV (file 7EK467) had a high response for Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1254 was acceptable on channel B, the associated samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-20 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6619-7 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6619-(1-6 and 8-20) were digested for ICP analysis on 10/26/11 (QC Batch BJ26ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6619-3 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-20 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6619-3 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6619-3 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6619-3 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6619-3 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the

concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-20 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recovery, relative to the TOC (2) result for the unspiked sample, for the matrix spike (136%) aliquot of Katahdin Sample No. SE6619-15 is outside the laboratory's acceptance limits of 75% - 125%. The matrix spike recovery relative to the TOC(1) result for the unspiked sample is within the laboratory's acceptance limits.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
11.30.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE		SEE PAGE ONE ( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTOWE61, Derecktor SY	

Bill (If different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton /	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE16618 / SE16619

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-T25-1224	10/5/11 / 1058	SED	2	X	X		X						
	DSY-SD-T25-2448	↓ / 1101		2	X	X		X						
	DSY-SD-Q29-0012	10/6/11 / 1045		3	X	X	X	X						
	DSY-SD-Q29-1224	/ 1048		2	X	X		X						
	DSY-SD-Q29-2448	/ 1051		2	X	X		X						
	DSY-SD-T29-0012	/ 1116		3	X	X	X	X						
	DSY-SD-T29-1224	/ 1113		2	X	X		X						
	DSY-SD-T29-2448	/ 1116		4	X	X		X						
	DSY-SD-W24-0012	/ 1225		3	X	X	X	X						
	DSY-SD-W24-1224	/ 1228		2	X	X		X						
	DSY-SD-W24-2448	/ 1231		2	X	X		X						
	DSY-SD-DUP28-100611	/ —		3	X	X	X	X						
	DSY-SD-W30-0012	/ 1245		3	X	X	X	X						
	DSY-SD-W30-1224	/ 1248		2	X	X		X						
	DSY-SD-W30-2448	/ 1251		2	X	X		X						
	DSY-SD-W28-0012	↓ / 1300	↓	3	X	X	X	X						

COMMENTS
DSY-SD-T29-2448 is designated as the lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE1661 9

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-W28-1224	10/6/11/1303	SED	2	X	X	X							
	DSY-SD-W28-2448	10/6/11/1306	SED	2	X	X	X							
	DSY-~~RB11~~ SD-RB11-100611	10/6/11/1430	AQ	5	X	X	X							
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8459

Address 250 Andover St. Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61 Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SED619 / SED620

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)					
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-C25-0012	10/7/11 / 0800	SED	3	X	X	X	X						
	DSY-SD-C25-1224	/ 0803		2	X	X		X						
	DSY-SD-C25-2448	/ 0806		2	X	X		X						
	DSY-SD-DUP29-100711	/ —		2	X	X		X						
	DSY-SD-C21-0012	/ 0840		3	X	X	X	X						
	DSY-SD-C21-1224	/ 0843		2	X	X		X						
	DSY-SD-C21-2448	/ 0846		2	X	X		X						
	DSY-SD-18-0012	/ 1000		3	X	X	X	X						
	DSY-SD-18-1224	/ 1003		2	X	X		X						
	DSY-SD-18-2448	/ 1006		2	X	X		X						
	DSY-SD-C09-0012	/ 1020		3	X	X	X	X						
	DSY-SD-C09-1224	/ 1023		2	X	X		MH	X					
	DSY-SD-C09-2448	/ 1026		2	X	X			X					
	DSY-SD-DUP30-100711	/ —		2	X	X			X					
	DSY-SD-C29-0012	/ 1125		3	X	X	X	X						
	DSY-SD-C29-1224	/ 1128		2	X	X		X						

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					SED619

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Project: Derecktor	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE1d616 to SE16620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 1 of 7	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.3
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Ø0000010

#DE 11-30-11

Project: Deerchon	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66116 to SE66120	KIMS Review By:	Received By: DM
SDG #:	Cooler: 2 of 67 WEW 10/7/11	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Dieselton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL66116 to SEL66120	KIMS Review By:	Received By: DM
SDG #:	Cooler: 3 of 7	Date/Time Rec.: 10/7/11 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12	✓			✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000017

Project: Deweerton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL16 to SEL620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 4 of 7	Date/Time Rec.: 10/7/4/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000013

Project: Pinnacle	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL1116 to 116620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 5 of 17 10/7/11 WCW	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓	~~✓~~ X 10.10.11			Temp (°C): 8.2
Samples received at <6 °C w/o freezing?		X			Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?	✓			~~✓~~ QP 10.10.11	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9 Cyanide – pH >12	✓			✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

2 Bags of ice - partially melted
No Temp Blanks
called client - temp. was greater than 6°C - Samples in cooler collected on same day as delivery to lab. Cooling process started.
QP 10.10.11

C000014

Project: Directorion	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 6 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Test America NVS	KAS PM: JU	Samples By: CLIENT	
Project: Directive	KIMS Entry By: DM	Delivered By: KAS	
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM	
SDG #:	Cooler: 7 of 7	Date/Time Rec.: 10/7/11 1730	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 4.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample ID DSY-SD-03-2448 labeled Time 2 jars 1006, 2 jars 1106
Time on COC = 1106

0000016

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-21	OS	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	OS	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	OS	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-18	SIM	%	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	SIM	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-18	SIM	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-20	SIM	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	SIM	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	SIM	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-18	PCB	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-21	PCB	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-23	PCB	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-24	PCB	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30

NAVSTA NEWPORT
SEDIMENT DATA
DSY-20

FRACTION	CHEMICAL	DSY-SD-C25-1224	UNITS	DSY-SD-DUP29-100711	RPD	D
PAH	BENZO(A)PYRENE	ND	UG/KG	190	200.00	190.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-20

FRACTION	CHEMICAL	DSY-SD-C25-1224	UNITS	DSY-SD-DUP29-100711	RPD	D
PCB	AROCLOR-1254	ND	UG/KG	380	200.00	380.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-20

FRACTION	CHEMICAL	DSY-SD-C25-1224	UNITS	DSY-SD-DUP29-100711	RPD	D
OS	BENZO(A)ANTHRACENE	ND	UG/KG	140 J	200.00	140.00
OS	BENZO(B)FLUORANTHENE	ND	UG/KG	260 J	200.00	260.00
OS	BENZO(K)FLUORANTHENE	ND	UG/KG	160 J	200.00	160.00
OS	CHRYSENE	ND	UG/KG	190 J	200.00	190.00
OS	PYRENE	ND	UG/KG	760	200.00	760.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD722 DFTPP Injection Date: 11/12/11

Instrument ID: GCMS-U DFTPP Injection Time: 0905

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	25.1
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.3 (81.6)2
442	40.0 - 100.0% of mass 198	87.6
443	17.0 - 23.0% of mass 442	16.3 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1112	U8539	11/12/11	0925
02		SSTD010U1112	U8540	11/12/11	1009
03		SSTD025U1112	U8541	11/12/11	1053
04		SSTD075U1112	U8542	11/12/11	1138
05		SSTD100U1112	U8543	11/12/11	1222
06		SSTD125U1112	U8544	11/12/11	1307
07		8270 IND CHECK	U8545	11/12/11	1352
08					
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20					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date(s): 11/12/11 11/12/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0925 1307

LAB FILE ID: RF10: U8540 RF25: U8541 RF50: U8539
RF75: U8542 RF100: U8543 RF125: U8544

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2	
Fluoranthene	0.846	0.849	0.922	0.854	0.740	0.710	AVRG	0.82028951	9.685	30.000	
Pyrene	1.574	1.420	1.691	1.452	1.565	1.802	AVRG	1.58392524	9.095	15.000	
Benzo(a)anthracene	0.985	0.989	1.100	1.002	0.938	0.959	AVRG	0.99552486	5.647	15.000	
Chrysene	1.020	0.944	1.034	0.914	0.855	0.872	AVRG	0.93981116	7.942	15.000	
Benzo(b)fluoranthene	0.866	0.962	1.283	1.148	1.005	1.023	AVRG	1.04784339	14.033	15.000	
Benzo(k)fluoranthene	1.618	1.555	1.615	1.468	1.252	1.374	AVRG	1.48031152	9.842	15.000	
Benzo(a)pyrene	0.869	1.021	1.149	1.052	0.942	1.017	AVRG	1.00839806	9.484	30.000	
Indeno(1,2,3-cd)pyrene	0.650	0.758	0.397	0.751	0.563	0.621	AVRG	0.62346504	21.495	15.000	<-
Dibenzo(a,h)anthracene	0.487	0.624	0.621	0.648	0.715	0.669	AVRG	0.62736016	12.246	15.000	
Benzo(g,h,i)perylene	0.533	0.604	0.600	0.639	0.690	0.667	AVRG	0.62216363	9.007	15.000	
Nitrobenzene-D5	0.339	0.342	0.376	0.336	0.311	0.322	AVRG	0.33760836	6.558	15.000	
2-Fluorobiphenyl	1.308	1.225	1.284	1.200	1.058	1.040	AVRG	1.18601809	9.535	15.000	
Terphenyl-D14	0.912	0.843	1.010	0.896	0.954	1.072	AVRG	0.94783144	8.752	15.000	

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD723 DFTPP Injection Date: 11/13/11

Instrument ID: GCMS-U DFTPP Injection Time: 0933

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.8
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.6
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.2 (79.9)2
442	40.0 - 100.0% of mass 198	90.1
443	17.0 - 23.0% of mass 442	17.7 (19.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1113	U8562	11/13/11	0953
02	WG98966-BLANK	WG98966-1	U8565	11/13/11	1206
03	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
04	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
05					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date: 11/13/11 Time: 0953

Lab File ID: U8562 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8628800	0.01	5.23	20.01	AVRG
Pyrene	1.5840000	1.3117000	0.01	-17.19	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9761800	0.01	-1.99	20.00	AVRG
Chrysene	0.9400000	0.8921600	0.01	-5.09	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0438000	0.01	-0.40	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.3342000	0.01	-9.85	20.00	AVRG
Benzo(a)pyrene	1.0080000	1.0022000	0.01	-0.58	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.5385100	0.01	-13.56	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.6103800	0.01	-2.65	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.5912900	0.01	-4.94	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3131300	0.01	-7.36	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1084000	0.01	-6.54	20.00	AVRG
Terphenyl-D14	0.9480000	0.8075400	0.01	-14.82	20.00	AVRG

FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98966-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: U8565 Lab Sample ID: WG98966-1

Instrument ID: GCMS-U Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/13/11

Level: (low/med) LOW Time Analyzed: 1206

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
02	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
03	DSY-SD-RB11-100611	SE6619-7	U8605	11/15/11	1009
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98966-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 22-nov-2011 13:06

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		42.6						
2-Fluorobiphenyl		50.3						
Terphenyl-d14		61.3						

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http://www.katahdinlab.com

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD725 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-U DFTPP Injection Time: 0733

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	13.2 (80.8)2
442	40.0 - 100.0% of mass 198	86.1
443	17.0 - 23.0% of mass 442	16.4 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1115	U8602	11/15/11	0754
02	DSY-SD-RB11-100611	SE6619-7	U8605	11/15/11	1009
03					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date: 11/15/11 Time: 0754

Lab File ID: U8602 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.6604500	0.01	-19.46	20.01	AVRG	
Pyrene	1.5840000	1.7244000	0.01	8.86	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9291400	0.01	-6.71	20.00	AVRG	
Chrysene	0.9400000	0.8601200	0.01	-8.50	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.0448000	0.01	-0.30	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3734000	0.01	-7.20	20.00	AVRG	
Benzo(a)pyrene	1.0080000	0.9161700	0.01	-9.11	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6230000	0.6212100	0.01	-0.29	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6270000	0.5021200	0.01	-19.92	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.4882800	0.01	-21.50	20.00	AVRG	<-
Nitrobenzene-D5	0.3380000	0.3146100	0.01	-6.92	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.0799000	0.01	-8.95	20.00	AVRG	
Terphenyl-D14	0.9480000	1.0064000	0.01	6.16	20.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD726 DFTPP Injection Date: 11/16/11

Instrument ID: GCMS-U DFTPP Injection Time: 0641

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	37.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.7
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.4
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.9 (80.3)2
442	40.0 - 100.0% of mass 198	96.9
443	17.0 - 23.0% of mass 442	18.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1116	U8631	11/16/11	0701
02	DSY-SD-W30-0012	SE6619-1	U8645	11/16/11	1735
03	DSY-SD-W30-1224	SE6619-2	U8646	11/16/11	1819
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date: 11/16/11 Time: 0701

Lab File ID: U8631 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.7906600	0.01	-3.58	20.01	AVRG	
Pyrene	1.5840000	1.5238000	0.01	-3.80	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9740900	0.01	-2.20	20.00	AVRG	
Chrysene	0.9400000	0.9095900	0.01	-3.24	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.2173000	0.01	16.15	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3888000	0.01	-6.16	20.00	AVRG	
Benzo(a)pyrene	1.0080000	1.0013000	0.01	-0.66	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6230000	0.4109500	0.01	-34.04	20.00	AVRG	<-
Dibenzo(a,h)anthracene	0.6270000	0.4471800	0.01	-28.68	20.00	AVRG	<-
Benzo(g,h,i)perylene	0.6220000	0.5059100	0.01	-18.66	20.00	AVRG	
Nitrobenzene-D5	0.3380000	0.3353300	0.01	-0.79	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.1319000	0.01	-4.56	20.00	AVRG	
Terphenyl-D14	0.9480000	0.9131100	0.01	-3.68	20.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD727 DFTPP Injection Date: 11/17/11

Instrument ID: GCMS-U DFTPP Injection Time: 0631

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	25.4
365	1.0 - 100.0% of mass 198	3.1
441	0.0 - 100.0% of mass 443	14.7 (81.1)2
442	40.0 - 100.0% of mass 198	92.4
443	17.0 - 23.0% of mass 442	18.1 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1116	U8647	11/17/11	0651
02	WG99336-BLANK	WG99336-1	U8648	11/17/11	0736
03	WG99336-LCS	WG99336-2	U8649	11/17/11	0820
04	WG99336-LCSD	WG99336-3	U8650	11/17/11	0905
05	DSY-SD-C21-2448	SE6619-14	U8651	11/17/11	0950
06	DSY-SD-C25-1224	SE6619-9	U8652	11/17/11	1035
07	DSY-SD-W30-2448	SE6619-3	U8653	11/17/11	1119
08	DSY-SD-18-0012	SE6619-15	U8654	11/17/11	1204
09	DSY-SD-W28-2448	SE6619-6	U8655	11/17/11	1249
10	DSY-SD-C25-2448	SE6619-10	U8656	11/17/11	1334
11	DSY-SD-C21-1224	SE6619-13	U8657	11/17/11	1419
12	DSY-SD-W28-0012	SE6619-4	U8658	11/17/11	1504
13	DSY-SD-C25-0012	SE6619-8	U8659	11/17/11	1549
14	DSY-SD-DUP29-100711	SE6619-11	U8660	11/17/11	1634
15	DSY-SD-C21-0012	SE6619-12	U8661	11/17/11	1719
16	DSY-SD-W28-1224	SE6619-5	U8662	11/17/11	1804
17					
18					
19					
20					

FORM V SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99336-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: U8648 Lab Sample ID: WG99336-1

Instrument ID: GCMS-U Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/17/11

Level:(low/med) LOW Time Analyzed: 0736

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-W30-0012	SE6619-1	U8645	11/16/11	1735
02	DSY-SD-W30-1224	SE6619-2	U8646	11/16/11	1819
03	WG99336-LCS	WG99336-2	U8649	11/17/11	0820
04	WG99336-LCSD	WG99336-3	U8650	11/17/11	0905
05	DSY-SD-C21-2448	SE6619-14	U8651	11/17/11	0950
06	DSY-SD-C25-1224	SE6619-9	U8652	11/17/11	1035
07	DSY-SD-W30-2448	SE6619-3	U8653	11/17/11	1119
08	DSY-SD-18-0012	SE6619-15	U8654	11/17/11	1204
09	DSY-SD-W28-2448	SE6619-6	U8655	11/17/11	1249
10	DSY-SD-C25-2448	SE6619-10	U8656	11/17/11	1334
11	DSY-SD-C21-1224	SE6619-13	U8657	11/17/11	1419
12	DSY-SD-W28-0012	SE6619-4	U8658	11/17/11	1504
13	DSY-SD-C25-0012	SE6619-8	U8659	11/17/11	1549
14	DSY-SD-DUP29-100711	SE6619-11	U8660	11/17/11	1634
15	DSY-SD-C21-0012	SE6619-12	U8661	11/17/11	1719
16	DSY-SD-W28-1224	SE6619-5	U8662	11/17/11	1804
17	DSY-SD-18-1224	SE6619-16	U8677	11/18/11	1122
18	DSY-SD-18-2448	SE6619-17	U8678	11/18/11	1207
19	DSY-SD-C09-0012	SE6619-18	U8679	11/18/11	1252
20	DSY-SD-C09-1224	SE6619-19	U8680	11/18/11	1337
21	DSY-SD-C09-2448	SE6619-20	U8681	11/18/11	1422
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99336-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 22-nov-2011 13:06

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		48.7	%					
2-Fluorobiphenyl		57.7	%					
Terphenyl-d14		57.1	%					

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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date: 11/17/11 Time: 0651

Lab File ID: U8647 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8444500	0.01	2.98	20.01	AVRG
Pyrene	1.5840000	1.4132000	0.01	-10.78	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9452800	0.01	-5.09	20.00	AVRG
Chrysene	0.9400000	0.8670900	0.01	-7.76	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0429000	0.01	-0.49	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.2986000	0.01	-12.26	20.00	AVRG
Benzo(a)pyrene	1.0080000	0.9664300	0.01	-4.12	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.5293600	0.01	-15.03	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.5905500	0.01	-5.81	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.6306800	0.01	1.40	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3339700	0.01	-1.19	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1610000	0.01	-2.11	20.00	AVRG
Terphenyl-D14	0.9480000	0.8447300	0.01	-10.89	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: UD728 DFTPP Injection Date: 11/18/11

Instrument ID: GCMS-U DFTPP Injection Time: 0710

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.5
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	37.2
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.5 (77.1)2
442	40.0 - 100.0% of mass 198	94.9
443	17.0 - 23.0% of mass 442	18.8 (19.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1118	U8672	11/18/11	0730
02	DSY-SD-18-1224	SE6619-16	U8677	11/18/11	1122
03	DSY-SD-18-2448	SE6619-17	U8678	11/18/11	1207
04	DSY-SD-C09-0012	SE6619-18	U8679	11/18/11	1252
05	DSY-SD-C09-1224	SE6619-19	U8680	11/18/11	1337
06	DSY-SD-C09-2448	SE6619-20	U8681	11/18/11	1422
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-U Calibration Date: 11/18/11 Time: 0730

Lab File ID: U8672 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8200000	0.8266500	0.01	0.81	20.01	AVRG
Pyrene	1.5840000	1.5449000	0.01	-2.47	20.00	AVRG
Benzo(a)anthracene	0.9960000	0.9978300	0.01	0.18	20.00	AVRG
Chrysene	0.9400000	0.8940600	0.01	-4.89	20.00	AVRG
Benzo(b)fluoranthene	1.0480000	1.0566000	0.01	0.82	20.00	AVRG
Benzo(k)fluoranthene	1.4800000	1.3138000	0.01	-11.23	20.00	AVRG
Benzo(a)pyrene	1.0080000	0.9745800	0.01	-3.32	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6230000	0.5814300	0.01	-6.67	20.00	AVRG
Dibenzo(a,h)anthracene	0.6270000	0.6942700	0.01	10.73	20.00	AVRG
Benzo(g,h,i)perylene	0.6220000	0.7112300	0.01	14.35	20.00	AVRG
Nitrobenzene-D5	0.3380000	0.3279400	0.01	-2.98	20.00	AVRG
2-Fluorobiphenyl	1.1860000	1.1068000	0.01	-6.68	20.00	AVRG
Terphenyl-D14	0.9480000	0.9330900	0.01	-1.57	20.00	AVRG

FORM VII PEST

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-20

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB11-100611	SE6619-7	67.0		63.2		63.9		0
Method Blank Sample	WG98966-1	50.3		42.6		61.3		0
Laboratory Control S	WG98966-2	65.0		55.0		58.1		0
Laboratory Control S	WG98966-3	44.8		37.0	*	51.0		1

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-20

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-W30-0012	SE6619-1	55.5		44.5		77.6		0
DSY-SD-C25-2448	SE6619-10	55.0		47.3		56.5		0
DSY-SD-DUP29-100711	SE6619-11	61.9		47.8		76.1		0
DSY-SD-C21-0012	SE6619-12	41.9		28.2		40.4		0
DSY-SD-C21-1224	SE6619-13	57.6		37.6		52.4		0
DSY-SD-C21-2448	SE6619-14	37.5		32.2		38.4		0
DSY-SD-18-0012	SE6619-15	50.2		33.0		55.4		0
DSY-SD-18-1224	SE6619-16	55.4		50.9		64.6		0
DSY-SD-18-2448	SE6619-17	49.0		46.2		55.3		0
DSY-SD-C09-0012	SE6619-18	61.0		52.8		81.0		0
DSY-SD-C09-1224	SE6619-19	57.0		50.2		55.1		0
DSY-SD-W30-1224	SE6619-2	60.8		54.8		89.9		0
DSY-SD-C09-2448	SE6619-20	58.7		54.0		60.1		0
DSY-SD-W30-2448	SE6619-3	57.9		43.1		65.0		0
DSY-SD-W28-0012	SE6619-4	35.2		23.9	*	37.6		1
DSY-SD-W28-1224	SE6619-5	58.8		44.6		82.0		0
DSY-SD-W28-2448	SE6619-6	32.7		27.0		21.7	*	1
DSY-SD-C25-0012	SE6619-8	41.7		27.7		54.4		0
DSY-SD-C25-1224	SE6619-9	51.2		49.8		49.7		0
Method Blank Sample	WG99336-1	57.7		48.7		57.1		0
Laboratory Control S	WG99336-2	66.3		62.0		65.6		0
Laboratory Control S	WG99336-3	57.4		51.8		70.4		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-20

2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98966-2
LCSD ID: WG98966-3
Project:
SDG: DSY-18
Report Date: 22-nov-2011 13:06

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	29.8	59.6*	26.8	53.6*	ug/L	11	30	66-109
Benzo(a)pyrene	50.0	33.8	67.6	28.7	57.4*	ug/L	16	30	63-118
Benzo(b)fluoranthene	50.0	30.5	61.0	26.5	53.0*	ug/L	14	30	60-108
Benzo(k)fluoranthene	50.0	28.8	57.6*	26.1	52.2*	ug/L	10	30	59-125
Benzo(g,h,i)perylene	50.0	34.9	69.8	31.3	62.6	ug/L	11	30	58-115
Chrysene	50.0	33.3	66.6*	29.7	59.4*	ug/L	11	30	68-114
Dibenzo(a,h)anthracene	50.0	31.5	63.0	30.6	61.2	ug/L	3	30	61-111
Fluoranthene	50.0	39.5	79.0	32.0	64.0*	ug/L	21	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	41.7	83.4	37.2	74.4	ug/L	11	30	55-111
Pyrene	50.0	27.2	54.4*	26.1	52.2*	ug/L	4	30	58-135
Nitrobenzene-d5			55.0		37.0*				41-91
2-Fluorobiphenyl			65.0		44.8				43-90
Terphenyl-d14			58.1		51.0				36-156

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Katahdin
ANALYTICAL SERVICES

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99336-2
LCSD ID: WG99336-3
Project:
SDG: DSY-20
Report Date: 22-nov-2011 13:06

Received Date: 18-OCT-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99336

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1160	69.5	1090	65.3	ug/Kgdrywt	6	30	40-100
Benzo(a)pyrene	1670	1230	73.6	1130	67.7	ug/Kgdrywt	8	30	40-100
Benzo(b)fluoranthene	1670	1230	73.6	1140	68.3	ug/Kgdrywt	8	30	40-100
Benzo(g,h,i)perylene	1670	1140	68.3	1130	67.7	ug/Kgdrywt	1	30	40-100
Benzo(k)fluoranthene	1670	1100	65.9	1030	61.7	ug/Kgdrywt	6	30	40-100
Chrysene	1670	1290	77.2	1190	71.2	ug/Kgdrywt	8	30	40-100
Dibenzo(a,h)anthracene	1670	1060	63.5	1130	67.7	ug/Kgdrywt	6	30	40-100
Fluoranthene	1670	1510	90.4	1240	74.2	ug/Kgdrywt	20	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1360	81.4	1310	78.4	ug/Kgdrywt	4	30	40-100
Pyrene	1670	1070	64.1	1200	71.8	ug/Kgdrywt	11	30	40-100
Nitrobenzene-d5			62.0		51.8				24-81
2-Fluorobiphenyl			66.3		57.4				29-83
Terphenyl-d14			65.6		70.4				24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	307490	8.41	1143270	11.24	599281	15.37
02	WG98966-BLANK	WG98966-1	273283	8.42	1012026	11.23	507801	15.36
03	WG98966-LCS	WG98966-2	259048	8.41	890555	11.23	413905	15.36
04	WG98966-LCSD	WG98966-3	294768	8.41	1044629	11.24	575991	15.36
05		SSTD050U1115	364715	8.38	1381025	11.21	721495	15.34
06	DSY-SD-RB11-100611	SE6619-7	313196	8.39	1153749	11.20	603031	15.33
07		SSTD050U1116	321805	8.37	1173246	11.20	648713	15.32
08	DSY-SD-W30-0012	SE6619-1	393633	8.38	1515300	11.20	803207	15.33
09	DSY-SD-W30-1224	SE6619-2	410853	8.38	1568339	11.19	867572	15.32
10		SSTD050U1116	280687	8.36	987754	11.19	508903	15.32
11	WG99336-BLANK	WG99336-1	263517	8.38	946119	11.19	484063	15.31
12	WG99336-LCS	WG99336-2	273599	8.37	909912	11.19	456844	15.31
13	WG99336-LCSD	WG99336-3	337483	8.37	1226035	11.19	675980	15.31
14	DSY-SD-C21-2448	SE6619-14	259197	8.37	917537	11.19	433976	15.32
15	DSY-SD-C25-1224	SE6619-9	305487	8.37	1113040	11.19	593170	15.32
16	DSY-SD-W30-2448	SE6619-3	356889	8.37	1311255	11.18	647292	15.31
17	DSY-SD-18-0012	SE6619-15	339965	8.37	1256601	11.18	624011	15.31
18	DSY-SD-W28-2448	SE6619-6	280255	8.38	991789	11.19	495890	15.31
19	DSY-SD-C25-2448	SE6619-10	261347	8.38	956790	11.19	475613	15.31
20	DSY-SD-C21-1224	SE6619-13	437922	8.37	1616637	11.20	867520	15.33

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-W28-0012	SE6619-4	381612	8.38	1508463	11.19	800508	15.32
02	DSY-SD-C25-0012	SE6619-8	406550	8.37	1570985	11.19	882014	15.32
03	DSY-SD-DUP29-100711	SE6619-11	415640	8.37	1591817	11.19	869678	15.32
04	DSY-SD-C21-0012	SE6619-12	417641	8.38	1615627	11.19	923705	15.32
05	DSY-SD-W28-1224	SE6619-5	434335	8.38	1680285	11.19	898371	15.33
06		SSTD050U1118	341223	8.36	1261656	11.18	701163	15.31
07	DSY-SD-18-1224	SE6619-16	374663	8.37	1434895	11.18	814173	15.31
08	DSY-SD-18-2448	SE6619-17	326490	8.36	1214117	11.18	687707	15.31
09	DSY-SD-C09-0012	SE6619-18	385962	8.37	1501907	11.18	855656	15.31
10	DSY-SD-C09-1224	SE6619-19	324440	8.37	1214559	11.18	672177	15.31
11	DSY-SD-C09-2448	SE6619-20	355383	8.37	1346024	11.19	765573	15.31
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		697814		18.82		379609		25.12		180449		28.26	
UPPER LIMIT		1395628		19.32		759218		25.62		360898		28.76	
LOWER LIMIT		348907		18.32		189805		24.62		90225		27.76	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD050U1113		883737		18.81		594632		25.10		343868		28.24	
02	WG98966-BLANK	WG98966-1		740773		18.80		543526		25.09		430393	*	28.24	
03	WG98966-LCS	WG98966-2		601159		18.80		473013		25.09		305766		28.24	
04	WG98966-LCSD	WG98966-3		852425		18.81		558202		25.09		392639	*	28.24	
05		SSTD050U1115		928379		18.78		345890		25.06		142086		28.20	
06	DSY-SD-RB11-100611	SE6619-7		943546		18.77		512022		25.05		280288		28.21	
07		SSTD050U1116		902897		18.77		468685		25.05		194670		28.20	
08	DSY-SD-W30-0012	SE6619-1		1167997		18.76		355747		25.05		108229		28.19	
09	DSY-SD-W30-1224	SE6619-2		1210740		18.77		407302		25.04		115792		28.20	
10		SSTD050U1116		762018		18.76		454017		25.04		240378		28.19	
11	WG99336-BLANK	WG99336-1		739995		18.75		619289		25.04		523318	*	28.19	
12	WG99336-LCS	WG99336-2		686077		18.76		526884		25.04		300689		28.20	
13	WG99336-LCSD	WG99336-3		991045		18.76		544630		25.04		316063		28.20	
14	DSY-SD-C21-2448	SE6619-14		687648		18.75		628982		25.05		468617	*	28.19	
15	DSY-SD-C25-1224	SE6619-9		901321		18.75		645425		25.05		482171	*	28.19	
16	DSY-SD-W30-2448	SE6619-3		954929		18.76		495700		25.04		193157		28.20	
17	DSY-SD-18-0012	SE6619-15		919381		18.76		633563		25.04		299235		28.19	
18	DSY-SD-W28-2448	SE6619-6		779841		18.76		663201		25.04		391020	*	28.20	
19	DSY-SD-C25-2448	SE6619-10		757972		18.76		663591		25.04		407534	*	28.20	
20	DSY-SD-C21-1224	SE6619-13		1072783		18.77		239615		25.05		97370		28.20	

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		697814		18.82		379609		25.12		180449		28.26	
UPPER LIMIT		1395628		19.32		759218		25.62		360898		28.76	
LOWER LIMIT		348907		18.32		189805		24.62		90225		27.76	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-W28-0012	SE6619-4		1195354	18.76	530077		25.05		201568		28.20	
02	DSY-SD-C25-0012	SE6619-8		1302260	18.76	458460		25.04		165148		28.19	
03	DSY-SD-DUP29-100711	SE6619-11		1175859	18.77	247437		25.05		105737		28.20	
04	DSY-SD-C21-0012	SE6619-12		1389741	18.77	524676		25.05		161752		28.20	
05	DSY-SD-W28-1224	SE6619-5		1069784	18.78	185769	*	25.05		77287	*	28.20	
06		SSTD050U1118		1074903	18.77	585750		25.04		299503		28.19	
07	DSY-SD-18-1224	SE6619-16		1357666	18.76	897960	*	25.04		407112	*	28.19	
08	DSY-SD-18-2448	SE6619-17		1150550	18.75	903526	*	25.04		568024	*	28.19	
09	DSY-SD-C09-0012	SE6619-18		1346058	18.76	620077		25.04		268942		28.19	
10	DSY-SD-C09-1224	SE6619-19		1070611	18.75	735578		25.04		401878	*	28.19	
11	DSY-SD-C09-2448	SE6619-20		1214980	18.75	885131	*	25.04		398989	*	28.19	
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Std Reference

Data File: \\target_server\GG\chem\gcms-u.i\U111711.b\U8647.D
Report Date: 22-Nov-2011 12:09

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U111711.b\U8647.D
Lab Smp Id: SSTD050U1116
Inj Date : 17-NOV-2011 06:51 MS Autotune Date: 27-JUL-1998 22:19
Operator : WAS Inst ID: gcms-u.i
Smp Info : WG101482-1
Misc Info : WG101482,WG101482,WG101009-3
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U111711.b\U8270C10.m
Meth Date : 22-Nov-2011 12:03 gcms-u.i Quant Type: ISTD
Cal Date : 12-NOV-2011 13:07 Cal File: U8544.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
* 19	1,4-Dichlorobenzene-D4	152	8.360	8.360	(1.000)	280687	40.0000		
149	Benzo(a)pyrene	252	28.067	28.067	(0.996)	290386	50.0000	47.9	
$ 33	Nitrobenzene-D5	82	9.674	9.674	(0.865)	412356	50.0000	49.5	
* 44	Naphthalene-D8	136	11.186	11.186	(1.000)	987754	40.0000		
$ 63	2-Fluorobiphenyl	172	13.825	13.825	(0.903)	738554	50.0000	48.9	
* 77	Acenaphthene-D10	164	15.315	15.315	(1.000)	508903	40.0000		
* 114	Phenanthrene-D10	188	18.762	18.762	(1.000)	762018	40.0000		
127	Fluoranthene	202	21.629	21.629	(1.153)	804358	50.0000	51.5	
128	Pyrene	202	22.136	22.136	(0.884)	802023	50.0000	44.6	
$ 130	Terphenyl-D14	244	22.664	22.664	(0.905)	479402	50.0000	44.6	
140	Benzo(a)anthracene	228	25.003	25.003	(0.998)	536465	50.0000	47.5	
* 141	Chrysene-D12	240	25.044	25.044	(1.000)	454017	40.0000		
142	Chrysene	228	25.106	25.106	(1.002)	492092	50.0000	46.1	
147	Benzo(b)fluoranthene	252	27.425	27.425	(0.973)	313368	50.0000	49.8	
148	Benzo(k)fluoranthene	252	27.477	27.477	(0.975)	390184	50.0000	43.9	
* 150	Perylene-D12	264	28.191	28.191	(1.000)	240378	40.0000		
153	Indeno(1,2,3-cd)pyrene	276	30.313	30.313	(1.075)	159058	50.0000	42.4(M)	M3
154	Dibenzo(a,h)anthracene	278	30.375	30.375	(1.077)	177445	50.0000	47.1	
155	Benzo(g,h,i)perylene	276	30.892	30.892	(1.096)	189503	50.0000	50.7	

JL 11/22/11

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U111811.b\U8672.D
Report Date: 22-Nov-2011 12:14

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U111811.b\U8672.D
Lab Smp Id: SSTD050U1118
Inj Date : 18-NOV-2011 07:30 MS Autotune Date: 27-JUL-1998 22:19
Operator : WAS Inst ID: gcms-u.i
Smp Info : WG101331-1
Misc Info : WG101331,WG101331,WG101009-3
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U111811.b\U8270C10.m
Meth Date : 22-Nov-2011 12:13 gcms-u.i Quant Type: ISTD
Cal Date : 12-NOV-2011 13:07 Cal File: U8544.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 19 1,4-Dichlorobenzene-D4	152	8.358	8.358	(1.000)	341223	40.0000		
149 Benzo(a)pyrene	252	28.064	28.064	(0.996)	364864	50.0000	48.3	
$ 33 Nitrobenzene-D5	82	9.672	9.672	(0.865)	517183	50.0000	48.6	
* 44 Naphthalene-D8	136	11.183	11.183	(1.000)	1261656	40.0000		
$ 63 2-Fluorobiphenyl	172	13.822	13.822	(0.903)	970079	50.0000	46.7	
* 77 Acenaphthene-D10	164	15.313	15.313	(1.000)	701163	40.0000		
* 114 Phenanthrene-D10	188	18.770	18.770	(1.000)	1074903	40.0000		
127 Fluoranthene	202	21.626	21.626	(1.152)	1110715	50.0000	50.4	
128 Pyrene	202	22.134	22.134	(0.884)	1131146	50.0000	48.8	
$ 130 Terphenyl-D14	244	22.661	22.661	(0.905)	683199	50.0000	49.2	
140 Benzo(a)anthracene	228	25.001	25.001	(0.998)	730601	50.0000	50.1	
* 141 Chrysene-D12	240	25.042	25.042	(1.000)	585750	40.0000		
142 Chrysene	228	25.104	25.104	(1.002)	654616	50.0000	47.6	
147 Benzo(b)fluoranthene	252	27.423	27.423	(0.973)	395579	50.0000	50.4	
148 Benzo(k)fluoranthene	252	27.474	27.474	(0.975)	491853	50.0000	44.4	
* 150 Perylene-D12	264	28.188	28.188	(1.000)	299503	40.0000		
153 Indeno(1,2,3-cd)pyrene	276	30.310	30.310	(1.075)	217676	50.0000	46.6	
154 Dibenzo(a,h)anthracene	278	30.372	30.372	(1.077)	259921	50.0000	55.3	
155 Benzo(g,h,i)perylene	276	30.890	30.890	(1.096)	266270	50.0000	57.2	

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-20

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-C25-2448	SE6619-10	38.7		53.7		73.1		0
DSY-SD-DUP29-100711	SE6619-11	53.2		50.8		91.4		0
DSY-SD-C21-0012	SE6619-12	30.2		47.1		62.9		0
DSY-SD-C21-1224	SE6619-13	40.3		49.3		68.5		0
DSY-SD-C21-2448	SE6619-14	24.5		24.5		33.3	*	1
DSY-SD-18-0012	SE6619-15	38.3		56.5		69.0		0
DSY-SD-18-1224	SE6619-16	48.0		56.7		69.6		0
DSY-SD-18-2448	SE6619-17	35.7		37.0		47.3		0
DSY-SD-C09-0012	SE6619-18	51.0		67.1		81.4		0
DSY-SD-C09-1224	SE6619-19	43.5		54.3		66.3		0
DSY-SD-W30-1224	SE6619-2	40.8		49.8		53.6		0
DSY-SD-C09-2448	SE6619-20	55.9		68.0		72.6		0
DSY-SD-W30-2448	SE6619-3	38.8		53.1		70.7		0
DSY-SD-W28-0012	SE6619-4	30.7		41.5		49.1		0
DSY-SD-W28-2448	SE6619-6	27.9		34.2		40.3		0
DSY-SD-C25-1224	SE6619-9	42.6		43.0		43.1		0
Method Blank Sample	WG101501-1	50.4		62.6		65.6		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-20

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-20

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB11-100611	SE6619-7	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG98968-1	49.4		65.8		72.5		0
Laboratory Control S	WG98968-2	40.5	*	51.0		58.1		1
Laboratory Control S	WG98968-3	43.8		51.7		57.7		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98968-2
LCSD ID: WG98968-3
Project:
SDG: DSY-20
Report Date: 28-nov-2011 11:59

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 17-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.17	58.5*	1.13	56.5*	ug/L	3	30	63-98
2-Methylnaphthalene-D10			40.5*		43.8				43-92
Fluorene-D10			51.0		51.7				29-101
Pyrene-D10			58.1		57.7				53-166

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http://www.katahdinlab.com

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1017	39324	9.14	102062	12.09	48369	16.41
02	WG98968-LCS	WG98968-2	44447	9.14	116697	12.10	57824	16.41
03	WG98968-LCSD	WG98968-3	41433	9.14	113990	12.09	58056	16.41
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		64726		20.09		32119		26.71		23689		30.04	
UPPER LIMIT		129452		20.63		64238		27.25		47378		30.58	
LOWER LIMIT		32363		19.55		16060		26.17		11845		29.50	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1017		58271		20.03		22735		26.65		20437	29.98
02	WG98968-LCS	WG98968-2		75106		20.03		45184		26.65		37176	29.98
03	WG98968-LCSD	WG98968-3		76069		20.03		41299		26.65		35793	29.98
04													
05													
06													
07													
08													
09													
10													
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15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		36243		8.92		123776		11.87		61148		16.18	
UPPER LIMIT		72486		9.46		247552		12.41		122296		16.72	
LOWER LIMIT		18122		8.38		61888		11.33		30574		15.64	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1114		50284		8.51		175100		11.45		92405		15.75	
02	WG98968-BLANK	WG98968-1		56329		8.51		193446		11.46		105196		15.76	
03													
04													
05													
06													
07													
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14													
15													
16													
17													
18													
19													
20													

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		83246		19.80		43673		26.39		30900		29.71	
UPPER LIMIT		166492		20.34		87346		26.93		61800		30.25	
LOWER LIMIT		41623		19.26		21837		25.85		15450		29.17	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1114		126835	19.35	69454		25.94		46628		29.24	
02	WG98968-BLANK	WG98968-1		154127	19.37	97438*		25.96		70118*		29.24	
03													
04													
05													
06													
07													
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15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		54590	8.47	163072	11.41	86969	15.71
UPPER LIMIT		109180	9.01	326144	11.95	173938	16.25
LOWER LIMIT		27295	7.93	81536	10.87	43485	15.17
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-RB11-100611	SE6619-7	49990	8.47	153288	11.41	81221	15.71
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		127329		19.32		92483		25.90		69188		29.21	
UPPER LIMIT		254658		19.86		184966		26.44		138376		29.75	
LOWER LIMIT		63665		18.78		46242		25.36		34594		28.67	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-RB11-100611	SE6619-7		112441		19.32		85769		25.90		59271	29.21
02													
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG101501-BLANK	WG101501-1	43265	8.35	146610	11.29	74006	15.58
02	DSY-SD-W30-1224	SE6619-2	49708	8.35	184822	11.30	100323	15.58
03	DSY-SD-W30-2448	SE6619-3	46046	8.35	167055	11.29	97266	15.58
04	DSY-SD-W28-0012	SE6619-4	45956	8.35	154057	11.29	81247	15.58
05	DSY-SD-W28-2448	SE6619-6	44498	8.35	159963	11.29	82923	15.58
06	DSY-SD-C25-1224	SE6619-9	44796	8.35	154507	11.29	79294	15.58
07	DSY-SD-C25-2448	SE6619-10	44833	8.35	151747	11.29	79487	15.58
08	DSY-SD-DUP29-100711	SE6619-11	42036	8.35	148385	11.30	96520	15.59
09	DSY-SD-C21-0012	SE6619-12	41330	8.35	152205	11.29	79424	15.58
10		SSTD1.00G1120	51116	8.32	172627	11.27	87317	15.55
11	DSY-SD-C21-1224	SE6619-13	44361	8.32	156059	11.27	79726	15.56
12	DSY-SD-C21-2448	SE6619-14	51516	8.32	176610	11.27	99330	15.55
13	DSY-SD-18-0012	SE6619-15	47828	8.32	171340	11.27	87532	15.55
14	DSY-SD-18-1224	SE6619-16	48071	8.32	175009	11.27	88010	15.55
15	DSY-SD-18-2448	SE6619-17	53791	8.32	175867	11.27	98439	15.55
16	DSY-SD-C09-0012	SE6619-18	47737	8.32	172392	11.27	88189	15.55
17	DSY-SD-C09-1224	SE6619-19	47732	8.32	162585	11.27	82029	15.55
18	DSY-SD-C09-2448	SE6619-20	46602	8.32	167240	11.27	83240	15.55
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Katahdin Analytical Services A0000099

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		118014	19.19	75564	25.77	53419	29.09
UPPER LIMIT		236028	19.73	151128	26.31	106838	29.63
LOWER LIMIT		59007	18.65	37782	25.23	26710	28.55
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG101501-BLANK	WG101501-1	105573	19.20	70507	25.78	58872	29.08
02	DSY-SD-W30-1224	SE6619-2	156235	19.19	71246	25.77	45404	29.08
03	DSY-SD-W30-2448	SE6619-3	146623	19.19	64791	25.77	40197	29.06
04	DSY-SD-W28-0012	SE6619-4	131026	19.17	55441	25.77	32545	29.06
05	DSY-SD-W28-2448	SE6619-6	138955	19.19	71192	25.75	40676	29.06
06	DSY-SD-C25-1224	SE6619-9	119814	19.19	74051	25.78	46196	29.08
07	DSY-SD-C25-2448	SE6619-10	123277	19.19	67286	25.77	40517	29.06
08	DSY-SD-DUP29-100711	SE6619-11	129126	19.20	45076	25.79	33750	29.10
09	DSY-SD-C21-0012	SE6619-12	133072	19.19	53366	25.77	28403	29.06
10		SSTD1.00G1120	134675	19.15	68400	25.71	41070	29.01
11	DSY-SD-C21-1224	SE6619-13	131973	19.17	50541	25.75	41243	29.05
12	DSY-SD-C21-2448	SE6619-14	136541	19.15	67198	25.73	34966	29.01
13	DSY-SD-18-0012	SE6619-15	143211	19.15	63542	25.71	39165	29.02
14	DSY-SD-18-1224	SE6619-16	145314	19.14	61146	25.73	33613	29.01
15	DSY-SD-18-2448	SE6619-17	134214	19.14	74295	25.73	41618	29.03
16	DSY-SD-C09-0012	SE6619-18	141994	19.15	64345	25.71	37728	29.05
17	DSY-SD-C09-1224	SE6619-19	124331	19.15	64920	25.73	37279	29.03
18	DSY-SD-C09-2448	SE6619-20	127686	19.15	72842	25.73	39779	29.01
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 10/14/11 Time: 0848

Lab File ID: G3278 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.4503000	0.01	3.52	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.3098000	0.01	17.37	20.00	AVRG
Fluorene-D10	0.8720000	0.9283300	0.01	6.46	20.00	AVRG
Pyrene-D10	1.2360000	1.2405000	0.01	0.36	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD890 DFTPP Injection Date: 10/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0825

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	39.6
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	55.3
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	9.2 (73.8)2
442	40.0 - 100.0% of mass 198	64.2
443	17.0 - 23.0% of mass 442	12.5 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1017	G3344	10/17/11	0845
02	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
03	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 10/17/11 Time: 0845

Lab File ID: G3344 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2822000	0.01	-8.48	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1507000	0.01	3.11	20.00	AVRG
Fluorene-D10	0.8720000	0.8635900	0.01	-0.96	20.00	AVRG
Pyrene-D10	1.2360000	1.4072000	0.01	13.85	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD911 DFTPP Injection Date: 11/02/11

Instrument ID: GCMS-G DFTPP Injection Time: 0601

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.7 (1.6)1
69	Less than 100.0% of mass 198	42.5
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	13.3 (76.3)2
442	40.0 - 100.0% of mass 198	90.3
443	17.0 - 23.0% of mass 442	17.5 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1102	G3691	11/02/11	0619
02		SSTD8.00G1102	G3692	11/02/11	0703
03		SSTD5.00G1102	G3693	11/02/11	0746
04		SSTD2.00G1102	G3694	11/02/11	0831
05		SSTD0.50G1102	G3695	11/02/11	0915
06		SSTD0.20G1102	G3696	11/02/11	1000
07		SIM IND CHECK	G3697	11/02/11	1045
08					
09					
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14					
15					
16					
17					
18					
19					
20					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date(s): 11/02/11 11/02/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0619 1000

LAB FILE ID: RF0.2: G3696 RF0.5: G3695 RF1: G3691
RF2: G3694 RF5: G3693 RF8: G3692

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.620	1.399	1.287	1.098	1.207	1.178	AVRG	1.29808638	14.471	15.000
2-Methylnaphthalene-D10	1.192	1.243	1.194	1.027	1.139	1.106	AVRG	1.15011689	6.680	15.000
Fluorene-D10	1.002	0.968	1.136	0.953	1.100	1.068	AVRG	1.03794548	7.181	15.000
Pyrene-D10	1.245	1.208	1.434	1.143	1.321	1.283	AVRG	1.27238392	7.894	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 11/02/11 Time: 0619

Lab File ID: G3691 Init. Calib. Date(s): 11/02/11 11/02/11

Init. Calib. Times: 0619 1000

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2980000	1.2867000	0.01	-0.87	20.01	AVRG
2-Methylnaphthalene-D10	1.1500000	1.1942000	0.01	3.84	20.00	AVRG
Fluorene-D10	1.0380000	1.1363000	0.01	9.47	20.00	AVRG
Pyrene-D10	1.2720000	1.4345000	0.01	12.78	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD926 DFTPP Injection Date: 11/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0807

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.3
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Less than 100.0% of mass 198	38.4
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	4.1
441	0.0 - 100.0% of mass 443	13.6 (74.9)2
442	40.0 - 100.0% of mass 198	93.1
443	17.0 - 23.0% of mass 442	18.2 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1114	G3923	11/14/11	0827
02	WG98968-BLANK	WG98968-1	G3928	11/14/11	1210
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Katahdin Analytical Services A0000078

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 11/14/11 Time: 0827

Lab File ID: G3923 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Benzo(a)pyrene	1.3180000	1.2356000	0.01	-6.25	20.01	AVRG	
2-Methylnaphthalene-D10	1.0640000	1.1772000	0.01	10.64	20.00	AVRG	
Fluorene-D10	0.9240000	1.3802000	0.01	49.37	20.00	AVRG	<-
Pyrene-D10	1.0930000	1.2198000	0.01	11.60	20.00	AVRG	

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98968-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: G3928 Lab Sample ID: WG98968-1

Instrument ID: GCMS-G Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/14/11

Level:(low/med) LOW Time Analyzed: 1210

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
02	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
03	DSY-SD-RB11-100611	SE6619-7	G3947	11/15/11	1445
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
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23					
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25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98968-1
Client ID: Method Blank Sample
Project:
SDG: DSY-18

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 28-nov-2011 11:55

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		49.4	%					
Fluorene-D10		65.8	%					
Pyrene-D10		72.5	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD927 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-G DFTPP Injection Time: 0826

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (74.8)2
442	40.0 - 100.0% of mass 198	93.7
443	17.0 - 23.0% of mass 442	17.6 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1115	G3939	11/15/11	0845
02		SSTD8.00G1115	G3940	11/15/11	0929
03		SSTD5.00G1115	G3941	11/15/11	1014
04		SSTD2.00G1115	G3942	11/15/11	1100
05		SSTD0.50G1115	G3943	11/15/11	1145
06		SSTD0.20G1125	G3944	11/15/11	1230
07		SIM IND CHECK	G3945	11/15/11	1315
08	DSY-SD-RB11-100611	SE6619-7	G3947	11/15/11	1445
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Katahdin Analytical Services A0000079

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date(s): 11/15/11 11/15/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0845 1230

LAB FILE ID: RF0.2: G3944 RF0.5: G3943 RF1: G3939
RF2: G3942 RF5: G3941 RF8: G3940

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.508	1.247	1.215	1.172	1.292	1.338	AVRG	1.29521840	9.192	15.000
2-Methylnaphthalene-D10	0.923	1.101	1.030	0.963	1.043	1.054	AVRG	1.01913546	6.344	15.000
Fluorene-D10	0.738	0.967	0.928	0.888	0.967	0.967	AVRG	0.90897353	9.855	15.000
Pyrene-D10	0.961	1.035	0.948	0.886	1.008	1.065	AVRG	0.98380939	6.600	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 11/15/11 Time: 0845

Lab File ID: G3939 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.2148000	0.01	-6.19	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0298000	0.01	1.06	20.00	AVRG
Fluorene-D10	0.9090000	0.9275700	0.01	2.04	20.00	AVRG
Pyrene-D10	0.9840000	0.9475900	0.01	-3.70	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08	WG101501-BLANK	WG101501-1	G4025	11/19/11	1655
09	DSY-SD-W30-1224	SE6619-2	G4026	11/19/11	1739
10	DSY-SD-W30-2448	SE6619-3	G4027	11/19/11	1823
11	DSY-SD-W28-0012	SE6619-4	G4028	11/19/11	1907
12	DSY-SD-W28-2448	SE6619-6	G4029	11/19/11	1951
13	DSY-SD-C25-1224	SE6619-9	G4030	11/19/11	2035
14	DSY-SD-C25-2448	SE6619-10	G4031	11/19/11	2119
15	DSY-SD-DUP29-100711	SE6619-11	G4032	11/19/11	2203
16	DSY-SD-C21-0012	SE6619-12	G4033	11/19/11	2247
17					
18					
19					
20					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date(s): 11/19/11 11/19/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1147 1527

LAB FILE ID: RF0.2: G4023 RF0.5: G4022 RF1: G4018
RF2: G4021 RF5: G4020 RF8: G4019

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.226	1.334	1.377	1.285	1.319	1.367	AVRG	1.31790301	4.260	15.000
2-Methylnaphthalene-D10	0.894	1.105	1.150	1.062	1.072	1.103	AVRG	1.06431855	8.374	15.000
Fluorene-D10	0.704	0.898	0.928	0.975	0.995	1.041	AVRG	0.92347346	12.868	15.000
Pyrene-D10	0.963	1.125	1.161	1.028	1.131	1.150	AVRG	1.09297445	7.249	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 11/19/11 Time: 1147

Lab File ID: G4018 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.3770000	0.01	4.48	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.1500000	0.01	8.08	20.00	AVRG
Fluorene-D10	0.9240000	0.9281000	0.01	0.44	20.00	AVRG
Pyrene-D10	1.0930000	1.1610000	0.01	6.22	20.00	AVRG

FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101501-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: G4025 Lab Sample ID: WG101501-1

Instrument ID: GCMS-G Date Extracted: 10/18/11

Matrix: (soil/water) SOIL Date Analyzed: 11/19/11

Level:(low/med) LOW Time Analyzed: 1655

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-W30-1224	SE6619-2	G4026	11/19/11	1739
02	DSY-SD-W30-2448	SE6619-3	G4027	11/19/11	1823
03	DSY-SD-W28-0012	SE6619-4	G4028	11/19/11	1907
04	DSY-SD-W28-2448	SE6619-6	G4029	11/19/11	1951
05	DSY-SD-C25-1224	SE6619-9	G4030	11/19/11	2035
06	DSY-SD-C25-2448	SE6619-10	G4031	11/19/11	2119
07	DSY-SD-DUP29-100711	SE6619-11	G4032	11/19/11	2203
08	DSY-SD-C21-0012	SE6619-12	G4033	11/19/11	2247
09	DSY-SD-C21-1224	SE6619-13	G4041	11/20/11	1320
10	DSY-SD-C21-2448	SE6619-14	G4042	11/20/11	1405
11	DSY-SD-18-0012	SE6619-15	G4043	11/20/11	1449
12	DSY-SD-18-1224	SE6619-16	G4044	11/20/11	1533
13	DSY-SD-18-2448	SE6619-17	G4045	11/20/11	1617
14	DSY-SD-C09-0012	SE6619-18	G4046	11/20/11	1701
15	DSY-SD-C09-1224	SE6619-19	G4047	11/20/11	1745
16	DSY-SD-C09-2448	SE6619-20	G4048	11/20/11	1829
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

Katahdin Analytical Services A0000073

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101501-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 22-NOV-11
Extract Date: 18-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101501

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 28-nov-2011 11:55

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		50.4	%					
Fluorene-D10		62.6	%					
Pyrene-D10		65.6	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Lab File ID: GD933 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-G DFTPP Injection Time: 0838

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.9)1
69	Less than 100.0% of mass 198	38.7
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	4.1
441	0.0 - 100.0% of mass 443	12.8 (75.1)2
442	40.0 - 100.0% of mass 198	90.8
443	17.0 - 23.0% of mass 442	17.0 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1120	G4035	11/20/11	0856
02	DSY-SD-C21-1224	SE6619-13	G4041	11/20/11	1320
03	DSY-SD-C21-2448	SE6619-14	G4042	11/20/11	1405
04	DSY-SD-18-0012	SE6619-15	G4043	11/20/11	1449
05	DSY-SD-18-1224	SE6619-16	G4044	11/20/11	1533
06	DSY-SD-18-2448	SE6619-17	G4045	11/20/11	1617
07	DSY-SD-C09-0012	SE6619-18	G4046	11/20/11	1701
08	DSY-SD-C09-1224	SE6619-19	G4047	11/20/11	1745
09	DSY-SD-C09-2448	SE6619-20	G4048	11/20/11	1829
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Katahdin Analytical Services A0000081

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-20

Instrument ID: GCMS-G Calibration Date: 11/20/11 Time: 0856

Lab File ID: G4035 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.2172000	0.01	-7.65	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.0422000	0.01	-2.05	20.00	AVRG
Fluorene-D10	0.9240000	0.9143400	0.01	-1.04	20.00	AVRG
Pyrene-D10	1.0930000	1.1507000	0.01	5.28	20.00	AVRG

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362160	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-12

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	13.28	3.82
02	WG98971-BLANK	WG98971-1	10/25/11	1259	13.29	3.83
03	WG98971-LCS	WG98971-2	10/25/11	1325	13.30	3.83
04	WG98971-LCSD	WG98971-3	10/25/11	1351	13.29	3.83
05		AR1660 0.25	10/25/11	1509	13.29	3.82
06		AR1660 1.0	10/25/11	2137	13.29	3.81
07	DSY-SD-RB11-100611	SE6619-7	10/25/11	2345	13.29	3.81
08		AR1660 0.25	10/26/11	0218	13.29	3.81
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000206

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	17.03	4.31
02	WG98971-BLANK	WG98971-1	10/25/11	1259	17.04	4.32
03	WG98971-LCS	WG98971-2	10/25/11	1325	17.04	4.32
04	WG98971-LCSD	WG98971-3	10/25/11	1351	17.04	4.32
05		AR1660 0.25	10/25/11	1509	17.03	4.31
06		AR1660 1.0	10/25/11	2137	17.03	4.31
07	DSY-SD-RB11-100611	SE6619-7	10/25/11	2345	17.04	4.31
08		AR1660 0.25	10/26/11	0218	17.03	4.31
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1830000	1.0000000	37768000	0.001	18.30	20.00	2RDR
(2)	1.1354000	1.0000000	21264000	0.001	13.54	20.00	2RDR
(3)	1.0897000	1.0000000	53895000	0.001	8.97	20.00	2RDR
(4)	1.0366000	1.0000000	30635000	0.001	3.66	20.00	2RDR
(5)	0.9511900	1.0000000	25113000	0.001	-4.88	20.00	2RDR
Average %D: 7.9200							
Aroclor-1260	0.8772200	1.0000000	43989000	0.001	-12.28	20.00	2RDR
(2)	0.9016300	1.0000000	58365000	0.001	-9.84	20.00	2RDR
(3)	0.9620000	1.0000000	45532000	0.001	-3.80	20.00	2RDR
(4)	0.8836600	1.0000000	41669000	0.001	-11.63	20.00	2RDR
(5)	0.8547600	1.0000000	26401000	0.001	-14.52	20.00	2RDR
Average %D: -10.41							
Decachlorobiphenyl	1.75e-002	2.e-002	522250000	0.001	-12.50	20.00	2RDR
Tetrachloro-m-xylene	2.24e-002	2.e-002	1.3e+009	0.001	12.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1076000	1.0000000	3861800.0	0.001	10.76	20.00	2RDR
(2)	1.1020000	1.0000000	6314600.0	0.001	10.20	20.00	2RDR
(3)	1.0410000	1.0000000	10786000	0.001	4.10	20.00	2RDR
(4)	1.0197000	1.0000000	5610900.0	0.001	1.97	20.00	2RDR
(5)	1.0098000	1.0000000	4961400.0	0.001	0.98	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	1.0331000	1.0000000	7258000.0	0.001	3.31	20.00	2RDR
(2)	1.0394000	1.0000000	8839300.0	0.001	3.94	20.00	2RDR
(3)	1.0611000	1.0000000	6314800.0	0.001	6.11	20.00	2RDR
(4)	1.0261000	1.0000000	5859400.0	0.001	2.61	20.00	2RDR
(5)	1.0370000	1.0000000	5911400.0	0.001	3.70	20.00	2RDR
Average %D: 3.9400							
Decachlorobiphenyl	1.91e-002	2.e-002	91785000	0.001	-4.50	20.00	2RDR
Tetrachloro-m-xylene	2.17e-002	2.e-002	236440000	0.001	8.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2735100	0.2500000	34489000	0.001	9.40	20.00	2RDR
(2)	0.2769800	0.2500000	20424000	0.001	10.79	20.00	2RDR
(3)	0.2394900	0.2500000	41239000	0.001	-4.20	20.00	2RDR
(4)	0.2595400	0.2500000	28584000	0.001	3.82	20.00	2RDR
(5)	0.2543200	0.2500000	24379000	0.001	1.73	20.00	2RDR
Average %D: 4.3200							
Aroclor-1260	0.2717700	0.2500000	49175000	0.001	8.71	20.00	2RDR
(2)	0.2671800	0.2500000	59586000	0.001	6.87	20.00	2RDR
(3)	0.2742700	0.2500000	45441000	0.001	9.71	20.00	2RDR
(4)	0.2710200	0.2500000	46132000	0.001	8.41	20.00	2RDR
(5)	0.2979600	0.2500000	35279000	0.001	19.18	20.00	2RDR
Average %D: 10.560							
Decachlorobiphenyl	5.71e-003	5.e-003	640580000	0.001	14.20	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	1.13e+009	0.001	0.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2471500	0.2500000	3488200.0	0.001	-1.14	20.00	2RDR
(2)	0.2518000	0.2500000	5857500.0	0.001	0.72	20.00	2RDR
(3)	0.2368700	0.2500000	9583300.0	0.001	-5.25	20.00	2RDR
(4)	0.2359300	0.2500000	5042500.0	0.001	-5.63	20.00	2RDR
(5)	0.2542900	0.2500000	4956100.0	0.001	1.72	20.00	2RDR
Average %D: -1.920							
Aroclor-1260	0.2510600	0.2500000	6928600.0	0.001	0.42	20.00	2RDR
(2)	0.2392400	0.2500000	7753400.0	0.001	-4.30	20.00	2RDR
(3)	0.2469500	0.2500000	5555000.0	0.001	-1.22	20.00	2RDR
(4)	0.2535000	0.2500000	5604300.0	0.001	1.40	20.00	2RDR
(5)	0.2414000	0.2500000	5165200.0	0.001	-3.44	20.00	2RDR
Average %D: -1.440							
Decachlorobiphenyl	4.97e-003	5.e-003	93873000	0.001	-0.60	20.00	2RDR
Tetrachloro-m-xylene	4.64e-003	5.e-003	198710000	0.001	-7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1320000	1.0000000	36153000	0.001	13.20	20.00	2RDR
(2)	1.1266000	1.0000000	21101000	0.001	12.66	20.00	2RDR
(3)	1.0274000	1.0000000	50675000	0.001	2.74	20.00	2RDR
(4)	1.0853000	1.0000000	32111000	0.001	8.53	20.00	2RDR
(5)	1.0609000	1.0000000	28130000	0.001	6.09	20.00	2RDR
Average %D: 8.6400							
Aroclor-1260	1.1455000	1.0000000	58212000	0.001	14.55	20.00	2RDR
(2)	1.1247000	1.0000000	73535000	0.001	12.47	20.00	2RDR
(3)	1.1560000	1.0000000	55336000	0.001	15.60	20.00	2RDR
(4)	1.1523000	1.0000000	55069000	0.001	15.23	20.00	2RDR
(5)	1.1983000	1.0000000	37467000	0.001	19.83	20.00	2RDR
Average %D: 15.540							
Decachlorobiphenyl	2.37e-002	2.e-002	714850000	0.001	18.50	20.00	2RDR
Tetrachloro-m-xylene	2.05e-002	2.e-002	1.19e+009	0.001	2.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9821600	1.0000000	3427800.0	0.001	-1.78	20.00	2RDR
(2)	1.0035000	1.0000000	5756200.0	0.001	0.35	20.00	2RDR
(3)	0.9733700	1.0000000	10084000	0.001	-2.66	20.00	2RDR
(4)	0.9545600	1.0000000	5249500.0	0.001	-4.54	20.00	2RDR
(5)	1.0030000	1.0000000	4928000.0	0.001	0.30	20.00	2RDR
Average %D: -1.670							
Aroclor-1260	1.0067000	1.0000000	7071600.0	0.001	0.67	20.00	2RDR
(2)	0.9734300	1.0000000	8269900.0	0.001	-2.66	20.00	2RDR
(3)	0.9749700	1.0000000	5792600.0	0.001	-2.50	20.00	2RDR
(4)	1.0067000	1.0000000	5747400.0	0.001	0.67	20.00	2RDR
(5)	0.9626400	1.0000000	5477400.0	0.001	-3.74	20.00	2RDR
Average %D: -1.510							
Decachlorobiphenyl	1.99e-002	2.e-002	95610000	0.001	-0.50	20.00	2RDR
Tetrachloro-m-xylene	1.9e-002	2.e-002	206810000	0.001	-5.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2803200	0.2500000	35374000	0.001	12.13	20.00	2RDR
(2)	0.2813800	0.2500000	20760000	0.001	12.55	20.00	2RDR
(3)	0.2535500	0.2500000	44095000	0.001	1.42	20.00	2RDR
(4)	0.2553800	0.2500000	28081000	0.001	2.15	20.00	2RDR
(5)	0.2580300	0.2500000	24782000	0.001	3.21	20.00	2RDR
Average %D: 6.2800							
Aroclor-1260	0.2715700	0.2500000	49133000	0.001	8.63	20.00	2RDR
(2)	0.2705600	0.2500000	60518000	0.001	8.22	20.00	2RDR
(3)	0.2747000	0.2500000	45525000	0.001	9.88	20.00	2RDR
(4)	0.2694600	0.2500000	45828000	0.001	7.78	20.00	2RDR
(5)	0.2759900	0.2500000	32539000	0.001	10.40	20.00	2RDR
Average %D: 9.0000							
Decachlorobiphenyl	5.56e-003	5.e-003	622780000	0.001	11.20	20.00	2RDR
Tetrachloro-m-xylene	5.46e-003	5.e-003	1.22e+009	0.001	9.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2638600	0.2500000	3721500.0	0.001	5.54	20.00	2RDR
(2)	0.2605800	0.2500000	6059600.0	0.001	4.23	20.00	2RDR
(3)	0.2489800	0.2500000	10092000	0.001	-0.41	20.00	2RDR
(4)	0.2452300	0.2500000	5249100.0	0.001	-1.91	20.00	2RDR
(5)	0.2581700	0.2500000	5032500.0	0.001	3.27	20.00	2RDR
Average %D: 2.1600							
Aroclor-1260	0.2589400	0.2500000	7151500.0	0.001	3.58	20.00	2RDR
(2)	0.2541200	0.2500000	8266700.0	0.001	1.65	20.00	2RDR
(3)	0.2570300	0.2500000	5798200.0	0.001	2.81	20.00	2RDR
(4)	0.2586700	0.2500000	5723600.0	0.001	3.47	20.00	2RDR
(5)	0.2563700	0.2500000	5511200.0	0.001	2.55	20.00	2RDR
Average %D: 2.8000							
Decachlorobiphenyl	5.15e-003	5.e-003	97352000	0.001	3.00	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	216340000	0.001	0.80	20.00	2RDR

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/06/11	1159	13.22	3.80
02		AR1254 1.0	11/06/11	1317		
03	WG99673-BLANK	WG99673-1	11/06/11	1343	13.23	3.81
04	WG99673-LCS	WG99673-2	11/06/11	1409	13.23	3.81
05	WG99673-LCSD	WG99673-3	11/06/11	1435	13.23	3.81
06	DSY-SD-W30-0012	SE6619-1	11/06/11	1711	13.22	3.80
07	DSY-SD-W30-1224	SE6619-2	11/06/11	1737	13.22	3.81
08		AR1660 0.25	11/06/11	1829	13.23	3.81
09		AR1254 1.0	11/06/11	1947		
10	DSY-SD-W30-2448	SE6619-3	11/06/11	2013	13.22	3.81
11	DSY-SD-W28-2448	SE6619-6	11/06/11	2131	13.22	3.80
12	DSY-SD-C25-0012	SE6619-8	11/06/11	2157	13.22	3.81
13	DSY-SD-C25-1224	SE6619-9	11/06/11	2223	13.23	3.81
14	DSY-SD-C25-2448	SE6619-10	11/06/11	2249	13.23	3.81
15	DSY-SD-DUP29-100711	SE6619-11	11/06/11	2315	13.22	3.80
16	DSY-SD-C21-1224	SE6619-13	11/07/11	0007	13.22	3.80
17		AR1660 1.0	11/07/11	0059	13.22	3.80
18		AR1254 1.0	11/07/11	0217		
19	DSY-SD-C21-2448	SE6619-14	11/07/11	0243	13.23	3.80
20	DSY-SD-18-0012	SE6619-15	11/07/11	0309	13.23	3.81

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000207

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/06/11	1159	16.94	4.29
02		AR1254 1.0	11/06/11	1317		
03	WG99673-BLANK	WG99673-1	11/06/11	1343	16.94	4.29
04	WG99673-LCS	WG99673-2	11/06/11	1409	16.95	4.30
05	WG99673-LCSD	WG99673-3	11/06/11	1435	16.95	4.30
06	DSY-SD-W30-0012	SE6619-1	11/06/11	1711	16.94	4.29
07	DSY-SD-W30-1224	SE6619-2	11/06/11	1737	16.94	4.29
08		AR1660 0.25	11/06/11	1829	16.95	4.29
09		AR1254 1.0	11/06/11	1947		
10	DSY-SD-W30-2448	SE6619-3	11/06/11	2013	16.94	4.30
11	DSY-SD-W28-2448	SE6619-6	11/06/11	2131	16.94	4.29
12	DSY-SD-C25-0012	SE6619-8	11/06/11	2157	16.94	4.29
13	DSY-SD-C25-1224	SE6619-9	11/06/11	2223	16.94	4.29
14	DSY-SD-C25-2448	SE6619-10	11/06/11	2249	16.94	4.29
15	DSY-SD-DUP29-100711	SE6619-11	11/06/11	2315	16.94	4.29
16	DSY-SD-C21-1224	SE6619-13	11/07/11	0007	16.94	4.29
17		AR1660 1.0	11/07/11	0059	16.94	4.29
18		AR1254 1.0	11/07/11	0217		
19	DSY-SD-C21-2448	SE6619-14	11/07/11	0243	16.95	4.29
20	DSY-SD-18-0012	SE6619-15	11/07/11	0309	16.94	4.29

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0354000	1.0000000	33092000	0.001	3.54	20.00	2RDR	
(2)	1.0432000	1.0000000	19550000	0.001	4.32	20.00	2RDR	
(3)	0.9290900	1.0000000	45595000	0.001	-7.09	20.00	2RDR	
(4)	0.9547000	1.0000000	28156000	0.001	-4.53	20.00	2RDR	
(5)	0.8877900	1.0000000	23372000	0.001	-11.22	20.00	2RDR	
Average %D: -2.990								
Aroclor-1260	0.8184000	1.0000000	40886000	0.001	-18.16	20.00	2RDR	
(2)	0.8199300	1.0000000	52794000	0.001	-18.01	20.00	2RDR	
(3)	0.8748700	1.0000000	41152000	0.001	-12.51	20.00	2RDR	
(4)	0.8318700	1.0000000	39098000	0.001	-16.81	20.00	2RDR	
(5)	0.9753000	1.0000000	30264000	0.001	-2.47	20.00	2RDR	
Average %D: -13.59								
Decachlorobiphenyl	1.57e-002	2.e-002	467440000	0.001	-21.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.19e-002	2.e-002	1.27e+009	0.001	9.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9993200	1.0000000	3487300.0	0.001	-0.07	20.00	2RDR
(2)	1.0016000	1.0000000	5746000.0	0.001	0.16	20.00	2RDR
(3)	0.9110200	1.0000000	9436800.0	0.001	-8.90	20.00	2RDR
(4)	0.8513900	1.0000000	4677000.0	0.001	-14.86	20.00	2RDR
(5)	0.8709500	1.0000000	4277300.0	0.001	-12.90	20.00	2RDR
Average %D: -7.310							
Aroclor-1260	0.9267600	1.0000000	6507000.0	0.001	-7.32	20.00	2RDR
(2)	0.8864300	1.0000000	7519200.0	0.001	-11.36	20.00	2RDR
(3)	0.9336300	1.0000000	5542000.0	0.001	-6.64	20.00	2RDR
(4)	0.9238300	1.0000000	5268800.0	0.001	-7.62	20.00	2RDR
(5)	0.8850600	1.0000000	5025400.0	0.001	-11.49	20.00	2RDR
Average %D: -8.890							
Decachlorobiphenyl	1.63e-002	2.e-002	78335000	0.001	-18.50	20.00	2RDR
Tetrachloro-m-xylene	2.09e-002	2.e-002	226620000	0.001	4.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1317

Lab File ID: 7EK191 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9001100	1.0000000	36679000	0.001	-9.99	20.00	2RDR
(2)	0.9100700	1.0000000	45331000	0.001	-8.99	20.00	2RDR
(3)	0.9014900	1.0000000	29275000	0.001	-9.85	20.00	2RDR
(4)	0.9137400	1.0000000	32536000	0.001	-8.63	20.00	2RDR
(5)	0.8991100	1.0000000	32605000	0.001	-10.09	20.00	2RDR
Average %D: -9.510							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1317

Lab File ID: 7EK191 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8877100	1.0000000	3594500.0	0.001	-11.23	20.00	2RDR
(2)	0.9777000	1.0000000	6453500.0	0.001	-2.23	20.00	2RDR
(3)	0.8614900	1.0000000	6443400.0	0.001	-13.85	20.00	2RDR
(4)	0.8326400	1.0000000	7823200.0	0.001	-16.74	20.00	2RDR
(5)	0.9092000	1.0000000	5106900.0	0.001	-9.08	20.00	2RDR
Average %D: -10.63							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2553400	0.2500000	32128000	0.001	2.14	20.00	2RDR
(2)	0.2572600	0.2500000	18918000	0.001	2.90	20.00	2RDR
(3)	0.2035000	0.2500000	33935000	0.001	-18.60	20.00	2RDR
(4)	0.2250200	0.2500000	24418000	0.001	-9.99	20.00	2RDR
(5)	0.2081800	0.2500000	19378000	0.001	-16.73	20.00	2RDR
Average %D: -8.040							
Aroclor-1260	0.2191100	0.2500000	38250000	0.001	-12.36	20.00	2RDR
(2)	0.2256200	0.2500000	48127000	0.001	-9.75	20.00	2RDR
(3)	0.2402400	0.2500000	38767000	0.001	-3.90	20.00	2RDR
(4)	0.2365400	0.2500000	39416000	0.001	-5.38	20.00	2RDR
(5)	0.2912900	0.2500000	34447000	0.001	16.52	20.00	2RDR
Average %D: -2.960							
Decachlorobiphenyl	4.8e-003	5.e-003	530280000	0.001	-4.00	20.00	2RDR
Tetrachloro-m-xylene	5.75e-003	5.e-003	1.29e+009	0.001	15.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2518400	0.2500000	3553600.0	0.001	0.74	20.00	2RDR
(2)	0.2567200	0.2500000	5970600.0	0.001	2.69	20.00	2RDR
(3)	0.2144800	0.2500000	8643400.0	0.001	-14.21	20.00	2RDR
(4)	0.2089300	0.2500000	4442800.0	0.001	-16.43	20.00	2RDR
(5)	0.2170900	0.2500000	4223000.0	0.001	-13.16	20.00	2RDR
Average %D: -8.080							
Aroclor-1260	0.2362700	0.2500000	6510400.0	0.001	-5.49	20.00	2RDR
(2)	0.2226800	0.2500000	7182700.0	0.001	-10.93	20.00	2RDR
(3)	0.2410600	0.2500000	5412800.0	0.001	-3.58	20.00	2RDR
(4)	0.2470100	0.2500000	5454600.0	0.001	-1.20	20.00	2RDR
(5)	0.2304000	0.2500000	4910800.0	0.001	-7.84	20.00	2RDR
Average %D: -5.800							
Decachlorobiphenyl	4.59e-003	5.e-003	86522000	0.001	-8.20	20.00	2RDR
Tetrachloro-m-xylene	5.35e-003	5.e-003	229490000	0.001	7.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1947

Lab File ID: 7EK206 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8858000	1.0000000	36067000	0.001	-11.42	20.00	2RDR
(2)	0.9009500	1.0000000	44846000	0.001	-9.90	20.00	2RDR
(3)	0.8998800	1.0000000	29219000	0.001	-10.01	20.00	2RDR
(4)	0.9556900	1.0000000	34107000	0.001	-4.43	20.00	2RDR
(5)	0.9341500	1.0000000	33991000	0.001	-6.58	20.00	2RDR
Average %D: -8.470							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1947

Lab File ID: 7EK206 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9044200	1.0000000	3662300.0	0.001	-9.56	20.00	2RDR
(2)	1.0121000	1.0000000	6681200.0	0.001	1.21	20.00	2RDR
(3)	0.8640800	1.0000000	6463000.0	0.001	-13.59	20.00	2RDR
(4)	0.8385100	1.0000000	7879800.0	0.001	-16.15	20.00	2RDR
(5)	0.8856200	1.0000000	4969700.0	0.001	-11.44	20.00	2RDR
Average %D: -9.900							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1834000	1.0000000	37779000	0.001	18.34	20.00	2RDR	
(2)	1.2166000	1.0000000	22771000	0.001	21.66	20.00	2RDR	<-
(3)	0.9476600	1.0000000	46554000	0.001	-5.23	20.00	2RDR	
(4)	1.0305000	1.0000000	30451000	0.001	3.05	20.00	2RDR	
(5)	0.9079000	1.0000000	23924000	0.001	-9.21	20.00	2RDR	
Average %D: 5.7200								
Aroclor-1260	0.9049300	1.0000000	45453000	0.001	-9.51	20.00	2RDR	
(2)	0.9056200	1.0000000	58637000	0.001	-9.44	20.00	2RDR	
(3)	0.9914700	1.0000000	47016000	0.001	-0.85	20.00	2RDR	
(4)	0.9776300	1.0000000	46343000	0.001	-2.24	20.00	2RDR	
(5)	1.2360000	1.0000000	38692000	0.001	23.60	20.00	2RDR	<-
Average %D: 0.3100								
Decachlorobiphenyl	1.87e-002	2.e-002	559820000	0.001	-6.50	20.00	2RDR	
Tetrachloro-m-xylene	2.46e-002	2.e-002	1.44e+009	0.001	23.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1025000	1.0000000	3844400.0	0.001	10.25	20.00	2RDR
(2)	1.1388000	1.0000000	6522900.0	0.001	13.88	20.00	2RDR
(3)	1.0060000	1.0000000	10424000	0.001	0.60	20.00	2RDR
(4)	0.9407000	1.0000000	5172600.0	0.001	-5.93	20.00	2RDR
(5)	0.9737300	1.0000000	4783800.0	0.001	-2.63	20.00	2RDR
Average %D: 3.2400							
Aroclor-1260	1.0351000	1.0000000	7272100.0	0.001	3.51	20.00	2RDR
(2)	1.0021000	1.0000000	8517000.0	0.001	0.21	20.00	2RDR
(3)	1.0417000	1.0000000	6197000.0	0.001	4.17	20.00	2RDR
(4)	1.0757000	1.0000000	6145900.0	0.001	7.57	20.00	2RDR
(5)	1.0088000	1.0000000	5746400.0	0.001	0.88	20.00	2RDR
Average %D: 3.2700							
Decachlorobiphenyl	2.03e-002	2.e-002	97807000	0.001	1.50	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	259060000	0.001	19.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9845000	1.0000000	40292000	0.001	-1.55	20.00	2RDR
(2)	0.9932300	1.0000000	49756000	0.001	-0.68	20.00	2RDR
(3)	0.9689900	1.0000000	31632000	0.001	-3.10	20.00	2RDR
(4)	1.0158000	1.0000000	36363000	0.001	1.58	20.00	2RDR
(5)	0.9865000	1.0000000	36066000	0.001	-1.35	20.00	2RDR
Average %D: -1.020							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0176000	1.0000000	4121200.0	0.001	1.76	20.00	2RDR
(2)	1.1115000	1.0000000	7338000.0	0.001	11.15	20.00	2RDR
(3)	0.9565400	1.0000000	7162800.0	0.001	-4.35	20.00	2RDR
(4)	0.9304800	1.0000000	8767000.0	0.001	-6.95	20.00	2RDR
(5)	0.9868100	1.0000000	5558700.0	0.001	-1.32	20.00	2RDR
Average %D: 0.0600							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-18-1224	SE6619-16	11/07/11	0335	13.22	3.80
02	DSY-SD-18-2448	SE6619-17	11/07/11	0401	13.23	3.81
03	DSY-SD-C09-0012	SE6619-18	11/07/11	0427	13.22	3.81
04	DSY-SD-C09-1224	SE6619-19	11/07/11	0453	13.23	3.81
05	DSY-SD-C09-2448	SE6619-20	11/07/11	0518	13.23	3.81
06		AR1660 0.25	11/07/11	0729	13.23	3.81
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000208

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-18-1224	SE6619-16	11/07/11	0335	16.94	4.29
02	DSY-SD-18-2448	SE6619-17	11/07/11	0401	16.95	4.29
03	DSY-SD-C09-0012	SE6619-18	11/07/11	0427	16.94	4.29
04	DSY-SD-C09-1224	SE6619-19	11/07/11	0453	16.94	4.29
05	DSY-SD-C09-2448	SE6619-20	11/07/11	0518	16.95	4.30
06		AR1660 0.25	11/07/11	0729	16.94	4.29
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000213

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2694100	0.2500000	33957000	0.001	7.76	20.00	2RDR	
(2)	0.2791000	0.2500000	20586000	0.001	11.64	20.00	2RDR	
(3)	0.2135800	0.2500000	35982000	0.001	-14.57	20.00	2RDR	
(4)	0.2340200	0.2500000	25504000	0.001	-6.39	20.00	2RDR	
(5)	0.2020200	0.2500000	18710000	0.001	-19.19	20.00	2RDR	
Average %D: -4.160								
Aroclor-1260	0.2341000	0.2500000	41358000	0.001	-6.36	20.00	2RDR	
(2)	0.2413600	0.2500000	52467000	0.001	-3.46	20.00	2RDR	
(3)	0.2603000	0.2500000	42700000	0.001	4.12	20.00	2RDR	
(4)	0.2562700	0.2500000	43256000	0.001	2.51	20.00	2RDR	
(5)	0.3166500	0.2500000	37613000	0.001	26.66	20.00	2RDR	<-
Average %D: 4.6800								
Decachlorobiphenyl	4.8e-003	5.e-003	529890000	0.001	-4.00	20.00	2RDR	
Tetrachloro-m-xylene	5.85e-003	5.e-003	1.31e+009	0.001	17.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2544100	0.2500000	3589600.0	0.001	1.76	20.00	2RDR
(2)	0.2760800	0.2500000	6415800.0	0.001	10.43	20.00	2RDR
(3)	0.2297800	0.2500000	9286000.0	0.001	-8.09	20.00	2RDR
(4)	0.2173500	0.2500000	4629700.0	0.001	-13.06	20.00	2RDR
(5)	0.2262100	0.2500000	4402700.0	0.001	-9.52	20.00	2RDR
Average %D: -3.680							
Aroclor-1260	0.2510200	0.2500000	6927700.0	0.001	0.41	20.00	2RDR
(2)	0.2424300	0.2500000	7863300.0	0.001	-3.03	20.00	2RDR
(3)	0.2599300	0.2500000	5868300.0	0.001	3.97	20.00	2RDR
(4)	0.2698500	0.2500000	5981500.0	0.001	7.94	20.00	2RDR
(5)	0.2513600	0.2500000	5395400.0	0.001	0.54	20.00	2RDR
Average %D: 1.9600							
Decachlorobiphenyl	5.18e-003	5.e-003	97920000	0.001	3.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240360000	0.001	11.80	20.00	2RDR

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.17 TCX: 3.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	13.15	3.75
02	WG100719-BLANK	WG100719-1	11/11/11	1823	13.15	3.76
03	WG100719-LCS	WG100719-2	11/11/11	1848	13.15	3.76
04		AR1660 0.25	11/11/11	2031	13.17	3.77
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-W28-0012	SE6619-4	11/11/11	2304	13.13	3.76
07	DSY-SD-W28-1224	SE6619-5	11/11/11	2330	13.13	3.76
08		AR1660 1.0	11/12/11	0254	13.13	3.75
09		AR1254 1.0	11/12/11	0410		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.83 TCX: 4.24

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	16.85	4.24
02	WG100719-BLANK	WG100719-1	11/11/11	1823	16.86	4.25
03	WG100719-LCS	WG100719-2	11/11/11	1848	16.85	4.25
04		AR1660 0.25	11/11/11	2031	16.86	4.25
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-W28-0012	SE6619-4	11/11/11	2304	16.84	4.24
07	DSY-SD-W28-1224	SE6619-5	11/11/11	2330	16.84	4.25
08		AR1660 1.0	11/12/11	0254	16.84	4.24
09		AR1254 1.0	11/12/11	0410		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000214

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.5517000	1.0000000	49360000	0.001	55.17	20.00	2RDR	<-
(2)	1.5851000	1.0000000	29555000	0.001	58.51	20.00	2RDR	<-
(3)	1.4896000	1.0000000	74704000	0.001	48.96	20.00	2RDR	<-
(4)	1.5058000	1.0000000	44865000	0.001	50.58	20.00	2RDR	<-
(5)	1.3620000	1.0000000	36444000	0.001	36.20	20.00	2RDR	<-
Average %D: 49.880								
Aroclor-1260	1.2826000	1.0000000	65524000	0.001	28.26	20.00	2RDR	<-
(2)	1.2802000	1.0000000	84072000	0.001	28.02	20.00	2RDR	<-
(3)	1.3299000	1.0000000	64192000	0.001	32.99	20.00	2RDR	<-
(4)	1.3209000	1.0000000	63539000	0.001	32.09	20.00	2RDR	<-
(5)	1.4493000	1.0000000	45662000	0.001	44.93	20.00	2RDR	<-
Average %D: 33.260								
Decachlorobiphenyl	2.58e-002	2.e-002	780660000	0.001	29.00	20.00	2RDR	<-
Tetrachloro-m-xylene	3.11e-002	2.e-002	1.83e+009	0.001	55.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1706000	1.0000000	4079800.0	0.001	17.06	20.00	2RDR
(2)	1.1369000	1.0000000	6512100.0	0.001	13.69	20.00	2RDR
(3)	1.1138000	1.0000000	11541000	0.001	11.38	20.00	2RDR
(4)	1.0938000	1.0000000	6022100.0	0.001	9.38	20.00	2RDR
(5)	1.1141000	1.0000000	5475500.0	0.001	11.41	20.00	2RDR
Average %D: 12.590							
Aroclor-1260	1.0916000	1.0000000	7671100.0	0.001	9.16	20.00	2RDR
(2)	1.1020000	1.0000000	9379200.0	0.001	10.20	20.00	2RDR
(3)	1.0642000	1.0000000	6333800.0	0.001	6.42	20.00	2RDR
(4)	1.0908000	1.0000000	6232900.0	0.001	9.08	20.00	2RDR
(5)	0.9916600	1.0000000	5646700.0	0.001	-0.83	20.00	2RDR
Average %D: 6.8100							
Decachlorobiphenyl	2.12e-002	2.e-002	101710000	0.001	6.00	20.00	2RDR
Tetrachloro-m-xylene	2.35e-002	2.e-002	256000000	0.001	17.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3139400	0.2500000	39740000	0.001	25.58	20.00	2RDR	<-
(2)	0.3551000	0.2500000	26382000	0.001	42.04	20.00	2RDR	<-
(3)	0.2376400	0.2500000	40864000	0.001	-4.94	20.00	2RDR	
(4)	0.2696500	0.2500000	29804000	0.001	7.86	20.00	2RDR	
(5)	0.2838600	0.2500000	27583000	0.001	13.54	20.00	2RDR	
Average %D: 16.800								
Aroclor-1260	0.2822600	0.2500000	51352000	0.001	12.90	20.00	2RDR	
(2)	0.2914600	0.2500000	66274000	0.001	16.58	20.00	2RDR	
(3)	0.3270600	0.2500000	55807000	0.001	30.82	20.00	2RDR	<-
(4)	0.2236100	0.2500000	36899000	0.001	-10.56	20.00	2RDR	
(5)	0.3294600	0.2500000	39213000	0.001	31.78	20.00	2RDR	<-
Average %D: 16.320								
Decachlorobiphenyl	6.48e-003	5.e-003	734810000	0.001	29.60	20.00	2RDR	<-
Tetrachloro-m-xylene	7.02e-003	5.e-003	1.59e+009	0.001	40.40	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2707800	0.2500000	3818200.0	0.001	8.31	20.00	2RDR	
(2)	0.2801300	0.2500000	6509000.0	0.001	12.05	20.00	2RDR	
(3)	0.2409300	0.2500000	9753800.0	0.001	-3.63	20.00	2RDR	
(4)	0.2331300	0.2500000	4980200.0	0.001	-6.75	20.00	2RDR	
(5)	0.2566300	0.2500000	5002200.0	0.001	2.65	20.00	2RDR	
Average %D: 2.5200								
Aroclor-1260	0.2464700	0.2500000	6799000.0	0.001	-1.41	20.00	2RDR	
(2)	0.2129700	0.2500000	6847800.0	0.001	-14.81	20.00	2RDR	
(3)	0.2242100	0.2500000	5006000.0	0.001	-10.32	20.00	2RDR	
(4)	0.2426500	0.2500000	5354100.0	0.001	-2.94	20.00	2RDR	
(5)	0.1820400	0.2500000	3793600.0	0.001	-27.18	20.00	2RDR	<--
Average %D: -11.32								
Decachlorobiphenyl	5.14e-003	5.e-003	97202000	0.001	2.80	20.00	2RDR	
Tetrachloro-m-xylene	5.93e-003	5.e-003	255140000	0.001	18.60	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1713000	1.0000000	48308000	0.001	17.13	20.00	2RDR	
(2)	1.1134000	1.0000000	56175000	0.001	11.34	20.00	2RDR	
(3)	1.1024000	1.0000000	36306000	0.001	10.24	20.00	2RDR	
(4)	1.2162000	1.0000000	43898000	0.001	21.62	20.00	2RDR	<-
(5)	0.9822200	1.0000000	35896000	0.001	-1.78	20.00	2RDR	
Average %D: 11.710								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.0127000	1.0000000	4101100.0	0.001	1.27	20.00	2RDR	
(2)	1.1213000	1.0000000	7402900.0	0.001	12.13	20.00	2RDR	
(3)	0.9739600	1.0000000	7294500.0	0.001	-2.60	20.00	2RDR	
(4)	0.8702900	1.0000000	8186400.0	0.001	-12.97	20.00	2RDR	
(5)	0.7957600	1.0000000	4446700.0	0.001	-20.42	20.00	2RDR	<-
Average %D: -4.520								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.4120000	1.0000000	44980000	0.001	41.20	20.00	2RDR	<-
(2)	1.3645000	1.0000000	25502000	0.001	36.45	20.00	2RDR	<-
(3)	1.2210000	1.0000000	60704000	0.001	22.10	20.00	2RDR	<-
(4)	1.2806000	1.0000000	38032000	0.001	28.06	20.00	2RDR	<-
(5)	1.1449000	1.0000000	30446000	0.001	14.49	20.00	2RDR	
Average %D: 28.460								
Aroclor-1260	1.0309000	1.0000000	52124000	0.001	3.09	20.00	2RDR	
(2)	1.0313000	1.0000000	67188000	0.001	3.13	20.00	2RDR	
(3)	1.0861000	1.0000000	51795000	0.001	8.61	20.00	2RDR	
(4)	1.1032000	1.0000000	52613000	0.001	10.32	20.00	2RDR	
(5)	1.1370000	1.0000000	35479000	0.001	13.70	20.00	2RDR	
Average %D: 7.7700								
Decachlorobiphenyl	2.31e-002	2.e-002	696700000	0.001	15.50	20.00	2RDR	
Tetrachloro-m-xylene	3.15e-002	2.e-002	1.85e+009	0.001	57.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1701000	1.0000000	4077900.0	0.001	17.01	20.00	2RDR	
(2)	1.0974000	1.0000000	6288500.0	0.001	9.74	20.00	2RDR	
(3)	1.0342000	1.0000000	10716000	0.001	3.42	20.00	2RDR	
(4)	1.0089000	1.0000000	5550800.0	0.001	0.89	20.00	2RDR	
(5)	1.0223000	1.0000000	5023300.0	0.001	2.23	20.00	2RDR	
Average %D: 6.6600								
Aroclor-1260	1.0078000	1.0000000	7079200.0	0.001	0.78	20.00	2RDR	
(2)	1.0114000	1.0000000	8597600.0	0.001	1.14	20.00	2RDR	
(3)	1.1320000	1.0000000	6744800.0	0.001	13.20	20.00	2RDR	
(4)	1.3145000	1.0000000	7524800.0	0.001	31.45	20.00	2RDR	<-
(5)	0.9417800	1.0000000	5355900.0	0.001	-5.82	20.00	2RDR	
Average %D: 8.1500								
Decachlorobiphenyl	1.94e-002	2.e-002	93143000	0.001	-3.00	20.00	2RDR	
Tetrachloro-m-xylene	2.5e-002	2.e-002	271830000	0.001	25.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.3426000	1.0000000	55686000	0.001	34.26	20.00	2RDR	<-
(2)	1.2788000	1.0000000	65043000	0.001	27.88	20.00	2RDR	<-
(3)	1.2672000	1.0000000	42109000	0.001	26.72	20.00	2RDR	<-
(4)	1.2697000	1.0000000	45915000	0.001	26.97	20.00	2RDR	<-
(5)	1.3228000	1.0000000	49508000	0.001	32.28	20.00	2RDR	<-
Average %D: 29.620								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1228000	1.0000000	4547300.0	0.001	12.28	20.00	2RDR
(2)	1.0991000	1.0000000	7256000.0	0.001	9.91	20.00	2RDR
(3)	1.0687000	1.0000000	8011100.0	0.001	6.87	20.00	2RDR
(4)	1.0489000	1.0000000	9908600.0	0.001	4.89	20.00	2RDR
(5)	1.1383000	1.0000000	6440700.0	0.001	13.83	20.00	2RDR
Average %D: 9.5600							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.08 TCX: 3.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/18/11	1516	13.10	3.73
02		AR1660 0.05	11/18/11	1542	13.09	3.73
03		AR1660 0.1	11/18/11	1608	13.10	3.73
04		AR1660 0.25	11/18/11	1633	13.10	3.74
05		AR1660 2.5	11/18/11	1659	13.10	3.74
06		AR1660 10	11/18/11	1725	13.09	3.74
07		AR1016 1.0	11/18/11	1751		
08		AR1260 1.0	11/18/11	1817		
09		AR1242 1.0	11/18/11	1843		
10		AR1248 1.0	11/18/11	2119		
11		AR1254 1.0	11/18/11	2354		
12		AR1254 0.05	11/19/11	0020		
13		AR1254 0.1	11/19/11	0046		
14		AR1254 0.25	11/19/11	0111		
15		AR1254 2.5	11/19/11	0137		
16		AR1254 10	11/19/11	0203		
17		AR1221 1.0	11/19/11	0229		
18		AR1232 1.0	11/19/11	0503		
19		AR1660 1.0	11/22/11	0039	13.07	3.73
20	WG101418-BLANK	WG101418-1	11/22/11	1309	13.07	3.73

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000215

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.71 TCX: 4.20

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/18/11	1516	16.72	4.19
02		AR1660 0.05	11/18/11	1542	16.73	4.19
03		AR1660 0.1	11/18/11	1608	16.73	4.19
04		AR1660 0.25	11/18/11	1633	16.74	4.20
05		AR1660 2.5	11/18/11	1659	16.73	4.20
06		AR1660 10	11/18/11	1725	16.73	4.20
07		AR1016 1.0	11/18/11	1751		
08		AR1260 1.0	11/18/11	1817		
09		AR1242 1.0	11/18/11	1843		
10		AR1248 1.0	11/18/11	2119		
11		AR1254 1.0	11/18/11	2354		
12		AR1254 0.05	11/19/11	0020		
13		AR1254 0.1	11/19/11	0046		
14		AR1254 0.25	11/19/11	0111		
15		AR1254 2.5	11/19/11	0137		
16		AR1254 10	11/19/11	0203		
17		AR1221 1.0	11/19/11	0229		
18		AR1232 1.0	11/19/11	0503		
19		AR1660 1.0	11/22/11	0039	16.70	4.19
20	WG101418-BLANK	WG101418-1	11/22/11	1309	16.70	4.19

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000217

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date(s): 11/18/11 11/19/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1516 1225

LAB FILE ID: RF0.05: 7EK702 RF0.1: 7EK703 RF0.25: 7EK704
RF1: 7EK701 RF2.5: 7EK705 RF10: 7EK706

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	COEFFICENTS CURVE	A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1521800	3169000	8314500	3e+007	9e+007	4e+008	2ORDR	5.706e-002	2.72e-008	-4.79e-018	0.99899	0.99000
(2)	865650	1744900	4914200	1e+007	6e+007	2e+008	2ORDR	6.835e-002	4.629e-008	-1.71e-017	0.99862	0.99000
(3)	1751400	3822300	1e+007	4e+007	2e+008	6e+008	2ORDR	7.428e-002	1.668e-008	-1.88e-018	0.99907	0.99000
(4)	1096600	2439000	6788900	2e+007	5e+007	4e+008	2ORDR	-4.39e-002	5.133e-008	-6.55e-017	0.99974	0.99000
(5)	1015500	2065200	5516900	2.e+007	7e+007	4e+008	2ORDR	5.772e-002	3.753e-008	-2.82e-017	0.99926	0.99000
Aroclor-1221	213990	526160	1386100	5323400	1e+007	5e+007	2ORDR	-6.52e-003	1.947e-007	-1.57e-016	0.99998	0.99000
(2)	171880	250200	687370	2834300	6439300	2e+007	2ORDR	-5.69e-003	3.582e-007	4.278e-015	0.99996	0.99000
(3)	247670	499810	1399200	6507500	2e+007	9e+007	2ORDR	1.804e-002	1.534e-007	-4.81e-016	0.99999	0.99000
(4)	662310	1311000	3473000	2e+007	4e+007	2e+008	2ORDR	2.255e-002	5.973e-008	-6.34e-017	0.99997	0.99000
Aroclor-1232	650400	1552500	3001800	1e+007	4e+007	2e+008	2ORDR	3.766e-002	6.244e-008	-4.54e-017	0.99974	0.99000
(2)	594220	1191800	3001800	1e+007	4e+007	1e+008	2ORDR	2.866e-002	7.12e-008	-1.95e-017	0.99986	0.99000
(3)	355600	494320	3001800	1e+007	4e+007	2e+008	2ORDR	7.762e-002	5.955e-008	-7.45e-017	0.99933	0.99000
(4)	135450	462250	2415900	8693300	3e+007	1e+008	2ORDR	5.253e-002	9.446e-008	-1.81e-016	0.99968	0.99000
(5)	184720	399370	1207400	7081500	2e+007	1e+008	2ORDR	6.799e-002	1.156e-007	-2.46e-016	0.99967	0.99000
Aroclor-1242	1554400	2494800	6606900	3e+007	7e+007	3.e+008	2ORDR	2.022e-002	3.38e-008	-3.48e-018	0.99991	0.99000
(2)	865250	1487700	3919000	2e+007	5e+007	2.e+008	2ORDR	2.619e-002	5.476e-008	-2.09e-017	0.99989	0.99000
(3)	1483000	2821200	7869700	4e+007	1e+008	6e+008	2ORDR	4.597e-002	2.302e-008	-1.13e-017	0.99980	0.99000
(4)	809880	1918700	5211400	2e+007	7e+007	3e+008	2ORDR	4.271e-002	3.552e-008	-1.84e-017	0.99985	0.99000
(5)	1008600	1560200	4313600	2.e+007	6.e+007	3e+008	2ORDR	3.966e-002	4.394e-008	-3.91e-017	0.99982	0.99000
Aroclor-1248	850240	1805500	4298300	2e+007	6e+007	3.e+008	2ORDR	2.668e-002	4.174e-008	-2.95e-017	0.99996	0.99000
(2)	1364100	2953000	6878400	3e+007	9e+007	5e+008	2ORDR	2.623e-002	2.779e-008	-1.32e-017	0.99996	0.99000
(3)	1354900	3016400	7228500	4e+007	1e+008	6e+008	2ORDR	3.526e-002	2.407e-008	-1.17e-017	0.99994	0.99000
(4)	1036600	2371900	5562000	3e+007	7e+007	3e+008	2ORDR	2.366e-002	3.652e-008	-5.84e-018	0.99996	0.99000
(5)	436340	885050	2374300	2e+007	4e+007	3e+008	2ORDR	5.02e-002	5.972e-008	-8.46e-017	0.99989	0.99000
Aroclor-1254	1575700	2749000	6947100	4e+007	1e+008	5e+008	2ORDR	1.582e-002	2.582e-008	-1.05e-017	0.99986	0.99000
(2)	1717800	2962900	7615600	5e+007	1e+008	6e+008	2ORDR	2.652e-002	2.077e-008	-8.19e-018	0.99988	0.99000
(3)	759990	1278700	5083000	3e+007	8e+007	5e+008	2ORDR	3.448e-002	3.111e-008	-2.16e-017	0.99987	0.99000
(4)	1310400	2415000	6839800	4e+007	1.e+008	5e+008	2ORDR	1.951e-002	2.588e-008	-1.34e-017	0.99985	0.99000
(5)	985100	1637700	5520700	4e+007	9e+007	6e+008	2ORDR	3.025e-002	2.945e-008	-2.13e-017	0.99988	0.99000
Aroclor-1260	1809400	3732600	1e+007	3e+007	1e+008	6e+008	2ORDR	7.081e-002	1.932e-008	-5.93e-018	0.99889	0.99000
(2)	2139300	4597800	1e+007	5e+007	2e+008	6e+008	2ORDR	8.511e-002	1.33e-008	-3.465e-018	0.99864	0.99000
(3)	1683200	3482700	1.e+007	4e+007	1e+008	6e+008	2ORDR	7.179e-002	1.821e-008	-4.16e-018	0.99912	0.99000
(4)	1374900	2962600	9467900	4e+007	1e+008	6e+008	2ORDR	7.337e-002	1.972e-008	-6.54e-018	0.99912	0.99000
(5)	1836300	3796100	8998500	2.e+007	9.e+007	5.e+008	2ORDR	6.201e-002	2.962e-008	-1.94e-017	0.99810	0.99000
Tetrachloro-m-xylene	993360	2171100	5870900	2e+007	7.e+007	3e+008	2ORDR	1.226e-003	7.543e-010	-4.67e-019	0.99899	0.99000
Decachlorobiphenyl	474580	985990	2767100	9752900	3e+007	2e+008	2ORDR	1.064e-003	1.55e-009	-2.26e-018	0.99937	0.99000

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date(s): 11/18/11 11/19/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1516 1225

LAB FILE ID: RF0.05: 7EK702 RF0.1: 7EK703 RF0.25: 7EK704
RF1: 7EK701 RF2.5: 7EK705 RF10: 7EK706

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	155200	299750	766400	2776900	7553500	3.e+007	2ORDR	7.733e-003	3.345e-007	-1.48e-016	0.99993	0.99000
(2)	236100	484130	1215100	4343400	1e+007	5e+007	2ORDR	9.156e-003	2.112e-007	9.641e-019	0.99991	0.99000
(3)	430490	811990	2027100	7920800	2e+007	9e+007	2ORDR	1.315e-002	1.171e-007	-1.82e-017	0.99994	0.99000
(4)	229450	424750	1051200	4247100	1e+007	5e+007	2ORDR	7.792e-003	2.273e-007	-3.26e-016	0.99998	0.99000
(5)	203150	404520	1007100	3806900	1.e+007	4e+007	2ORDR	6.165e-003	2.501e-007	-3.58e-016	0.99996	0.99000
Aroclor-1221	79048	153820	350880	1292700	3068100	1e+007	2ORDR	-1.95e-002	7.995e-007	5.62e-015	0.99998	0.99000
(2)	90267	172270	417740	1685300	4288900	2e+007	2ORDR	2.491e-003	5.84e-007	-3.13e-017	1.00000	0.99000
(3)	50247	111420	270970	1113800	2854200	1e+007	2ORDR	7.933e-003	8.733e-007	1.036e-015	0.99999	0.99000
(4)	194810	378870	905080	3729200	9545100	4e+007	2ORDR	5.984e-003	2.609e-007	1.418e-016	0.99999	0.99000
Aroclor-1232	181170	362790	819150	3300400	8332200	3e+007	2ORDR	-9.62e-004	3.e-007	8.174e-017	1.00000	0.99000
(2)	113680	238710	536400	2049500	5130200	2e+007	2ORDR	-8.64e-003	4.92e-007	-5.89e-016	1.00000	0.99000
(3)	147140	303870	683660	3138800	8506400	4e+007	2ORDR	2.073e-002	3.006e-007	-7.92e-016	0.99995	0.99000
(4)	63722	161510	329910	1617900	4294400	2e+007	2ORDR	2.036e-002	5.961e-007	-3.64e-015	0.99997	0.99000
(5)	74129	153610	327550	1419200	3623900	2e+007	2ORDR	1.685e-003	7.096e-007	-5.41e-015	0.99999	0.99000
Aroclor-1242	159380	248610	619190	2422900	6007100	2e+007	2ORDR	-7.35e-003	4.168e-007	6.448e-017	1.00000	0.99000
(2)	253940	410680	988830	3897800	9632500	4e+007	2ORDR	-7.15e-003	2.583e-007	1.945e-016	1.00000	0.99000
(3)	389330	632640	1562500	6647600	2e+007	7.e+007	2ORDR	6.866e-003	1.473e-007	-5.57e-017	0.99999	0.99000
(4)	198730	325060	815180	3448400	8823000	4e+007	2ORDR	4.523e-003	2.882e-007	-5.45e-016	1.00000	0.99000
(5)	212250	333030	798080	3258600	8393800	3e+007	2ORDR	7.201e-004	3.029e-007	-4.89e-016	0.99999	0.99000
Aroclor-1248	189480	379430	862200	3802500	9386700	4.e+007	2ORDR	7.147e-004	2.694e-007	-4.17e-016	0.99999	0.99000
(2)	230160	476120	1072500	4541200	1e+007	5e+007	2ORDR	-2.09e-003	2.245e-007	-1.16e-016	0.99999	0.99000
(3)	286240	585870	1319600	5772500	1e+007	6.e+007	2ORDR	3.306e-004	1.771e-007	-1.59e-016	0.99999	0.99000
(4)	225390	458310	1044700	4625400	1e+007	5e+007	2ORDR	4.703e-003	2.179e-007	-2.99e-016	0.99999	0.99000
(5)	149120	338250	809830	4295400	1e+007	5e+007	2ORDR	2.764e-002	2.269e-007	-8.19e-016	0.99997	0.99000
Aroclor-1254	165660	312540	746070	3164100	7947300	3e+007	2ORDR	2.009e-003	3.18e-007	-4.72e-016	1.00000	0.99000
(2)	295450	565240	1382700	5721200	1e+007	5e+007	2ORDR	-1.91e-003	1.774e-007	8.795e-017	1.00000	0.99000
(3)	244500	478940	1210600	5725700	1e+007	6e+007	2ORDR	1.828e-002	1.708e-007	-1.76e-016	0.99998	0.99000
(4)	243650	521990	1333200	6806500	2e+007	8e+007	2ORDR	2.8e-002	1.413e-007	-1.96e-016	0.99997	0.99000
(5)	149150	289840	730510	3735400	9661900	5e+007	2ORDR	2.102e-002	2.667e-007	-1.03e-015	0.99998	0.99000
Aroclor-1260	263980	549040	1395200	5378500	1e+007	6e+007	2ORDR	6.703e-003	1.786e-007	-1.07e-016	0.99998	0.99000
(2)	290800	595520	1518400	6173500	2e+007	7e+007	2ORDR	4.378e-003	1.608e-007	-1.28e-016	1.00000	0.99000
(3)	199970	411580	1047900	4954200	1e+007	5e+007	2ORDR	-1.66e-003	2.195e-007	-3.18e-016	0.99990	0.99000
(4)	194690	404360	1045600	4140200	1e+007	5e+007	2ORDR	8.928e-003	2.328e-007	-2.51e-016	0.99998	0.99000
(5)	179720	348760	888600	3430100	9572300	4e+007	2ORDR	1.495e-002	2.699e-007	-7.66e-016	0.99992	0.99000
Tetrachloro-m-xylene	201300	388760	967140	3424500	9788500	4e+007	2ORDR	2.892e-004	5.19e-009	-3.25e-018	0.99985	0.99000
Decachlorobiphenyl	64946	126130	330530	1310100	3283700	1e+007	2ORDR	3.935e-006	1.531e-008	-2.59e-017	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1751

Lab File ID: 7EK663 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0610000	1.0000000	37156000	0.001	6.10	20.00	2RDR	
(2)	1.1002000	1.0000000	22475000	0.001	10.02	20.00	2RDR	
(3)	1.0130000	1.0000000	56634000	0.001	1.30	20.00	2RDR	
(4)	1.6368000	1.0000000	34239000	0.001	63.68	20.00	2RDR	<-
(5)	1.0174000	1.0000000	26082000	0.001	1.74	20.00	2RDR	
Average %D: 16.570								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1751

Lab File ID: 7EK663 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9878500	1.0000000	2933600.0	0.001	-1.22	20.00	2RDR
(2)	1.0524000	1.0000000	4940200.0	0.001	5.24	20.00	2RDR
(3)	1.0263000	1.0000000	8662500.0	0.001	2.63	20.00	2RDR
(4)	1.0070000	1.0000000	4423100.0	0.001	0.70	20.00	2RDR
(5)	0.9907300	1.0000000	3958600.0	0.001	-0.93	20.00	2RDR
Average %D: 1.2800							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1817

Lab File ID: 7EK664 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	1.0502000	1.0000000	51501000	0.001	5.02	20.00	2RDR
(2)	0.9837300	1.0000000	66414000	0.001	-1.63	20.00	2RDR
(3)	1.0375000	1.0000000	53701000	0.001	3.75	20.00	2RDR
(4)	0.8749900	1.0000000	41204000	0.001	-12.50	20.00	2RDR
(5)	1.0336000	1.0000000	33540000	0.001	3.36	20.00	2RDR
Average %D: -0.400							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/18/11 Time: 1817

Lab File ID: 7EK664 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 1516 1225

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9715400	1.0000000	5418700.0	0.001	-2.85	20.00	2RDR
(2)	0.9512000	1.0000000	5914200.0	0.001	-4.88	20.00	2RDR
(3)	1.0490000	1.0000000	4820300.0	0.001	4.90	20.00	2RDR
(4)	0.8779300	1.0000000	3748100.0	0.001	-12.21	20.00	2RDR
(5)	0.9193600	1.0000000	3383900.0	0.001	-8.06	20.00	2RDR
Average %D: -4.620							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 0039

Lab File ID: 7EK761 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8731000	1.0000000	30164000	0.001	-12.69	20.00	2RDR	
(2)	0.8728800	1.0000000	17491000	0.001	-12.71	20.00	2RDR	
(3)	0.7784100	1.0000000	42413000	0.001	-22.16	20.00	2RDR	<-
(4)	1.1259000	1.0000000	23494000	0.001	12.59	20.00	2RDR	
(5)	0.7315700	1.0000000	18204000	0.001	-26.84	20.00	2RDR	<-
Average %D: -12.36								
Aroclor-1260	0.6912900	1.0000000	32436000	0.001	-30.87	20.00	2RDR	<-
(2)	0.6852400	1.0000000	44603000	0.001	-31.48	20.00	2RDR	<-
(3)	0.7177100	1.0000000	35768000	0.001	-28.23	20.00	2RDR	<-
(4)	0.6969400	1.0000000	31953000	0.001	-30.31	20.00	2RDR	<-
(5)	0.7607500	1.0000000	23967000	0.001	-23.92	20.00	2RDR	<-
Average %D: -28.96								
Decachlorobiphenyl	1.38e-002	2.e-002	414910000	0.001	-31.00	20.00	2RDR	<-
Tetrachloro-m-xylene	1.96e-002	2.e-002	1.24e+009	0.001	-2.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 0039

Lab File ID: 7EK761 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.8572000	1.0000000	2542200.0	0.001	-14.28	20.00	2RDR	
(2)	0.8383400	1.0000000	3926600.0	0.001	-16.17	20.00	2RDR	
(3)	0.7931600	1.0000000	6667100.0	0.001	-20.68	20.00	2RDR	<-
(4)	0.7856600	1.0000000	3438500.0	0.001	-21.43	20.00	2RDR	<-
(5)	0.8376400	1.0000000	3340100.0	0.001	-16.24	20.00	2RDR	
Average %D: -17.76								
Aroclor-1260	0.8305200	1.0000000	4624500.0	0.001	-16.95	20.00	2RDR	
(2)	0.8330000	1.0000000	5172800.0	0.001	-16.70	20.00	2RDR	
(3)	0.8464400	1.0000000	3885600.0	0.001	-15.36	20.00	2RDR	
(4)	0.8386500	1.0000000	3578100.0	0.001	-16.14	20.00	2RDR	
(5)	0.9118000	1.0000000	3355400.0	0.001	-8.82	20.00	2RDR	
Average %D: -14.79								
Decachlorobiphenyl	1.71e-002	2.e-002	56026000	0.001	-14.50	20.00	2RDR	
Tetrachloro-m-xylene	1.83e-002	2.e-002	173740000	0.001	-8.50	20.00	2RDR	

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.08 TCX: 3.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG101418-LCS	WG101418-2	11/22/11	1335	13.07	3.73
02	WG101418-LCSD	WG101418-3	11/22/11	1401	13.08	3.73
03		AR1660 1.0	11/22/11	1755	13.08	3.73
04		AR1254 1.0	11/22/11	1913		
05	DSY-SD-C21-0012	SE6619-12	11/22/11	2005	13.07	3.73
06		AR1660 0.25	11/23/11	0025	13.01	3.73
07		AR1254 1.0	11/23/11	0143		
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000216

PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 11/18/11 11/19/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.71 TCX: 4.20

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	WG101418-LCS	WG101418-2	11/22/11	1335	16.70	4.19
02	WG101418-LCSD	WG101418-3	11/22/11	1401	16.70	4.19
03		AR1660 1.0	11/22/11	1755	16.71	4.19
04		AR1254 1.0	11/22/11	1913		
05	DSY-SD-C21-0012	SE6619-12	11/22/11	2005	16.70	4.19
06		AR1660 0.25	11/23/11	0025	16.69	4.19
07		AR1254 1.0	11/23/11	0143		
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1755

Lab File ID: 7EK777 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0184000	1.0000000	35571000	0.001	1.84	20.00	2RDR	
(2)	1.0134000	1.0000000	20571000	0.001	1.34	20.00	2RDR	
(3)	0.9020200	1.0000000	49902000	0.001	-9.80	20.00	2RDR	
(4)	1.2995000	1.0000000	27109000	0.001	29.95	20.00	2RDR	<-
(5)	0.8363300	1.0000000	21080000	0.001	-16.37	20.00	2RDR	
Average %D: 1.3900								
Aroclor-1260	0.6994100	1.0000000	32865000	0.001	-30.06	20.00	2RDR	<-
(2)	0.6895700	1.0000000	44921000	0.001	-31.04	20.00	2RDR	<-
(3)	0.7108100	1.0000000	35383000	0.001	-28.92	20.00	2RDR	<-
(4)	0.6942900	1.0000000	31816000	0.001	-30.57	20.00	2RDR	<-
(5)	0.7794800	1.0000000	24619000	0.001	-22.05	20.00	2RDR	<-
Average %D: -28.53								
Decachlorobiphenyl	1.44e-002	2.e-002	436100000	0.001	-28.00	20.00	2RDR	<-
Tetrachloro-m-xylene	2.43e-002	2.e-002	1.56e+009	0.001	21.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1755

Lab File ID: 7EK777 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0775000	1.0000000	3202400.0	0.001	7.75	20.00	2RDR	
(2)	0.9668300	1.0000000	4535100.0	0.001	-3.32	20.00	2RDR	
(3)	0.8651200	1.0000000	7282900.0	0.001	-13.49	20.00	2RDR	
(4)	0.8208100	1.0000000	3594700.0	0.001	-17.92	20.00	2RDR	
(5)	0.7799800	1.0000000	3107400.0	0.001	-22.00	20.00	2RDR	<-
Average %D: -9.790								
Aroclor-1260	0.8310500	1.0000000	4627400.0	0.001	-16.90	20.00	2RDR	
(2)	0.8214300	1.0000000	5100300.0	0.001	-17.86	20.00	2RDR	
(3)	0.8533600	1.0000000	3917500.0	0.001	-14.66	20.00	2RDR	
(4)	0.8307900	1.0000000	3544000.0	0.001	-16.92	20.00	2RDR	
(5)	0.9139800	1.0000000	3363600.0	0.001	-8.60	20.00	2RDR	
Average %D: -14.99								
Decachlorobiphenyl	1.59e-002	2.e-002	51915000	0.001	-20.50	20.00	2RDR	<-
Tetrachloro-m-xylene	1.97e-002	2.e-002	187710000	0.001	-1.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1913

Lab File ID: 7EK780 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.8971800	1.0000000	34629000	0.001	-10.28	20.00	2RDR	
(2)	0.9160600	1.0000000	43583000	0.001	-8.39	20.00	2RDR	
(3)	0.8947700	1.0000000	28205000	0.001	-10.52	20.00	2RDR	
(4)	0.7580800	1.0000000	28975000	0.001	-24.19	20.00	2RDR	<-
(5)	0.9860600	1.0000000	33258000	0.001	-1.39	20.00	2RDR	
Average %D: -10.96								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/22/11 Time: 1913

Lab File ID: 7EK780 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.8705000	1.0000000	2742200.0	0.001	-12.95	20.00	2RDR	
(2)	0.7934500	1.0000000	4472500.0	0.001	-20.66	20.00	2RDR	<-
(3)	0.8020200	1.0000000	4611300.0	0.001	-19.80	20.00	2RDR	
(4)	0.8751600	1.0000000	6045500.0	0.001	-12.48	20.00	2RDR	
(5)	1.0356000	1.0000000	3861800.0	0.001	3.56	20.00	2RDR	
Average %D: -12.46								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0025

Lab File ID: 7EK792 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2361800	0.2500000	26374000	0.001	-5.53	20.00	2RDR	
(2)	0.2401500	0.2500000	14864000	0.001	-3.94	20.00	2RDR	
(3)	0.2258600	0.2500000	36385000	0.001	-9.66	20.00	2RDR	
(4)	0.2054600	0.2500000	19552000	0.001	-17.82	20.00	2RDR	
(5)	0.1926400	0.2500000	14420000	0.001	-22.94	20.00	2RDR	<-
Average %D: -11.96								
Aroclor-1260	0.1787000	0.2500000	22374000	0.001	-28.52	20.00	2RDR	<-
(2)	0.2070100	0.2500000	36576000	0.001	-17.20	20.00	2RDR	
(3)	0.2102600	0.2500000	30474000	0.001	-15.90	20.00	2RDR	
(4)	0.2012700	0.2500000	25994000	0.001	-19.49	20.00	2RDR	
(5)	0.1874500	0.2500000	16987000	0.001	-25.02	20.00	2RDR	<-
Average %D: -21.24								
Decachlorobiphenyl	3.33e-002	5.e-003	4.3e+009	0.001	566.00	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.01e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0025

Lab File ID: 7EK792 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 1516 1725

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2050300	0.2500000	2359700.0	0.001	-17.99	20.00	2RDR	
(2)	0.2078600	0.2500000	3763900.0	0.001	-16.86	20.00	2RDR	
(3)	0.2001200	0.2500000	6387400.0	0.001	-19.95	20.00	2RDR	
(4)	0.1831600	0.2500000	3089000.0	0.001	-26.74	20.00	2RDR	<-
(5)	0.1622600	0.2500000	2498400.0	0.001	-35.10	20.00	2RDR	<-
Average %D: -23.32								
Aroclor-1260	0.1795400	0.2500000	3872400.0	0.001	-28.18	20.00	2RDR	<-
(2)	0.1810300	0.2500000	4396900.0	0.001	-27.59	20.00	2RDR	<-
(3)	0.2091700	0.2500000	3847400.0	0.001	-16.33	20.00	2RDR	
(4)	0.2579600	0.2500000	4284100.0	0.001	3.18	20.00	2RDR	
(5)	0.2058400	0.2500000	2835200.0	0.001	-17.66	20.00	2RDR	
Average %D: -17.32								
Decachlorobiphenyl	3.45e-003	5.e-003	45045000	0.001	-31.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.45e-003	5.e-003	160240000	0.001	-11.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0143

Lab File ID: 7EK795 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.7012000	1.0000000	26842000	0.001	-29.88	20.00	2RDR	<-
(2)	0.7570400	1.0000000	35678000	0.001	-24.30	20.00	2RDR	<-
(3)	0.7735700	1.0000000	24162000	0.001	-22.64	20.00	2RDR	<-
(4)	0.6137900	1.0000000	23245000	0.001	-38.62	20.00	2RDR	<-
(5)	0.8147300	1.0000000	27174000	0.001	-18.53	20.00	2RDR	
Average %D: -26.79								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Instrument ID: GC07 Calibration Date: 11/23/11 Time: 0143

Lab File ID: 7EK795 Init. Calib. Date(s): 11/18/11 11/19/11

Init. Calib. Times: 2354 0203

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	0.7607000	1.0000000	2394300.0	0.001	-23.93	20.00	2RDR	<-
(2)	0.7189500	1.0000000	4054400.0	0.001	-28.10	20.00	2RDR	<-
(3)	0.7284300	1.0000000	4176400.0	0.001	-27.16	20.00	2RDR	<-
(4)	0.8233800	1.0000000	5673000.0	0.001	-17.66	20.00	2RDR	
(5)	0.9646800	1.0000000	3587800.0	0.001	-3.53	20.00	2RDR	
Average %D: -20.08								

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99673-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Lab Sample ID: WG99673-1 Lab File ID: 7EK192

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/23/11

Date Analyzed (1): 11/06/11 Date Analyzed (2): 11/06/11

Time Analyzed (1): 1343 Time Analyzed (2): 1343

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99673-LCS	WG99673-2	7EK193	11/06/11	11/06/11
02	WG99673-LCSD	WG99673-3	7EK194	11/06/11	11/06/11
03	DSY-SD-W30-0012	SE6619-1	7EK200	11/06/11	11/06/11
04	DSY-SD-W30-1224	SE6619-2	7EK201	11/06/11	11/06/11
05	DSY-SD-W30-2448	SE6619-3	7EK207	11/06/11	11/06/11
06	DSY-SD-W28-2448	SE6619-6	7EK210	11/06/11	11/06/11
07	DSY-SD-C25-0012	SE6619-8	7EK211	11/06/11	11/06/11
08	DSY-SD-C25-1224	SE6619-9	7EK212	11/06/11	11/06/11
09	DSY-SD-C25-2448	SE6619-10	7EK213	11/06/11	11/06/11
10	DSY-SD-DUP29-100711	SE6619-11	7EK214	11/06/11	11/06/11
11	DSY-SD-C21-1224	SE6619-13	7EK216	11/07/11	11/07/11
12	DSY-SD-C21-2448	SE6619-14	7EK222	11/07/11	11/07/11
13	DSY-SD-18-0012	SE6619-15	7EK223	11/07/11	11/07/11
14	DSY-SD-18-1224	SE6619-16	7EK224	11/07/11	11/07/11
15	DSY-SD-18-2448	SE6619-17	7EK225	11/07/11	11/07/11
16	DSY-SD-C09-0012	SE6619-18	7EK226	11/07/11	11/07/11
17	DSY-SD-C09-1224	SE6619-19	7EK227	11/07/11	11/07/11
18	DSY-SD-C09-2448	SE6619-20	7EK228	11/07/11	11/07/11
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Report of Analytical Results

Client:
Lab ID: WG99673-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 23-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		88.6	%					
Decachlorobiphenyl		88.6	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

FORM 4

PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100719-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Lab Sample ID: WG100719-1 Lab File ID: 7EK444

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) N Date Extracted: 11/09/11

Date Analyzed (1): 11/11/11 Date Analyzed (2): 11/11/11

Time Analyzed (1): 1823 Time Analyzed (2): 1823

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG100719-LCS	WG100719-2	7EK445	11/11/11	11/11/11
02	DSY-SD-W28-0012	SE6619-4	7EK455	11/11/11	11/11/11
03	DSY-SD-W28-1224	SE6619-5	7EK456	11/11/11	11/11/11
04					
05					
06					
07					
08					
09					
10					
11					
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13					
14					
15					
16					
17					
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19					
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22					
23					
24					

COMMENTS:

FORM IVPCB

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100719-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Lab Sample ID: WG100719-1 Lab File ID: 7EK444

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 11/09/11

Date Analyzed (1): 11/11/11 Date Analyzed (2): 11/11/11

Time Analyzed (1): 1823 Time Analyzed (2): 1823

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG100719-LCS	WG100719-2	7EK445	11/11/11	11/11/11
02	DSY-SD-W28-0012	SE6619-4	7EK455	11/11/11	11/11/11
03	DSY-SD-W28-1224	SE6619-5	7EK456	11/11/11	11/11/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS:

FORM IVPCB

Report of Analytical Results

Client:
Lab ID: WG100719-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene	*	122.	%					
Decachlorobiphenyl	*	133.	%					

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101418-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

Lab Sample ID: WG101418-1 Lab File ID: 7EK766

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 11/21/11

Date Analyzed (1): 11/22/11 Date Analyzed (2): 11/22/11

Time Analyzed (1): 1309 Time Analyzed (2): 1309

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG101418-LCS	WG101418-2	7EK767	11/22/11	11/22/11
02	WG101418-LCSD	WG101418-3	7EK768	11/22/11	11/22/11
03	DSY-SD-C21-0012	SE6619-12	7EK782	11/22/11	11/22/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS:

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101418-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		73.9	%					
Decachlorobiphenyl		73.6	%					

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FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm) GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99673-BLANK	WG99673-1	87	88	89	85			0
02	WG99673-LCS	WG99673-2	81	83	85	80			0
03	WG99673-LCSD	WG99673-3	90	91	94	88			0
04	DSY-SD-W30-0012	SE6619-1	79	94	72	87			0
05	DSY-SD-W30-1224	SE6619-2	64	78	61	76			0
06	DSY-SD-W30-2448	SE6619-3	66	80	71	82			0
07	DSY-SD-W28-2448	SE6619-6	68	80	66	77			0
08	DSY-SD-C25-0012	SE6619-8	55*	65	47*	55*			3
09	DSY-SD-C25-1224	SE6619-9	74	80	79	84			0
10	DSY-SD-C25-2448	SE6619-10	84	91	81	86			0
11	DSY-SD-DUP29-100711	SE6619-11	48*	69	48*	74			2
12	DSY-SD-C21-1224	SE6619-13	50*	67	52*	69			2
13	DSY-SD-C21-2448	SE6619-14	73	76	78	76			0
14	DSY-SD-18-0012	SE6619-15	65	70	68	70			0
15	DSY-SD-18-1224	SE6619-16	64	72	72	76			0
16	DSY-SD-18-2448	SE6619-17	74	79	85	85			0
17	DSY-SD-C09-0012	SE6619-18	82	88	75	85			0
18	DSY-SD-C09-1224	SE6619-19	74	80	74	75			0
19	DSY-SD-C09-2448	SE6619-20	86	90	83	82			0
20	WG100719-BLANK	WG100719-1	121*	106	133*	98			2
21	WG100719-LCS	WG100719-2	116*	103	138*	102			2
22	DSY-SD-W28-0012	SE6619-4	97	100	94	93			0
23	DSY-SD-W28-1224	SE6619-5	65	85	64	87			0
24	WG101418-BLANK	WG101418-1	74	69	70	74			0
25	WG101418-LCS	WG101418-2	69	68	71	74			0
26	WG101418-LCSD	WG101418-3	79	80	86	91			0
27	DSY-SD-C21-0012	SE6619-12	62	80	60	80			0
28									

ADVISORY QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000134

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-20

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98971-BLANK	WG98971-1	38*	46*	59	51			2
02	WG98971-LCS	WG98971-2	38*	45*	86	73			2
03	WG98971-LCSD	WG98971-3	45*	53*	77	65			2
04	DSY-SD-RB11-100611	SE6619-7	65	70	45	36*			1
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM II PCB-1

LCS/LCSD Recovery Report

LCS ID: WG98971-2
LCSD ID: WG98971-3
Project:
SDG: DSY-20
Report Date: 29-NOV-11

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	1.00	0.572	57.2*	0.693	69.3	ug/L	19	30	65-112
Aroclor-1260	1.00	0.654	65.4	0.677	67.7	ug/L	3	30	62-104
Tetrachloro-M-Xylene			45.1*		53.0*				62-111
Decachlorobiphenyl			86.5		77.0				44-135

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LCS/LCSD Recovery Report

LCS ID: WG99673-2
LCSD ID: WG99673-3
Project:
SDG: DSY-20
Report Date: 29-NOV-11

Received Date: 23-OCT-11
Extract Date: 23-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99673

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	134.	80.2	141.	84.4	ug/Kgdrywt	5	50	53-123
Aroclor-1260	167.	140.	83.8	150.	89.8	ug/Kgdrywt	7	50	58-120
Tetrachloro-M-Xylene			82.6		90.7				56-115
Decachlorobiphenyl			85.3		94.0				59-124

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LCS Recovery Report

Client:
Lab ID: WG100719-2
Client ID: LCS
Project:
SDG: DSY-20

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 29-NOV-11

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Aroclor-1016	106.	167.	177.	ug/Kgdrywt	53-123
Aroclor-1260	112.	167.	188.	ug/Kgdrywt	58-120
Tetrachloro-M-Xylene	* 116.				56-115
Decachlorobiphenyl	* 138.				59-124

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG101418-2
LCSD ID: WG101418-3
Project:
SDG: DSY-20
Report Date: 29-NOV-11

Received Date: 21-NOV-11
Extract Date: 21-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101418

Analysis Date: 22-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	154.	92.2	192.	115.	ug/Kgdrywt	22	50	53-123
Aroclor-1260	167.	136.	81.4	164.	98.2	ug/Kgdrywt	19	50	58-120
Tetrachloro-M-Xylene			68.8		80.2				56-115
Decachlorobiphenyl			74.2		91.3				59-124

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98971-1
Client ID: Method Blank Sample
Project:
SDG: DSY-20

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	45.6	%					
Decachlorobiphenyl		59.5	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C21-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-12 Date(s) Analyzed: 11/22/11 11/22/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.06	6.02	6.16	104		
Aroclor-1254	2	6.39	6.34	6.48	164		
	3	6.75	6.71	6.85	122		
COLUMN 1	4	7.57	7.53	7.67	161		
	5	8.04	8.00	8.14	207	152	
	1	6.25	6.20	6.34	162		
	2	7.21	7.15	7.29	174		
	3	7.48	7.44	7.58	185		
COLUMN 2	4	8.28	8.24	8.38	180		
	5	9.93	9.90	10.04	230	186	20.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C21-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-13 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	107		
Aroclor-1254	2	6.47	6.41	6.55	136		
	3	6.84	6.78	6.92	162		
COLUMN 1	4	7.67	7.61	7.75	188		
	5	8.14	8.09	8.23	187	156	
	1	6.36	6.30	6.44	142		
	2	7.33	7.26	7.40	160		
	3	7.61	7.55	7.69	174		
COLUMN 2	4	8.43	8.37	8.51	175		
	5	10.12	10.07	10.21	225	175	11.5
	1	7.24	7.19	7.33	98.8		
Aroclor-1260	2	7.67	7.63	7.77	116		
	3	8.14	8.11	8.25	145		
COLUMN 1	4	8.32	8.26	8.40	132		
	5	10.21	10.15	10.29	224	143	
	1	8.79	8.74	8.88	132		
	2	9.24	9.19	9.33	147		
	3	10.12	10.07	10.21	210		
COLUMN 2	4	11.14	11.09	11.23	133		
	5	12.94	12.93	13.07	277	180	22.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C25-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-8 Date(s) Analyzed: 11/06/11 11/06/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	108		
Aroclor-1254	2	6.48	6.41	6.55	134		
	3	6.84	6.78	6.92	144		
COLUMN 1	4	7.67	7.61	7.75	155		
	5	8.14	8.09	8.23	168	142	
	1	6.36	6.30	6.44	128		
	2	7.33	7.26	7.40	139		
	3	7.61	7.55	7.69	114		
COLUMN 2	4	8.43	8.37	8.51	128		
	5	10.12	10.07	10.21	171	136	4.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000114

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-DU
P29-100711

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-11 Date(s) Analyzed: 11/06/11 11/06/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	207		
Aroclor-1254	2	6.47	6.41	6.55	274		
	3	6.83	6.78	6.92	319		
COLUMN 1	4	7.66	7.61	7.75	287		
	5	8.13	8.09	8.23	330	283	
	1	6.36	6.30	6.44	353		
	2	7.33	7.26	7.40	378		
	3	7.61	7.55	7.69	364		
COLUMN 2	4	8.43	8.37	8.51	366		
	5	10.12	10.07	10.21	437	380	29.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W28-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-4 Date(s) Analyzed: 11/11/11 11/11/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.10	6.03	6.17	203		
Aroclor-1254	2	6.43	6.36	6.50	240		
	3	6.79	6.72	6.86	266		
COLUMN 1	4	7.62	7.55	7.69	284		
	5	8.09	8.01	8.15	327	264	
	1	6.32	6.25	6.39	298		
	2	7.27	7.21	7.35	268		
	3	7.56	7.50	7.64	240		
COLUMN 2	4	8.37	8.32	8.46	258		
	5	10.04	10.01	10.15	316	276	4.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W28-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-5 Date(s) Analyzed: 11/11/11 11/11/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.10	6.03	6.17	606		
Aroclor-1254	2	6.42	6.36	6.50	800		
	3	6.78	6.72	6.86	1010		
COLUMN 1	4	7.61	7.55	7.69	997		
	5	8.10	8.01	8.15	2260	1130	
	1	6.32	6.25	6.39	1010		
	2	7.27	7.21	7.35	952		
	3	7.55	7.50	7.64	1020		
COLUMN 2	4	8.36	8.32	8.46	1030		
	5	10.03	10.01	10.15	2960	1390	20.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-W30-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-1 Date(s) Analyzed: 11/06/11 11/06/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	59.1		
Aroclor-1254	2	6.48	6.41	6.55	81.1		
	3	6.84	6.78	6.92	86.6		
COLUMN 1	4	7.67	7.61	7.75	85.2		
	5	8.14	8.09	8.23	99.4	82.3	
	1	6.36	6.30	6.44	95.9		
	2	7.33	7.26	7.40	94.9		
	3	7.61	7.55	7.69	78.2		
COLUMN 2	4	8.43	8.37	8.51	86.5		
	5	10.12	10.07	10.21	91.7	89.4	8.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-W30-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-2 Date(s) Analyzed: 11/06/11 11/06/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	309		
Aroclor-1254	2	6.48	6.41	6.55	328		
	3	6.84	6.78	6.92	321		
COLUMN 1	4	7.67	7.61	7.75	368		
	5	8.14	8.09	8.23	427	350	
	1	6.37	6.30	6.44	376		
	2	7.33	7.26	7.40	410		
	3	7.61	7.55	7.69	413		
COLUMN 2	4	8.43	8.37	8.51	418		
	5	10.13	10.07	10.21	502	424	19.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-W30-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-20

Lab Sample ID: SE6619-3 Date(s) Analyzed: 11/06/11 11/06/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	57.2		
Aroclor-1254	2	6.48	6.41	6.55	62.1		
	3	6.84	6.78	6.92	63.5		
COLUMN 1	4	7.68	7.61	7.75	50.3		
	5	8.15	8.09	8.23	67.2	60.1	
	1	6.36	6.30	6.44	92.7		
	2	7.35	7.26	7.40	72.4		
	3	7.62	7.55	7.69	54.6		
COLUMN 2	4	8.44	8.37	8.51	56.1		
	5	10.12	10.07	10.21	60.4	67.2	11.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000106

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **DECEMBER 20, 2011**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PAH/PCB**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-21

SAMPLES: 10/Sediment/PAH/PCB

DSY-SD-C13-0012	DSY-SD-C13-1224	DSY-SD-C13-2448
DSY-SD-C17-0012	DSY-SD-C17-1224	DSY-SD-C17-2448
DSY-SD-C29-0012	DSY-SD-C29-1224	DSY-SD-C29-2448
DSY-SD-DUP30-100711		

1/Aqueous/PAH/PCB

DSY-SD-RB12-100711

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-21 consisted of ten (10) sediment environmental samples and one (1) rinse blank. All samples were analyzed for polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyls (PCB). One field duplicate pair was included in this sample delivery group (SDG): DSY-SD-C09-2448 / DSY-SD-DUP30-100711. Sample DSY-SD-C09-2448 is associated with SDG DSY-20.

The samples were collected by Tetra Tech on October 7, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, and 8082 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

*	• Data Completeness
*	• Holding Times
*	• GC/MS Instrument Tuning and System Performance
	• Initial and Continuing Calibrations
*	• Laboratory Method Blank Results
	• Surrogate Spike Recoveries
	• Internal Standard Areas
	• Matrix Spike Sample/Matrix Spike Duplicate Sample Results
	• Laboratory Control Sample Results
*	• Field Duplicate Precision
*	• Detection Limits
*	• Compound Identification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are

presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier II validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

INITIAL AND CONTINUING CALIBRATION

The PAH continuing calibration verification (CCV) performed on instrument GCMS-U on 11/15/11 @ 07:54 had a percent difference (%D) greater than 20% for benzo(g,h,i)perylene. Samples DSY-SD-RB12-100711, DSY-SD-C13-2448, and DSY-SD-DUP30-100711 were affected. Only non-detected results were reported for benzo(g,h,i)perylene and the results were qualified as estimated (UJ), in the affected samples.

The PAH CCV performed on instrument GCMS-U on 11/16/11 @ 07:01 had %Ds greater than 20% for indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene. Samples DSY-SD-C13-1224, DSY-SD-C29-2448, DSY-SD-C17-0012, DSY-SD-C17-1224, DSY-SD-C17-2448, DSY-SD-C29-0012, DSY-SD-C29-1224, and DSY-SD-C13-0012 were affected. Only non-detected results were reported for indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene and the results were qualified as estimated (UJ), in the affected samples.

The PCB CCV performed on instrument GC07 on 11/03/11 @2205 had a %D greater than 20% for Aroclor-1260 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-C29-2448 was qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The surrogate fluorene-d10 had a percent recovery (%R) greater than the quality control limit for sample DSY-SD-C29-2448. The sample was not re-extracted or re-analyzed. The positive benzo(a)pyrene result for sample DSY-SD-C29-2448 was qualified as estimated (J).

The %Rs for the PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, were below the lower quality control limits on both GC columns for samples DSY-SD-RB12-100711, DSY-SD-C29-0012, and DSY-SD-C17-0012. The samples were not re-extracted or reanalyzed. The positive and non-detected PCB results for the aforementioned samples were qualified as estimated, (J) and (UJ), respectively.

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in samples DSY-SD-C29-1224, DSY-SD-C13-0012, and DSY-SD-C29-2448. The positive and non-detected PCB results reported for aforementioned samples were qualified as estimated, (J) and (UJ), respectively.

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl, were below the lower quality control limits on both GC columns for samples, DSY-SD-DUP30-100711, DSY-SD-C13-1224, and DSY-SD-C13-2448. The samples were not re-extracted or reanalyzed. Only non-detected PCB results were reported for the aforementioned samples and these results were qualified as estimated, (UJ).

INTERNAL STANDARD RESULTS

The internal standard area for perylene-d12 was less than the lower quality control limit in sample DSY-SD-C29-0012. The positive and non-detected results reported for the target PAH compounds associated with perylene-d12 in sample DSY-SD-C29-0012 were qualified as estimated, (J) and (UJ), respectively.

The internal standard areas for chrysene-d12 and perylene-d12 were less than the lower quality control limit in sample DSY-SD-C29-1224. The positive and non-detected results reported for the target PAH

compounds associated with chrysene-d12 and perylene-d12 in sample DSY-SD-C29-1224 were qualified as estimated, (J) and (UJ), respectively.

The internal standard areas for perylene-d12 were less than the lower quality control limit in samples DSY-SD-DUP30-100711, DSY-SD-C29-0012, DSY-SD-C13-0012, DSY-SD-C13-1224, DSY-SD-C13-2448, and DSY-SD-C17-1224. The positive and non-detected benzo(a)pyrene results reported for the aforementioned samples were qualified as estimated, (J) and (UJ), respectively.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RESULTS

The PAH matrix spike/matrix spike duplicate (MS/MSD) %Rs for benzo(g,h,i)perylene were less than the lower quality control limit and the %R for the MS of dibenzo(a,h)anthracene was less than the lower quality control limit. The nondetected result reported for benzo(g,h,i)perylene in the parent sample, DSY-SD-C13-2448, was qualified as estimated, (J). No action was taken on the nondetected dibenzo(a,h)anthracene result because the MSD had an acceptable recovery.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE

The PAH laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with the rinse blank (DSY-SD-RB12-100711) had %Rs of benzo(a)anthracene, benzo(k)fluoranthene, chrysene, and pyrene were less than the lower quality control limit in the LCS and LCSD. The compounds benzo(a)pyrene, benzo(b)fluoranthene, and fluoranthene were less than the lower quality control limit in the LCSD. The nondetected benzo(a)anthracene, benzo(k)fluoranthene, chrysene, and pyrene results in the rinsate blank, (DSY-SD-RB12-100711), were qualified as estimated (UJ). No action was taken on the recovery noncompliances in the LCSD because the LCS had acceptable recoveries.

The PAH SIM LCS / LCSD associated with the rinse blank (DSY-SD-RB12-100711) had a %R of benzo(a)pyrene less than the lower quality control limit in the LCS and LCSD. The nondetected benzo(a)pyrene result in the rinsate blank, (DSY-SD-RB12-100711), was qualified as estimated (UJ).

The PCB LCS / LCSD associated with batch WG98971 had a %R of Aroclor-1260 less than the lower quality control limit in the LCS. No action was taken on the recovery noncompliance in the LCS because the LCSD had an acceptable recovery.

NOTES

One cooler had a temperature of 8.2 degrees Celsius, greater than the 6 degrees Celsius quality control limit. The samples were collected on the same day as received by the laboratory and there were two bags of ice in the cooler with ice still present. No qualification action was taken on this basis as the cooling process had been started.

The surrogate nitrobenzene-d5 had a percent recovery less than the quality control limit for the LCSD associated with batch WG9866. No action was taken on this basis because QC samples are not qualified.

The CCV analyzed on 11/13/11 @09:53 on instrument GCMS-U had %D greater than the quality control limit for indeno(1,2,3-cd)pyrene. No action was taken on this basis because only QC samples were associated with this CCV and QC samples are not qualified.

The CCV analyzed on 11/14/11 @08:01 on instrument GCMS-U had %D greater than the quality control limit for benzo(b)fluoranthene. No action was taken on this basis because only QC samples were associated with this CCV and QC samples are not qualified.

The PAH laboratory control sample/laboratory control sample duplicate (LCS/LSCD) had a relative percent difference (RPD) for indeno(1,2,3-cd)pyrene greater than the 30% quality control limit. No action was taken in the affected samples because the %Rs for this compound were acceptable.

The internal standard areas for chrysene-d12 and perylene-d12 were greater than the upper quality control limit in sample DSY-SD-RB12-100711. No action was taken on this basis because all the results for the sample were nondetected.

The surrogate 2-methylnaphthalene-d10 had a percent recovery less than the quality control limit for the LCS associated with batch WG98968. No action was taken on this basis because QC samples are not qualified.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). All samples were analyzed by 8270C SIM for benzo(a)pyrene.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: A continuing calibration %D was noted in the PAH and PCB fraction. PAH LCS/LCSD %R noncompliances resulted in the qualification of data.

Other Factors Affecting Data Quality: Surrogate noncompliances were noted in the PAH and PCB fractions. Internal standard areas were noncompliant in several PAH fraction samples. PAH MS/MSD noncompliances resulted in qualification of the data. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082 listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-C13-0012			DSY-SD-C13-1224			DSY-SD-C13-2448			DSY-SD-C17-0012		
SDG: DSY-21	LAB_ID	SE6620-4			SE6620-5			SE6620-6			SE6620-8		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.7			78.8			77.8			71.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		140	J	P	310	U		320	U		330	U	
BENZO(B)FLUORANTHENE		350	U		310	U		320	U		330	U	
BENZO(G,H,I)PERYLENE		350	U		310	U		320	UJ	CD	330	U	
BENZO(K)FLUORANTHENE		350	U		310	U		320	U		330	U	
CHRYSENE		170	J	P	310	U		320	U		330	U	
DIBENZO(A,H)ANTHRACENE		350	UJ	C	310	UJ	C	320	U		330	UJ	C
FLUORANTHENE		350	U		310	U		320	U		330	U	
INDENO(1,2,3-CD)PYRENE		350	UJ	C	310	UJ	C	320	U		330	UJ	C
PYRENE		260	J	P	310	U		320	U		330	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-C17-1224			DSY-SD-C17-2448			DSY-SD-C29-0012			DSY-SD-C29-1224		
SDG: DSY-21	LAB_ID	SE6620-9			SE6620-10			SE6620-2			SE6620-3		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.5			79.7			40.8			49.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		300	U		620	J	P	520	J	NP
BENZO(B)FLUORANTHENE		300	U		300	U		670	J	NP	480	UJ	N
BENZO(G,H,I)PERYLENE		300	U		300	U		590	UJ	N	480	UJ	N
BENZO(K)FLUORANTHENE		300	U		300	U		660	J	NP	480	UJ	N
CHRYSENE		300	U		300	U		850			730	J	N
DIBENZO(A,H)ANTHRACENE		300	UJ	C	300	UJ	C	590	UJ	CN	480	UJ	CN
FLUORANTHENE		300	U		300	U		510	J	P	430	J	P
INDENO(1,2,3-CD)PYRENE		300	UJ	C	300	UJ	C	590	UJ	CN	480	UJ	CN
PYRENE		300	U		300	U		2500			3100	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-C29-2448			DSY-SD-DUP30-100711		
SDG: DSY-21	LAB_ID	SE6620-7			SE6620-1		
FRACTION: OS	SAMP_DATE	10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	71.2			77.9		
	DUP_OF				DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		340	U		300	U	
BENZO(B)FLUORANTHENE		340	U		300	U	
BENZO(G,H,I)PERYLENE		340	U		300	UJ	C
BENZO(K)FLUORANTHENE		340	U		300	U	
CHRYSENE		340	U		300	U	
DIBENZO(A,H)ANTHRACENE		340	UJ	C	300	U	
FLUORANTHENE		340	U		300	U	
INDENO(1,2,3-CD)PYRENE		340	UJ	C	300	U	
PYRENE		330	J	P	300	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB12-100711
SDG: DSY-21	LAB_ID	SE6620-11
FRACTION: OS	SAMP_DATE	10/7/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	7.1	UJ	E
BENZO(B)FLUORANTHENE	7.1	U	
BENZO(G,H,I)PERYLENE	7.1	UJ	C
BENZO(K)FLUORANTHENE	7.1	UJ	E
CHRYSENE	7.1	UJ	E
DIBENZO(A,H)ANTHRACENE	7.1	U	
FLUORANTHENE	7.1	U	
INDENO(1,2,3-CD)PYRENE	7.1	U	
PYRENE	7.1	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-C13-0012			DSY-SD-C13-1224			DSY-SD-C13-2448			DSY-SD-C17-0012		
SDG: DSY-21	LAB_ID	SE6620-4			SE6620-5			SE6620-6			SE6620-8		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.7			78.8			77.8			71.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		110	J	N	8.2	J	NP	13	UJ	N	44		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C17-1224			DSY-SD-C17-2448			DSY-SD-C29-0012			DSY-SD-C29-1224		
SDG: DSY-21	LAB_ID	SE6620-9			SE6620-10			SE6620-2			SE6620-3DL		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.5			79.7			40.8			49.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		5.6	J	NP	12	U		620	J	N	550		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C29-2448			DSY-SD-DUP30-100711		
SDG: DSY-21	LAB_ID	SE6620-7			SE6620-1		
FRACTION: PAH	SAMP_DATE	10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	71.2			77.9		
	DUP_OF				DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		84	J	R	12	UJ	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB12-100711		
SDG: DSY-21	LAB_ID	SE6620-11		
FRACTION: PAH	SAMP_DATE	10/7/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-C13-0012			DSY-SD-C13-1224			DSY-SD-C13-2448			DSY-SD-C17-0012		
SDG: DSY-21	LAB_ID	SE6620-4			SE6620-5			SE6620-6			SE6620-8		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.7			78.8			77.8			71.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	R	10	UJ	R	11	UJ	R	12	UJ	R
AROCLOR-1221		12	UJ	R	10	UJ	R	11	UJ	R	12	UJ	R
AROCLOR-1232		15	UJ	R	12	UJ	R	13	UJ	R	14	UJ	R
AROCLOR-1242		12	UJ	R	10	UJ	R	11	UJ	R	12	UJ	R
AROCLOR-1248		12	UJ	R	10	UJ	R	11	UJ	R	12	UJ	R
AROCLOR-1254		120	J	R	10	UJ	R	11	UJ	R	12	UJ	R
AROCLOR-1260		12	UJ	R	10	UJ	R	11	UJ	R	12	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-C17-1224			DSY-SD-C17-2448			DSY-SD-C29-0012			DSY-SD-C29-1224		
SDG: DSY-21	LAB_ID	SE6620-9			SE6620-10			SE6620-2			SE6620-3		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.5			79.7			40.8			49.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		10	U		20	UJ	R	17	UJ	R
AROCLOR-1221		10	U		10	U		20	UJ	R	17	UJ	R
AROCLOR-1232		12	U		12	U		24	UJ	R	20	UJ	R
AROCLOR-1242		10	U		10	U		20	UJ	R	17	UJ	R
AROCLOR-1248		10	U		10	U		20	UJ	R	17	UJ	R
AROCLOR-1254		10	U		10	U		470	J	R	550	J	R
AROCLOR-1260		10	U		10	U		20	UJ	R	17	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-C29-2448			DSY-SD-DUP30-100711		
SDG: DSY-21	LAB_ID	SE6620-7			SE6620-1		
FRACTION: PCB	SAMP_DATE	10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	71.2			77.9		
	DUP_OF				DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	R	11	UJ	R
AROCLOR-1221		12	UJ	R	11	UJ	R
AROCLOR-1232		14	UJ	R	13	UJ	R
AROCLOR-1242		12	UJ	R	11	UJ	R
AROCLOR-1248		12	UJ	R	11	UJ	R
AROCLOR-1254		59	J	CR	11	UJ	R
AROCLOR-1260		12	UJ	R	11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB12-100711
SDG: DSY-21	LAB_ID	SE6620-11
FRACTION: PCB	SAMP_DATE	10/7/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
AROCLOR-1016	0.24	UJ	R
AROCLOR-1221	0.24	UJ	R
AROCLOR-1232	0.24	UJ	R
AROCLOR-1242	0.24	UJ	R
AROCLOR-1248	0.24	UJ	R
AROCLOR-1254	0.24	UJ	R
AROCLOR-1260	0.24	UJ	R

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-4
Client ID: DSY-SD-C13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8644.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 68.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	140	ug/Kgdrywt	1	330	460	120	350
Benzo(b)fluoranthene	U	350	ug/Kgdrywt	1	330	460	190	350
Benzo(g,h,i)perylene	U	350	ug/Kgdrywt	1	330	460	140	350
Benzo(k)fluoranthene	U	350	ug/Kgdrywt	1	330	460	120	350
Chrysene	J	170	ug/Kgdrywt	1	330	460	130	350
Dibenzo(a,h)anthracene	U	350	ug/Kgdrywt	1	330	460	180	350
Fluoranthene	U	350	ug/Kgdrywt	1	330	460	150	350
Indeno(1,2,3-cd)pyrene	U	350	ug/Kgdrywt	1	330	460	170	350
Pyrene	J	260	ug/Kgdrywt	1	330	460	140	350
Nitrobenzene-d5		53.4	%					
2-Fluorobiphenyl		62.4	%					
Terphenyl-d14		77.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-5
Client ID: DSY-SD-C13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8637.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 79.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	310	ug/Kgdrywt	1	330	410	110	310
Benzo(b)fluoranthene	U	310	ug/Kgdrywt	1	330	410	170	310
Benzo(g,h,i)perylene	U	310	ug/Kgdrywt	1	330	410	130	310
Benzo(k)fluoranthene	U	310	ug/Kgdrywt	1	330	410	100	310
Chrysene	U	310	ug/Kgdrywt	1	330	410	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	410	160	310
Fluoranthene	U	310	ug/Kgdrywt	1	330	410	130	310
Indeno(1,2,3-cd)pyrene	U	310	ug/Kgdrywt	1	330	410	150	310
Pyrene	U	310	ug/Kgdrywt	1	330	410	130	310
Nitrobenzene-d5		47.4	%					
2-Fluorobiphenyl		56.2	%					
Terphenyl-d14		62.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-6
Client ID: DSY-SD-C13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	420	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	420	170	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	420	130	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	420	100	320
Chrysene	U	320	ug/Kgdrywt	1	330	420	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	420	160	320
Fluoranthene	U	320	ug/Kgdrywt	1	330	420	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	420	160	320
Pyrene	U	320	ug/Kgdrywt	1	330	420	130	320
Nitrobenzene-d5		29.8	%					
2-Fluorobiphenyl		38.1	%					
Terphenyl-d14		46.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-8
Client ID: DSY-SD-C17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8639.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 72.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	330	ug/Kgdrywt	1	330	440	120	330
Benzo(b)fluoranthene	U	330	ug/Kgdrywt	1	330	440	180	330
Benzo(g,h,i)perylene	U	330	ug/Kgdrywt	1	330	440	140	330
Benzo(k)fluoranthene	U	330	ug/Kgdrywt	1	330	440	110	330
Chrysene	U	330	ug/Kgdrywt	1	330	440	130	330
Dibenzo(a,h)anthracene	U	330	ug/Kgdrywt	1	330	440	170	330
Fluoranthene	U	330	ug/Kgdrywt	1	330	440	140	330
Indeno(1,2,3-cd)pyrene	U	330	ug/Kgdrywt	1	330	440	160	330
Pyrene	U	330	ug/Kgdrywt	1	330	440	140	330
Nitrobenzene-d5		28.8	%					
2-Fluorobiphenyl		50.9	%					
Terphenyl-d14		59.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-9
Client ID: DSY-SD-C17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8640.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 82.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	150	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		57.5	%					
2-Fluorobiphenyl		63.5	%					
Terphenyl-d14		70.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-10
Client ID: DSY-SD-C17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8641.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 80.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		47.9	%					
2-Fluorobiphenyl		51.2	%					
Terphenyl-d14		66.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-2
Client ID: DSY-SD-C29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8642.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 41.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	620	ug/Kgdrywt	1	330	790	210	590
Benzo(b)fluoranthene	J	670	ug/Kgdrywt	1	330	790	320	590
Benzo(g,h,i)perylene	U	590	ug/Kgdrywt	1	330	790	250	590
Benzo(k)fluoranthene	J	660	ug/Kgdrywt	1	330	790	200	590
Chrysene		850	ug/Kgdrywt	1	330	790	230	590
Dibenzo(a,h)anthracene	U	590	ug/Kgdrywt	1	330	790	310	590
Fluoranthene	J	510	ug/Kgdrywt	1	330	790	250	590
Indeno(1,2,3-cd)pyrene	U	590	ug/Kgdrywt	1	330	790	290	590
Pyrene		2500	ug/Kgdrywt	1	330	790	240	590
Nitrobenzene-d5		62.6	%					
2-Fluorobiphenyl		73.4	%					
Terphenyl-d14		73.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-3
Client ID: DSY-SD-C29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 49.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	520	ug/Kgdrywt	1	330	640	170	480
Benzo(b)fluoranthene	U	480	ug/Kgdrywt	1	330	640	260	480
Benzo(g,h,i)perylene	U	480	ug/Kgdrywt	1	330	640	200	480
Benzo(k)fluoranthene	U	480	ug/Kgdrywt	1	330	640	160	480
Chrysene		730	ug/Kgdrywt	1	330	640	180	480
Dibenzo(a,h)anthracene	U	480	ug/Kgdrywt	1	330	640	250	480
Fluoranthene	J	430	ug/Kgdrywt	1	330	640	210	480
Indeno(1,2,3-cd)pyrene	U	480	ug/Kgdrywt	1	330	640	240	480
Pyrene		3100	ug/Kgdrywt	1	330	640	200	480
Nitrobenzene-d5		52.1	%					
2-Fluorobiphenyl		77.6	%					
Terphenyl-d14		52.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-7
Client ID: DSY-SD-C29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8638.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 16-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 71.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	340	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	U	340	ug/Kgdrywt	1	330	450	110	340
Chrysene	U	340	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	180	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	450	140	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	170	340
Pyrene	J	330	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		43.4	%					
2-Fluorobiphenyl		61.7	%					
Terphenyl-d14		26.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-1
Client ID: DSY-SD-DUP30-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: U8617.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	410	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	410	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	410	130	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	410	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	410	120	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	410	160	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	410	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	410	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	410	120	300
Nitrobenzene-d5		63.4	%					
2-Fluorobiphenyl		67.3	%					
Terphenyl-d14		99.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-11
Client ID: DSY-SD-RB12-100711
Project: NAVSTA Newport CTO WE
SDG: DSY-21
Lab File ID: U8606.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		60.4						
2-Fluorobiphenyl		64.0						
Terphenyl-d14		64.8						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-4
Client ID: DSY-SD-C13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 68.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		110	ug/Kgdrywt	1	20	28.	4.6	14.
2-Methylnaphthalene-D10		54.0	%					
Fluorene-D10		69.3	%					
Pyrene-D10		109.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-5
Client ID: DSY-SD-C13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4003.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 79.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	8.2	ug/Kgdrywt	1	20	25.	4.1	12.
2-Methylnaphthalene-D10		49.2	%					
Fluorene-D10		62.7	%					
Pyrene-D10		52.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-6
Client ID: DSY-SD-C13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4004.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	13.	ug/Kgdrywt	1	20	26.	4.2	13.
2-Methylnaphthalene-D10		24.8	%					
Fluorene-D10		40.6	%					
Pyrene-D10		34.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-8
Client ID: DSY-SD-C17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4006.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 72.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		44.	ug/Kgdrywt	1	20	27.	4.4	13.
2-Methylnaphthalene-D10		29.1	%					
Fluorene-D10		67.6	%					
Pyrene-D10		62.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-9
Client ID: DSY-SD-C17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4007.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 82.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	5.6	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		55.1	%					
Fluorene-D10		65.2	%					
Pyrene-D10		58.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-10
Client ID: DSY-SD-C17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4008.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 80.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10		44.2	%					
Fluorene-D10		64.0	%					
Pyrene-D10		56.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-2
Client ID: DSY-SD-C29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 41.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		620	ug/Kgdrywt	1	20	48.	7.9	24.
2-Methylnaphthalene-D10		70.6	%					
Fluorene-D10		57.5	%					
Pyrene-D10		126.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-3DL
Client ID: DSY-SD-C29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 29-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 49.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		550	ug/Kgdrywt	2	20	78.	13.	39.
2-Methylnaphthalene-D10		45.6	%					
Fluorene-D10		58.8	%					
Pyrene-D10		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-7
Client ID: DSY-SD-C29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G4005.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 18-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 71.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		84.	ug/Kgdrywt	1	20	28.	4.5	14.
2-Methylnaphthalene-D10		45.9	%					
Fluorene-D10	*	93.2	%					
Pyrene-D10		82.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-1
Client ID: DSY-SD-DUP30-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 17-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 78.
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	25.	4.1	12.
2-Methylnaphthalene-D10		60.6	%					
Fluorene-D10		69.5	%					
Pyrene-D10		100.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-11
Client ID: DSY-SD-RB12-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-21
Lab File ID: G3948.D

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-4
Client ID: DSY-SD-C13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 68.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	25.	8.8	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	25.	12.	12.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	25.	14.	15.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	25.	8.5	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	25.	8.9	12.
Aroclor-1254		120	ug/Kgdrywt	1	17	25.	6.9	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	25.	8.8	12.
Tetrachloro-M-Xylene		64.5	%					
Decachlorobiphenyl	*	51.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-5
Client ID: DSY-SD-C13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 79.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		67.5	%					
Decachlorobiphenyl	*	48.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-6
Client ID: DSY-SD-C13-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		69.4	%					
Decachlorobiphenyl	*	57.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-8
Client ID: DSY-SD-C17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 72.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	23.	8.2	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	23.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	23.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	23.	7.9	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	23.	8.4	12.
Aroclor-1254	U	12.	ug/Kgdrywt	1	17	23.	6.4	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	23.	8.2	12.
Tetrachloro-M-Xylene	*	54.2	%					
Decachlorobiphenyl	*	44.1	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-9
Client ID: DSY-SD-C17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 82.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.5	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		75.4	%					
Decachlorobiphenyl		67.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-10
Client ID: DSY-SD-C17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 80.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.5	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.8	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	12.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.2	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.6	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.9	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.5	10.
Tetrachloro-M-Xylene		66.7	%					
Decachlorobiphenyl		63.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-2
Client ID: DSY-SD-C29-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 41.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	41.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	41.	15.	20.
Aroclor-1254		470	ug/Kgdrywt	1	17	41.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Tetrachloro-M-Xylene	*	35.8	%					
Decachlorobiphenyl	*	37.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-3
Client ID: DSY-SD-C29-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: C
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 49.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	19.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		550	ug/Kgdrywt	1	17	34.	9.5	17.
Aroclor-1260	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		56.3	%					
Decachlorobiphenyl		71.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-7
Client ID: DSY-SD-C29-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 71.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.4	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.1	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.5	12.
Aroclor-1254		59.	ug/Kgdrywt	1	17	24.	6.6	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.4	12.
Tetrachloro-M-Xylene		60.0	%					
Decachlorobiphenyl		67.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-1
Client ID: DSY-SD-DUP30-100711
Project: NAVSTA Newport CTO WE(
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Tetrachloro-M-Xylene		68.5	%					
Decachlorobiphenyl	*	51.0	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6620-11
Client ID: DSY-SD-RB12-100711
Project: NAVSTA Newport CTO WE
SDG: DSY-21

Sample Date: 07-OCT-11
Received Date: 07-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 26-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 22-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene	*	55.6	%					
Decachlorobiphenyl	*	20.4	%					

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APPENDIX C

REGIONAL WORKSHEETS

Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Newport
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin Analytical Services
Case/Project No. _____
SDG No. D5Y-21
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. See DV Report

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- LICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit
UJ - The sample quantitation limit is an estimated quantity
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Edward Ludlum Company Name TetraTech Phone Number 412-921-8704

Date Validation Started Dec 18, 2011

Date Validation Completed Dec. 20, 2011

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	____
VOA/SV-III	INITIAL CALIBRATION	____
VOA/SV-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	____
SV-VI	SV SURROGATE SPIKE RECOVERIES	____
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	____
VOA/SV-XV	SEMIVOLATILE CLEANUP	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____
		____

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	____
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	____
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	____
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	____
Pest/PCB-III	INITIAL CALIBRATION	____
Pest/PCB-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
Pest/PCB-VI	SURROGATE COMPOUNDS	____
Pest/PCB-VII	SPIKE RECOVERIES AND RETENTION TIME SHIFT	
VOA/SV-Pest/PCB-VIII	PESTICIDE CLEANUP	____
VOA/SV-Pest/PCB-IX	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-X	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-XI	SENSITIVITY CHECK	____
Pest/PCB-XII	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XIII	COMPOUND IDENTIFICATION	____
TABLE II-WORKSHEET	SAMPLE QUANTITATION	____
	OVERALL EVALUATION OF DATA	____
		____

I certify that all criteria were met for the worksheets checked above

Signature Edward Sedlmyer

Name Edward Sedlmyer

Date 12/20/2011

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Sedlmyer

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Kwellyer

Date: 12/20/2011

See DV Report

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received

Validator Edward Sedlmyer Date: 12/20/2011

EPA-NE - Data Validation
VOA/SV - Pest/PCB-1

See DV Report

Sampler _____ Company: _____ Contacted: Yes No Date: _____

I. PRESERVATION AND HOLDING TIMES -

Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No (TR No.)	Matrix	Pres Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Ac

Preservation Code:
1 Cool @ 4°C (± 2°)
2 Preserve with HCl to at least pH 2
3 Protect from light
4 Freeze
5 Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Edward Sullivan

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV-II

See DV Report

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Edward Kuchinyer

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Edward Swallow

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments

Validator: Edward Sedlmayer

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-A

See DV Report

V. BLANK ANALYSIS

List the blank contamination below.

Sampler: _____ Company: _____ Concentration Level: _____

1. Laboratory: Method, Storage and Instrument Blanks

Contacted: Yes No Date: _____

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Edward Hedlund

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. Blank Actions - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: Edward Kedlaya

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
OLM03.2	Toluene-d_8 Water 88-110 Soil 84-138	BFB Water 86-115 Soil 59-113	DCE-d_4 Water 76-114 Soil 70-121	Other:	
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	Action

Validator: Edward Lechlinger

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

* Advisory Surrogates - OLM03.2

Validator: Edward Bradley

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Edward Sedlmayr

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator Edward Kudlayer

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

See DV Report

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Edward Hedbury Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

See DV Report

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D _____ Same as samples? Y N
- Column I.D _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Edward Hedberg

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

See DV Report

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HI TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUNI HIT (% Recovery Limits)

Validator: Edward Kedlaya

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	___RRT	Action

Validator: Edward Sedlazo

Date: 12/20/2011

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C. 1.a. requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an exam for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.		
Reported Compound		
Reported Value		
Not Detected Compound		
Reported Quantitation Limit		
BNA		
Sample No.		
Reported Compound		
Reported Value		
Not Detected Compound		
Reported Quantitation Limit		
Pesticide/PCB		
Sample No.		
Reported Compound		
Reported Value		
Not Detected Compound		
Reported Quantitation Limit		

Validator: Edward Kadlubowski

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

NA

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Edward Sullivan

Date: 12/20/2011

EPA-NE - Data Validation Worksheet
VOA/SV-XV

See DV Report

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet: resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Edward Kudlyn

Date: 12/20/2011

APPENDIX D

SUPPORT DOCUMENTATION

HOLDTIME

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-N24-2448	SE6617-009	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-DUP26-100511	SE6617-010	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-1224	SE6617-018	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-0012	SE6617-017	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-2448	SE6617-016	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N28-1224	SE6617-015	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-0012	SE6617-014	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N26-2448	SE6617-013	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N30-2448	SE6617-019	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N26-0012	SE6617-011	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-Q25-0012	SE6617-020	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-1224	SE6617-008	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-0012	SE6617-007	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-L26-2448	SE6617-002	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L26-1224	SE6617-001	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L24-2448	SE6617-005	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-L24-1224	SE6617-004	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-L24-0012	SE6617-003	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-N26-1224	SE6617-012	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-19	M	MG/KG	DSY-SD-T25-2448	SE6618-010	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-2448	SE6618-005	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-1224	SE6618-004	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-0012	SE6618-003	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W24-2448	SE6618-019	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-1224	SE6618-018	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-0012	SE6618-017	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-2448	SE6618-016	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-DUP27-100511	SE6618-006	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T29-0012	SE6618-014	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T25-1224	SE6618-009	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T25-0012	SE6618-008	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-Q29-2448	SE6618-013	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-1224	SE6618-012	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-0012	SE6618-011	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q25-2448	SE6618-002	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	M	MG/KG	DSY-SD-Q25-1224	SE6618-001	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-DUP28-100611	SE6618-020	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-1224	SE6618-015	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-C25-1224	SE6619-009	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-W30-0012	SE6619-001	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-2448	SE6619-006	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-1224	SE6619-005	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-18-0012	SE6619-015	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-18-1224	SE6619-016	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-18-2448	SE6619-017	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-0012	SE6619-018	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-1224	SE6619-019	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-2448	SE6619-020	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-0012	SE6619-012	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-1224	SE6619-013	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-W30-1224	SE6619-002	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C25-0012	SE6619-008	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C25-2448	SE6619-010	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-DUP29-100711	SE6619-011	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	M	MG/KG	DSY-SD-G25-0012	SE6767-021	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP32-101211	SE6767-017	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/31/2011	15	4	19
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-1224	SE6767-005	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-0012	SE6767-001	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-2448	SE6767-006	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-2448	SE6767-016	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-0012	SE6767-011	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-1224	SE6767-019	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-2448	SE6767-010	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-1224	SE6767-015	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-0012	SE6767-004	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-2448	SE6767-003	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-1224	SE6767-012	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-2448	SE6767-013	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-0012	SE6767-014	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-1224	SE6767-002	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-23	M	MG/KG	DSY-SD-AA01-0012	SE6768-001	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	M	MG/KG	DSY-SD-AA01-1224	SE6768-002	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA01-2448	SE6768-003	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-0012	SE6768-005	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-1224	SE6768-006	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-2448	SE6768-007	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-DUP33-101211	SE6768-004	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-G30-0018	SE6841-024	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-0012	SE6841-022	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-0012	SE6841-014	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA28-0016	SE6841-020	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-1224	SE6841-023	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-DUP34-101311	SE6841-013	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-0012	SE6841-001	NM	10/13/2	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA26-2448	SE6841-019	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-1224	SE6841-002	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA09-2448	SE6841-003	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-0012	SE6841-004	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-1224	SE6841-005	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-DUP35-101311	SE6841-021	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TOC	MG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-22	TOC	MG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-18	TS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-19	TS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	TS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/24/2011	10/26/2011	18	2	20
DSY-19	TS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	TS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-21	TS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-22	TS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	TS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-24	TS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	SUR	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	SUR	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	SUR	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	SUR	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	SUR	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	SUR	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	SUR	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	SUR	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	SUR	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-20	OS	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-21	OS	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-23	OS	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7DL	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-24	OS	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-19	OS	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	OS	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	OS	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-18	SIM	%	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	SIM	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	SIM	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	%	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-20	SIM	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	SIM	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-21	SIM	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	SIM	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-22	SIM	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-23	SIM	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-24	SIM	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48
DSY-18	SIM	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	UG/KG	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	SIM	UG/KG	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-21	SIM	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-22	SIM	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-23	SIM	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-24	SIM	UG/KG	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-18	SIM	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-20	SIM	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	SIM	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	SIM	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-18	PCB	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-18	PCB	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-19	PCB	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20
DSY-19	PCB	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-20	PCB	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-20	PCB	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-21	PCB	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-21	PCB	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	PCB	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-23	PCB	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11
DSY-24	PCB	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16RE	NM	10/05/2011	11/21/2011	11/22/2011	47	1	48
DSY-18	PCB	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-19	PCB	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-21	PCB	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-19	PCB	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-21	PCB	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-23	PCB	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-24	PCB	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-21
SE6620

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6620 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6620-1	DSY-SD-DUP30-100711
SE6620-2	DSY-SD-C29-0012
SE6620-3	DSY-SD-C29-1224
SE6620-4	DSY-SD-C13-0012
SE6620-5	DSY-SD-C13-1224
SE6620-6	DSY-SD-C13-2448
SE6620-7	DSY-SD-C29-2448
SE6620-8	DSY-SD-C17-0012
SE6620-9	DSY-SD-C17-1224
SE6620-10	DSY-SD-C17-2448
SE6620-11	DSY-SD-RB12-100711

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-21 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6620-6 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.
All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6620-11 was spiked only with the 8270-SCAN surrogates. The soil MS/MSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The soil LCS/LCSD WG99422-2 and 3 were lost in a GPC instrument malfunction. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD or MS/MSD.

Samples SE6620-1, 2, 3DL and 7 were manually integrated for the surrogates fluorene-d10, pyrene-d10, the internal standards phenanthrene-d10, chyresene-d12 and/or perylene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative. Samples SE6620-7 had a high recovery for the surrogate fluorene-d10, which was outside the laboratory established acceptance limits. Since this surrogate is not associated with the target analyte benzo(a)pyrene, the sample was not reanalyzed.

Samples SE6620-1, 2, 4, 5, 6, 9, 10 and the laboratory method blank WG99422-1 had low or high responses for the internal standards acenaphthene-d10, phenanthrene-d10, chrysene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The CV (file G3999) had a low response for the surrogate pyrene-d10 which resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1. Also, the CV had high responses for the internal standards chrysene-d12 and perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The LCS and LCSD WG98968-2 and 3 had low recoveries for the compound benzo(a)pyrene, which were outside of the laboratory established acceptance limits. Also, the LCS had a low recovery for one surrogate.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Samples SE6620-2, 3, 11, the method blanks WG99420-1 and WG98966-1, and the LCSD WG98966-3 had high or low responses for the internal standards chyrsene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard.

The CV (file U8562) had a low response for the analyte indeno(1,2,3-cd)pyrene. The CV (file U8582) had a high response for the analyte benzo(b)fluoranthene. The CV (file U8602) had a low response for the analyte benzo(g,h,i)perylene. The CV (file U8631) had low responses for the analytes indeno(1,2,3-cd)perylene and dibenzo(a,h)anthracene, These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCS WG98966-2 and the LCSD WG98966-3 had four and seven spiked target analytes, respectively, with recoveries that were low and outside of the laboratory established acceptance limits. The LCSD also had a low recovery for the surrogate nitrobenzene-d5, which was outside the laboratory established acceptance limits. DoD QSM Version 4.1 Section G.7 lists the acceptance limits of the SW-846 Method 8270 target analytes. If the DoD QSM acceptance limits are applied, the LCS had acceptable recoveries for all of the target analytes. Therefore, no further action was taken.

8082 Analysis

Surrogate recoveries for the samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6620-2, 3, and 7 were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6620-1 through 8 and the associated MS/MSD WG99849-4 and 5 had low recoveries for TCX on one or both channels and/or DCB on one or both channels, which were outside the laboratory established acceptance limits. The associated method blank and LCS/LCSD had acceptable surrogate recoveries. The MS/MSD and native sample had low surrogate recoveries, confirming a matrix effect. For these reasons, these samples were not reextracted.

Sample SE6620-11 had low recoveries for TCX and DCB on both channels, which were outside the laboratory established acceptance limits. The method blank, LCS, and LCSD, WG98971-1, 2, and 3 had low recoveries for TCX on both channels. Since the recoveries for DCB were acceptable in the method blank and LCS/LCSD, no further action was taken.

The opening calibration verification standard (CV) (file 7EK122) had a low response for DCB on both channels, as well as a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recovery of DCB may be biased low.

The closing CV (file 7EK137) had a high response for TCX and a low response for DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK183) had a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG98971-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-21 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6620-11 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6620-(1-10) were digested for ICP analysis on 10/23/11 (QC Batch BJ23ICS2) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6620-6 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-21 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6620-6 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6620-6 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6620-6 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6620-6 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-21 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.02.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

0000008

Project: Derecktor	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE1d016 to SE16620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 1 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 4.3
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0006009

Project: Direct Ion	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66116 to SE66120	KIMS Review By:	Received By: DM
SDG #:	Cooler: 2 of 67 WCW 10/7/11	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?				✓	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000010

Project: Dereckton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL66116 to SEL66120	KIMS Review By:	Received By: DM
SDG #:	Cooler: 3 of 7	Date/Time Rec.: 10/7/11 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project: Deerfield	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SEL0116 to SEL0620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 4 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 2.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000012

Project: Dereckton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66116 to 66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 5 of 67 10/7/11 WCW	Date/Time Rec.: 10/7/11 / 1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓	X 10.10.11			Temp (°C): 8.2
Samples received at <6 °C w/o freezing?		X			Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?	✓			✓ 10.10.11	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9 Cyanide – pH >12	✓			✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

2 Bags of ice - partially melted

No Temp Blanks

called client - temp. was greater than 6°C - Samples in cooler collected on same day as delivery to lab. Cooling process started.

QP 10.10.11

0000013

Project: Direct Ion	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 6 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 3.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certai regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2# Sulfide - >9 Cyanide – pH >12				✓ ✓ ✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Tetra Tech NUS	KAS PM: JU	Cooler
Project: Deer Park Ton	KIMS Entry By: DM	Delivered By: KAS
KAS Work Order#: SE66616 to SE66620	KIMS Review By:	Received By: DM
SDG #:	Cooler: 7 of 7	Date/Time Rec.: 10/7/11/1730

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				X	
2. Chain of Custody present in cooler?				X	
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 4.0
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample ID DSY-SD-03-2448 labeled Time 2 jars 1006, 2 jars 1106
Time on COC = 1106

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ___ of ___

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8455

Address	City	State	Zip Code
250 Andover St. Suite 200	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE10019 / SE10020

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-C25-0012	10/7/11 / 0800	SED	3	X	X	X	X							
	DSY-SD-C25-1224	/ 0803		2	X	X		X							
	DSY-SD-C25-2448	/ 0806		2	X	X		X							
	DSY-SD-DUP29-100711	/ —		2	X	X		X							
	DSY-SD-C21-0012	/ 0810		3	X	X	X	X							
	DSY-SD-C21-1224	/ 0843		2	X	X		X							
	DSY-SD-C21-2448	/ 0846		2	X	X		X							
	DSY-SD-18-0012	/ 1000		3	X	X	X	X							
	DSY-SD-18-1224	/ 1003		2	X	X		X							
	DSY-SD-18-2448	/ 1006		2	X	X		X							
	DSY-SD-C09-0012	/ 1020		3	X	X	X	X							
	DSY-SD-C09-1224	/ 1023		2	X	X		X	X						
	DSY-SD-C09-2448	/ 1026		2	X	X			X						
	DSY-SD-DUP30-100711	/ —		2	X	X			X						
	DSY-SD-C29-0012	/ 1125		3	X	X	X	X							
	DSY-SD-C29-1224	↓ / 1128	↓	2	X	X		X							

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Horton	10/7/11 1300	Andrew Hamilton			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Dorchester Bay	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER ____

REMARKS: SE1620

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)
	DSY-SD-C13-0012	10/7/11 / 1105	SED	3	X	X	X	X
	DSY-SD-C13-1224	/ 1103		2	X	X		X
	DSY-SD-C13-2448	/ 1106		2	X	X		X
	DSY-SD-C29-2448	/ 1131		2	X	X		X
	DSY-SD-C17-0012	/ 1150		3	X	X	X	X
	DSY-SD-C17-1224	/ 1153		2	X	X		X
	DSY-SD-C17-2448	/ 1156		2	X	X		X
	DSY-SD-RB12-100711	10/7/11 / 1245	AQ	5	X	X		X
		/						
		/						
		/						
		/						
		/						
		/						
		/						
		/						

COMMENTS DSY-SD-C13-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

000017

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

AS-COC1

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1 %.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-21

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-DUP30-100711	SE6620-1	67.3		63.4		99.0		0
DSY-SD-C17-2448	SE6620-10	51.2		47.9		66.5		0
DSY-SD-C29-0012	SE6620-2	73.4		62.6		73.4		0
DSY-SD-C29-1224	SE6620-3	77.6		52.1		52.1		0
DSY-SD-C13-0012	SE6620-4	62.4		53.4		77.4		0
DSY-SD-C13-1224	SE6620-5	56.2		47.4		62.0		0
DSY-SD-C13-2448	SE6620-6	38.2		29.8		46.8		0
DSY-SD-C29-2448	SE6620-7	61.7		43.4		26.7		0
DSY-SD-C17-0012	SE6620-8	50.9		28.8		59.8		0
DSY-SD-C17-1224	SE6620-9	63.5		57.5		70.5		0
Method Blank Sample	WG99420-1	60.2		55.5		65.6		0
Laboratory Control S	WG99420-2	64.6		56.4		65.9		0
Laboratory Control S	WG99420-3	63.3		53.9		67.0		0
Matrix Spike	WG99420-4	59.2		58.2		77.9		0
Matrix Spike Duplica	WG99420-5	58.9		57.5		83.6		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-21

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB12-100711	SE6620-11	64.0		60.4		64.8		0
Method Blank Sample	WG98966-1	50.3		42.6		61.3		0
Laboratory Control S	WG98966-2	65.0		55.0		58.1		0
Laboratory Control S	WG98966-3	44.8		37.0	*	51.0		1

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: UD722 DFTPP Injection Date: 11/12/11

Instrument ID: GCMS-U DFTPP Injection Time: 0905

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	25.1
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.3 (81.6)2
442	40.0 - 100.0% of mass 198	87.6
443	17.0 - 23.0% of mass 442	16.3 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1112	U8539	11/12/11	0925
02		SSTD010U1112	U8540	11/12/11	1009
03		SSTD025U1112	U8541	11/12/11	1053
04		SSTD075U1112	U8542	11/12/11	1138
05		SSTD100U1112	U8543	11/12/11	1222
06		SSTD125U1112	U8544	11/12/11	1307
07		8270 IND CHECK	U8545	11/12/11	1352
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-U Calibration Date(s): 11/12/11 11/12/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0925 1307

LAB FILE ID: RF10: U8540 RF25: U8541 RF50: U8539B
RF75: U8542 RF100: U8543 RF125: U8544

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	0.846	0.849	0.922	0.854	0.740	0.710	AVRG	0.82028951	9.685	30.000
Pyrene	1.574	1.420	1.691	1.452	1.565	1.802	AVRG	1.58392524	9.095	15.000
Benzo(a)anthracene	0.985	0.989	1.100	1.002	0.938	0.959	AVRG	0.99552486	5.647	15.000
Chrysene	1.020	0.944	1.034	0.914	0.855	0.872	AVRG	0.93981116	7.942	15.000
Benzo(b)fluoranthene	0.866	0.962	1.283	1.148	1.005	1.023	AVRG	1.04784339	14.033	15.000
Benzo(k)fluoranthene	1.618	1.555	1.615	1.468	1.252	1.374	AVRG	1.48031152	9.842	15.000
Benzo(a)pyrene	0.869	1.021	1.149	1.052	0.942	1.017	AVRG	1.00839806	9.484	30.000
Indeno(1,2,3-cd)pyrene	0.650	0.758	0.736	0.751	0.563	0.621	AVRG	0.67995155	11.823	15.000
Dibenzo(a,h)anthracene	0.487	0.624	0.621	0.648	0.715	0.669	AVRG	0.62736016	12.246	15.000
Benzo(g,h,i)perylene	0.533	0.604	0.600	0.639	0.690	0.667	AVRG	0.62216363	9.007	15.000
Nitrobenzene-D5	0.339	0.342	0.376	0.336	0.311	0.322	AVRG	0.33760836	6.558	15.000
2-Fluorobiphenyl	1.308	1.225	1.284	1.200	1.058	1.040	AVRG	1.18601809	9.535	15.000
Terphenyl-D14	0.912	0.843	1.010	0.896	0.954	1.072	AVRG	0.94783144	8.752	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: UD723 DFTPP Injection Date: 11/13/11

Instrument ID: GCMS-U DFTPP Injection Time: 0933

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.8
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.6
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.2 (79.9)2
442	40.0 - 100.0% of mass 198	90.1
443	17.0 - 23.0% of mass 442	17.7 (19.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1113	U8562	11/13/11	0953
02	WG99420-BLANK	WG99420-1	U8563	11/13/11	1038
03	WG98966-BLANK	WG98966-1	U8565	11/13/11	1206
04	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
05	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
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Katahdin Analytical Services A0000026

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-U Calibration Date: 11/13/11 Time: 0953

Lab File ID: U8562 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.8628800	0.01	5.23	20.01	AVRG	
Pyrene	1.5840000	1.3117000	0.01	-17.19	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9761800	0.01	-1.99	20.00	AVRG	
Chrysene	0.9400000	0.8921600	0.01	-5.09	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.0438000	0.01	-0.40	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3342000	0.01	-9.85	20.00	AVRG	
Benzo(a)pyrene	1.0080000	1.0022000	0.01	-0.58	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6800000	0.5385100	0.01	-20.81	20.00	AVRG	<-
Dibenzo(a,h)anthracene	0.6270000	0.6103800	0.01	-2.65	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.5912900	0.01	-4.94	20.00	AVRG	
Nitrobenzene-D5	0.3380000	0.3131300	0.01	-7.36	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.1084000	0.01	-6.54	20.00	AVRG	
Terphenyl-D14	0.9480000	0.8075400	0.01	-14.82	20.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: UD724 DFTPP Injection Date: 11/14/11

Instrument ID: GCMS-U DFTPP Injection Time: 0741

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.7
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	49.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	13.9 (80.0)2
442	40.0 - 100.0% of mass 198	88.4
443	17.0 - 23.0% of mass 442	17.3 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1114	U8582	11/14/11	0801
02	WG99420-LCS	WG99420-2	U8585	11/14/11	1015
03	WG99420-LCSD	WG99420-3	U8586	11/14/11	1100
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-U Calibration Date: 11/14/11 Time: 0801

Lab File ID: U8582 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.9221000	0.01	12.45	20.01	AVRG	
Pyrene	1.5840000	1.6913000	0.01	6.77	20.00	AVRG	
Benzo(a)anthracene	0.9960000	1.1002000	0.01	10.46	20.00	AVRG	
Chrysene	0.9400000	1.0344000	0.01	10.04	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.2828000	0.01	22.40	20.00	AVRG	<-
Benzo(k)fluoranthene	1.4800000	1.6154000	0.01	9.15	20.00	AVRG	
Benzo(a)pyrene	1.0080000	1.1494000	0.01	14.03	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6800000	0.7363600	0.01	8.29	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6270000	0.6211200	0.01	-0.94	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.6004100	0.01	-3.47	20.00	AVRG	
Nitrobenzene-D5	0.3380000	0.3757100	0.01	11.16	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.2841000	0.01	8.27	20.00	AVRG	
Terphenyl-D14	0.9480000	1.0098000	0.01	6.52	20.00	AVRG	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: UD725 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-U DFTPP Injection Time: 0733

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	41.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	13.2 (80.8)2
442	40.0 - 100.0% of mass 198	86.1
443	17.0 - 23.0% of mass 442	16.4 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1115	U8602	11/15/11	0754
02	DSY-SD-RB12-100711	SE6620-11	U8606	11/15/11	1054
03	DSY-SD-C13-2448	SE6620-6	U8614	11/15/11	1655
04	DSY-SD-C13-2448MS	WG99420-4	U8615	11/15/11	1740
05	DSY-SD-C13-2448MSD	WG99420-5	U8616	11/15/11	1824
06	DSY-SD-DUP30-100711	SE6620-1	U8617	11/15/11	1909
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-U Calibration Date: 11/15/11 Time: 0754

Lab File ID: U8602 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.6604500	0.01	-19.46	20.01	AVRG	
Pyrene	1.5840000	1.7244000	0.01	8.86	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9291400	0.01	-6.71	20.00	AVRG	
Chrysene	0.9400000	0.8601200	0.01	-8.50	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.0448000	0.01	-0.30	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3734000	0.01	-7.20	20.00	AVRG	
Benzo(a)pyrene	1.0080000	0.9161700	0.01	-9.11	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6800000	0.6212100	0.01	-8.64	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6270000	0.5021200	0.01	-19.92	20.00	AVRG	
Benzo(g,h,i)perylene	0.6220000	0.4882800	0.01	-21.50	20.00	AVRG	<-
Nitrobenzene-D5	0.3380000	0.3146100	0.01	-6.92	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.0799000	0.01	-8.95	20.00	AVRG	
Terphenyl-D14	0.9480000	1.0064000	0.01	6.16	20.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: UD726 DFTPP Injection Date: 11/16/11

Instrument ID: GCMS-U DFTPP Injection Time: 0641

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	37.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.7
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.4
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	14.9 (80.3)2
442	40.0 - 100.0% of mass 198	96.9
443	17.0 - 23.0% of mass 442	18.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1116	U8631	11/16/11	0701
02	DSY-SD-C13-1224	SE6620-5	U8637	11/16/11	1134
03	DSY-SD-C29-2448	SE6620-7	U8638	11/16/11	1219
04	DSY-SD-C17-0012	SE6620-8	U8639	11/16/11	1304
05	DSY-SD-C17-1224	SE6620-9	U8640	11/16/11	1349
06	DSY-SD-C17-2448	SE6620-10	U8641	11/16/11	1435
07	DSY-SD-C29-0012	SE6620-2	U8642	11/16/11	1519
08	DSY-SD-C29-1224	SE6620-3	U8643	11/16/11	1605
09	DSY-SD-C13-0012	SE6620-4	U8644	11/16/11	1650
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-U Calibration Date: 11/16/11 Time: 0701

Lab File ID: U8631 Init. Calib. Date(s): 11/12/11 11/12/11

Init. Calib. Times: 0925 1307

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Fluoranthene	0.8200000	0.7906600	0.01	-3.58	20.01	AVRG	
Pyrene	1.5840000	1.5238000	0.01	-3.80	20.00	AVRG	
Benzo(a)anthracene	0.9960000	0.9740900	0.01	-2.20	20.00	AVRG	
Chrysene	0.9400000	0.9095900	0.01	-3.24	20.00	AVRG	
Benzo(b)fluoranthene	1.0480000	1.2173000	0.01	16.15	20.00	AVRG	
Benzo(k)fluoranthene	1.4800000	1.3888000	0.01	-6.16	20.00	AVRG	
Benzo(a)pyrene	1.0080000	1.0013000	0.01	-0.66	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6800000	0.4109500	0.01	-39.57	20.00	AVRG	<-
Dibenzo(a,h)anthracene	0.6270000	0.4471800	0.01	-28.68	20.00	AVRG	<-
Benzo(g,h,i)perylene	0.6220000	0.5059100	0.01	-18.66	20.00	AVRG	
Nitrobenzene-D5	0.3380000	0.3353300	0.01	-0.79	20.00	AVRG	
2-Fluorobiphenyl	1.1860000	1.1319000	0.01	-4.56	20.00	AVRG	
Terphenyl-D14	0.9480000	0.9131100	0.01	-3.68	20.00	AVRG	

FORM VII PEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99420-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: U8563 Lab Sample ID: WG99420-1

Instrument ID: GCMS-U Date Extracted: 10/19/11

Matrix: (soil/water) SOIL Date Analyzed: 11/13/11

Level: (low/med) LOW Time Analyzed: 1038

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG99420-LCS	WG99420-2	U8585	11/14/11	1015
02	WG99420-LCSD	WG99420-3	U8586	11/14/11	1100
03	DSY-SD-C13-2448	SE6620-6	U8614	11/15/11	1655
04	DSY-SD-C13-2448MS	WG99420-4	U8615	11/15/11	1740
05	DSY-SD-C13-2448MSD	WG99420-5	U8616	11/15/11	1824
06	DSY-SD-DUP30-100711	SE6620-1	U8617	11/15/11	1909
07	DSY-SD-C13-1224	SE6620-5	U8637	11/16/11	1134
08	DSY-SD-C29-2448	SE6620-7	U8638	11/16/11	1219
09	DSY-SD-C17-0012	SE6620-8	U8639	11/16/11	1304
10	DSY-SD-C17-1224	SE6620-9	U8640	11/16/11	1349
11	DSY-SD-C17-2448	SE6620-10	U8641	11/16/11	1435
12	DSY-SD-C29-0012	SE6620-2	U8642	11/16/11	1519
13	DSY-SD-C29-1224	SE6620-3	U8643	11/16/11	1605
14	DSY-SD-C13-0012	SE6620-4	U8644	11/16/11	1650
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99420-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21
Lab File ID: U8563.D

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		55.5	%					
2-Fluorobiphenyl		60.2	%					
Terphenyl-d14		65.6	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH
nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99420-2
LCSD ID: WG99420-3
Project:
SDG: DSY-21
Report Date: 29-NOV-11

Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420

Analysis Date: 14-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1050	62.9	1080	64.7	ug/Kgdrywt	3	30	40-100
Benzo(a)pyrene	1670	1110	66.5	1190	71.2	ug/Kgdrywt	7	30	40-100
Benzo(b)fluoranthene	1670	1140	68.3	1140	68.3	ug/Kgdrywt	0	30	40-100
Benzo(g,h,i)perylene	1670	1120	67.1	1100	65.9	ug/Kgdrywt	2	30	40-100
Benzo(k)fluoranthene	1670	1060	63.5	1100	65.9	ug/Kgdrywt	4	30	40-100
Chrysene	1670	1230	73.6	1280	76.6	ug/Kgdrywt	4	30	40-100
Dibenzo(a,h)anthracene	1670	1040	62.3	998.	59.8	ug/Kgdrywt	4	30	40-100
Fluoranthene	1670	1250	74.8	1250	74.8	ug/Kgdrywt	0	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1450	86.8	832.	49.8	ug/Kgdrywt	54*	30	40-100
Pyrene	1670	1080	64.7	1080	64.7	ug/Kgdrywt	0	30	40-100
Nitrobenzene-d5			56.4		53.9				24-81
2-Fluorobiphenyl			64.6		63.3				29-83
Terphenyl-d14			65.9		67.0				24-136

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MS/MSD Recovery Report

MS ID: WG99420-4
MSD ID: WG99420-5
Sample ID: SE6620-6
Client ID: DSY-SD-C13-2448
Project:
SDG: DSY-21

Received Date: 07-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99420
Report Date: 29-NOV-11

Analysis Date: 15-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 78.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	2130	2070	ug/Kgdrywt	U320	1300	1300	61.1	64.7	3	30	40-100
Benzo(a)pyrene	2130	2070	ug/Kgdrywt	U320	1400	1400	66.8	68.5	0	30	40-100
Benzo(b)fluoranthene	2130	2070	ug/Kgdrywt	U320	1500	1600	72.4	78.7	6	30	40-100
Benzo(g,h,i)perylene	2130	2070	ug/Kgdrywt	U320	710	810	33.2*	39.1*	14	30	40-100
Benzo(k)fluoranthene	2130	2070	ug/Kgdrywt	U320	1600	1600	74.8	78.2	2	30	40-100
Chrysene	2130	2070	ug/Kgdrywt	U320	1400	1500	66.8	72.4	5	30	40-100
Dibenzo(a,h)anthracene	2130	2070	ug/Kgdrywt	U320	820	920	38.4*	44.3	12	30	40-100
Fluoranthene	2130	2070	ug/Kgdrywt	U320	1500	1500	71.9	74.3	1	30	40-100
Indeno(1,2,3-cd)pyrene	2130	2070	ug/Kgdrywt	U320	900	900	42.4	43.7	0	30	40-100
Pyrene	2130	2070	ug/Kgdrywt	U320	1600	1700	77.6	82.5	4	30	40-100
Nitrobenzene-d5							58.2	57.5			24-81
2-Fluorobiphenyl							59.2	58.9			29-83
Terphenyl-d14							77.9	83.6			24-136

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98966-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: U8565 Lab Sample ID: WG98966-1

Instrument ID: GCMS-U Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 11/13/11

Level: (low/med) LOW Time Analyzed: 1206

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98966-LCS	WG98966-2	U8566	11/13/11	1250
02	WG98966-LCSD	WG98966-3	U8567	11/13/11	1334
03	DSY-SD-RB12-100711	SE6620-11	U8606	11/15/11	1054
04					
05					
06					
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29					
30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98966-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21
Lab File ID: U8565.D

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 29-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		42.6						
2-Fluorobiphenyl		50.3						
Terphenyl-d14		61.3						

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LCS/LCSD Recovery Report

LCS ID: WG98966-2
LCSD ID: WG98966-3
Project:
SDG: DSY-21
Report Date: 29-NOV-11

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98966

Analysis Date: 13-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	29.8	59.6*	26.8	53.6*	ug/L	11	30	66-109
Benzo(a)pyrene	50.0	33.8	67.6	28.7	57.4*	ug/L	16	30	63-118
Benzo(b)fluoranthene	50.0	30.5	61.0	26.5	53.0*	ug/L	14	30	60-108
Benzo(k)fluoranthene	50.0	28.8	57.6*	26.1	52.2*	ug/L	10	30	59-125
Benzo(g,h,i)perylene	50.0	34.9	69.8	31.3	62.6	ug/L	11	30	58-115
Chrysene	50.0	33.3	66.6*	29.7	59.4*	ug/L	11	30	68-114
Dibenzo(a,h)anthracene	50.0	31.5	63.0	30.6	61.2	ug/L	3	30	61-111
Fluoranthene	50.0	39.5	79.0	32.0	64.0*	ug/L	21	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	41.7	83.4	37.2	74.4	ug/L	11	30	55-111
Pyrene	50.0	27.2	54.4*	26.1	52.2*	ug/L	4	30	58-135
Nitrobenzene-d5			55.0		37.0*				41-91
2-Fluorobiphenyl			65.0		44.8				43-90
Terphenyl-d14			58.1		51.0				36-156

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		253956	8.42	882001	11.25	475330	15.38
UPPER LIMIT		507912	8.92	1764002	11.75	950660	15.88
LOWER LIMIT		126978	7.92	441001	10.75	237665	14.88
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	307490	8.41	1143270	11.24	599281	15.37
02	WG99420-BLANK	WG99420-1	251055	8.42	921576	11.24	486698	15.36
03	WG98966-BLANK	WG98966-1	273283	8.42	1012026	11.23	507801	15.36
04	WG98966-LCS	WG98966-2	259048	8.41	890555	11.23	413905	15.36
05	WG98966-LCSD	WG98966-3	294768	8.41	1044629	11.24	575991	15.36
06		SSTD050U1114	306069	8.39	1144358	11.21	624745	15.34
07	WG99420-LCS	WG99420-2	265840	8.40	913921	11.22	471874	15.34
08	WG99420-LCSD	WG99420-3	275883	8.39	998730	11.22	501358	15.34
09		SSTD050U1115	364715	8.38	1381025	11.21	721495	15.34
10	DSY-SD-RB12-100711	SE6620-11	305315	8.39	1064801	11.21	558043	15.32
11	DSY-SD-C13-2448	SE6620-6	329749	8.39	1227674	11.20	603076	15.33
12	DSY-SD-C13-2448MS	WG99420-4	385974	8.39	1449682	11.21	795551	15.34
13	DSY-SD-C13-2448MSD	WG99420-5	404570	8.39	1544670	11.22	847023	15.33
14	DSY-SD-DUP30-100711	SE6620-1	296349	8.39	1044366	11.21	553883	15.32
15		SSTD050U1116	321805	8.37	1173246	11.20	648713	15.32
16	DSY-SD-C13-1224	SE6620-5	280955	8.38	1045113	11.19	581734	15.32
17	DSY-SD-C29-2448	SE6620-7	390737	8.38	1493364	11.19	771316	15.32
18	DSY-SD-C17-0012	SE6620-8	310224	8.38	1159095	11.20	557771	15.32
19	DSY-SD-C17-1224	SE6620-9	307814	8.38	1187440	11.20	620616	15.32
20	DSY-SD-C17-2448	SE6620-10	323888	8.38	1193242	11.19	674196	15.32

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		253956		8.42		882001		11.25		475330		15.38	
UPPER LIMIT		507912		8.92		1764002		11.75		950660		15.88	
LOWER LIMIT		126978		7.92		441001		10.75		237665		14.88	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-C29-0012	SE6620-2		429472		8.39		1658747		11.19		875771		15.33	
02	DSY-SD-C29-1224	SE6620-3		453568		8.38		1631369		11.20		677718		15.35	
03	DSY-SD-C13-0012	SE6620-4		392179		8.38		1526972		11.20		817583		15.33	
04															
05															
06															
07															
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18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		697814	18.82	379609	25.12	180449	28.26
UPPER LIMIT		1395628	19.32	759218	25.62	360898	28.76
LOWER LIMIT		348907	18.32	189805	24.62	90225	27.76
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1113	883737	18.81	594632	25.10	343868	28.24
02	WG99420-BLANK	WG99420-1	761894	18.80	558280	25.08	413538*	28.24
03	WG98966-BLANK	WG98966-1	740773	18.80	543526	25.09	430393*	28.24
04	WG98966-LCS	WG98966-2	601159	18.80	473013	25.09	305766	28.24
05	WG98966-LCSD	WG98966-3	852425	18.81	558202	25.09	392639*	28.24
06		SSTD050U1114	840041	18.79	450795	25.08	223333	28.24
07	WG99420-LCS	WG99420-2	640161	18.78	394517	25.09	234724	28.23
08	WG99420-LCSD	WG99420-3	684464	18.78	427591	25.09	262534	28.24
09		SSTD050U1115	928379	18.78	345890	25.06	142086	28.20
10	DSY-SD-RB12-100711	SE6620-11	898691	18.77	788696*	25.06	465530*	28.21
11	DSY-SD-C13-2448	SE6620-6	783354	18.77	413687	25.06	118047	28.21
12	DSY-SD-C13-2448MS	WG99420-4	1182108	18.78	580960	25.07	159447	28.21
13	DSY-SD-C13-2448MSD	WG99420-5	1220155	18.78	588895	25.06	165167	28.21
14	DSY-SD-DUP30-100711	SE6620-1	857154	18.77	372705	25.05	95640	28.22
15		SSTD050U1116	902897	18.77	468685	25.05	194670	28.20
16	DSY-SD-C13-1224	SE6620-5	930125	18.76	547174	25.05	288743	28.20
17	DSY-SD-C29-2448	SE6620-7	1039584	18.77	289774	25.04	93523	28.20
18	DSY-SD-C17-0012	SE6620-8	702962	18.76	416678	25.05	177487	28.19
19	DSY-SD-C17-1224	SE6620-9	862899	18.76	439975	25.05	230697	28.19
20	DSY-SD-C17-2448	SE6620-10	1034713	18.76	575174	25.04	290272	28.20

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): U8539 Date Analyzed: 11/12/11

Instrument ID: GCMS-U Time Analyzed: 0925

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		697814	18.82	379609	25.12	180449	28.26
UPPER LIMIT		1395628	19.32	759218	25.62	360898	28.76
LOWER LIMIT		348907	18.32	189805	24.62	90225	27.76
	CLIENT SAMPLE ID / LAB SAMPLE ID						
01	DSY-SD-C29-0012 / SE6620-2	1033144	18.77	196293	25.04	67416*	28.20
02	DSY-SD-C29-1224 / SE6620-3	526737	18.78	72906*	25.04	26370*	28.20
03	DSY-SD-C13-0012 / SE6620-4	1097106	18.76	368549	25.04	112327	28.19
04							
05							
06							
07							
08							
09							
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11							
12							
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14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-21

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-DUP30-100711	SE6620-1	60.6		69.5		100.		0
DSY-SD-C17-2448	SE6620-10	44.2		64.0		56.2		0
DSY-SD-C29-0012	SE6620-2	70.6		57.5		126.		0
DSY-SD-C29-1224	SE6620-3DL	45.6		58.8		65.7		0
DSY-SD-C13-0012	SE6620-4	54.0		69.3		109.		0
DSY-SD-C13-1224	SE6620-5	49.2		62.7		52.4		0
DSY-SD-C13-2448	SE6620-6	24.8		40.6		34.4		0
DSY-SD-C29-2448	SE6620-7	45.9		93.2	*	82.2		1
DSY-SD-C17-0012	SE6620-8	29.1		67.6		62.7		0
DSY-SD-C17-1224	SE6620-9	55.1		65.2		58.5		0
Method Blank Sample	WG99422-1	34.7		44.8		46.7		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-21

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB12-100711	SE6620-11	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG98968-1	46.8		57.3		72.4		0
Laboratory Control S	WG98968-2	40.5	*	51.0		58.1		1
Laboratory Control S	WG98968-3	43.8		51.7		57.7		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD889 DFTPP Injection Date: 10/16/11

Instrument ID: GCMS-G DFTPP Injection Time: 1105

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.1
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	40.1
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	8.9 (71.7)2
442	40.0 - 100.0% of mass 198	65.5
443	17.0 - 23.0% of mass 442	12.4 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1016	G3327	10/16/11	1124
02	WG98968-BLANK	WG98968-1	G3329	10/16/11	1253
03					
04					
05					
06					
07					
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FORM V SV

Katahdin Analytical Services A0000058

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 10/16/11 Time: 1124

Lab File ID: G3327 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.3416000	0.01	-4.24	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.2291000	0.01	10.13	20.00	AVRG
Fluorene-D10	0.8720000	0.9242500	0.01	5.99	20.00	AVRG
Pyrene-D10	1.2360000	1.4523000	0.01	17.50	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD890 DFTPP Injection Date: 10/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0825

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Less than 100.0% of mass 198	39.6
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	55.3
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	9.2 (73.8)2
442	40.0 - 100.0% of mass 198	64.2
443	17.0 - 23.0% of mass 442	12.5 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1017	G3344	10/17/11	0845
02	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
03	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
04					
05					
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19					
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FORM V SV

Katahdin Analytical Services A0000059

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 10/17/11 Time: 0845

Lab File ID: G3344 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2822000	0.01	-8.48	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1507000	0.01	3.11	20.00	AVRG
Fluorene-D10	0.8720000	0.8635900	0.01	-0.96	20.00	AVRG
Pyrene-D10	1.2360000	1.4072000	0.01	13.85	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD898 DFTPP Injection Date: 10/22/11

Instrument ID: GCMS-G DFTPP Injection Time: 1133

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.9
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	37.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	3.5
441	0.0 - 100.0% of mass 443	10.4 (73.2)2
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	14.1 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1022	G3461	10/22/11	1153
02		SSTD8.00G1022	G3462	10/22/11	1243
03		SSTD5.00G1022	G3463	10/22/11	1327
04		SSTD2.00G1022	G3464	10/22/11	1411
05		SSTD0.50G1022	G3465	10/22/11	1456
06		SSTD0.20G1022	G3466	10/22/11	1540
07		SIM IND CHECK	G3467	10/22/11	1624
08					
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17					
18					
19					
20					

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date(s): 10/22/11 10/22/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1153 1540

LAB FILE ID: RF0.2: G3466 RF0.5: G3465 RF1: G3461
RF2: G3464 RF5: G3463 RF8: G3462

								COEFFICENTS		%RSD	MAX %RSD
COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	A0	A1	OR R^2	OR R^2
Benzo(a)pyrene	9512	26679	46723	75148	297310	453990	LINR	-9.91e-002	0.90832682	0.99983	0.99000
2-Methylnaphthalene-D10	1.498	1.126	1.144	1.091	1.048	1.054	AVRG		1.16015036	14.653	15.000
Fluorene-D10	0.723	0.907	0.971	0.940	0.973	0.955	AVRG		0.91171703	10.473	15.000
Pyrene-D10	13172	33245	63561	115210	397950	614650	LINR	-0.1346602	0.93387204	0.99870	0.99000

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD906 DFTPP Injection Date: 10/28/11

Instrument ID: GCMS-G DFTPP Injection Time: 1607

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.1
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	37.6
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	53.0
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	3.4
441	0.0 - 100.0% of mass 443	11.4 (76.5)2
442	40.0 - 100.0% of mass 198	77.8
443	17.0 - 23.0% of mass 442	14.9 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1028	G3612	10/28/11	1627
02	WG99422-BLANK	WG99422-1	G3616	10/28/11	1925
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 10/28/11 Time: 1627

Lab File ID: G3612 Init. Calib. Date(s): 10/22/11 10/22/11

Init. Calib. Times: 1153 1540

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzo(a)pyrene	0.9254700	1.0000000	1.1061000	0.01	-7.45	20.01	LINR
2-Methylnaphthalene-D10	1.1600000	1.0315000	1.0315000	0.01	-11.08	20.00	AVRG
Fluorene-D10	0.9120000	0.8917000	0.8917000	0.01	-2.22	20.00	AVRG
Pyrene-D10	0.8469800	1.0000000	1.0223000	0.01	-15.30	20.00	LINR

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD927 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-G DFTPP Injection Time: 0826

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.2
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (74.8)2
442	40.0 - 100.0% of mass 198	93.7
443	17.0 - 23.0% of mass 442	17.6 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1115	G3939	11/15/11	0845
02		SSTD8.00G1115	G3940	11/15/11	0929
03		SSTD5.00G1115	G3941	11/15/11	1014
04		SSTD2.00G1115	G3942	11/15/11	1100
05		SSTD0.50G1115	G3943	11/15/11	1145
06		SSTD0.20G1125	G3944	11/15/11	1230
07		SIM IND CHECK	G3945	11/15/11	1315
08	DSY-SD-RB12-100711	SE6620-11	G3948	11/15/11	1530
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date(s): 11/15/11 11/15/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0845 1230

LAB FILE ID: RF0.2: G3944 RF0.5: G3943 RF1: G3939
RF2: G3942 RF5: G3941 RF8: G3940

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.508	1.247	1.215	1.172	1.292	1.338	AVRG	1.29521840	9.192	15.000
2-Methylnaphthalene-D10	0.923	1.101	1.030	0.963	1.043	1.054	AVRG	1.01913546	6.344	15.000
Fluorene-D10	0.738	0.967	0.928	0.888	0.967	0.967	AVRG	0.90897353	9.855	15.000
Pyrene-D10	0.961	1.035	0.948	0.886	1.008	1.065	AVRG	0.98380939	6.600	15.000

FORM VI SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 11/15/11 Time: 0845

Lab File ID: G3939 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.2148000	0.01	-6.19	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0298000	0.01	1.06	20.00	AVRG
Fluorene-D10	0.9090000	0.9275700	0.01	2.04	20.00	AVRG
Pyrene-D10	0.9840000	0.9475900	0.01	-3.70	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD929 DFTPP Injection Date: 11/17/11

Instrument ID: GCMS-G DFTPP Injection Time: 0713

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.0
68	Less than 2.0% of mass 69	0.5 (1.3)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	59.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	26.1
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	13.2 (75.3)2
442	40.0 - 100.0% of mass 198	93.2
443	17.0 - 23.0% of mass 442	17.5 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1117	G3972	11/17/11	0733
02	DSY-SD-DUP30-100711	SE6620-1	G3984	11/17/11	1628
03	DSY-SD-C29-0012	SE6620-2	G3985	11/17/11	1713
04	DSY-SD-C13-0012	SE6620-4	G3987	11/17/11	1842
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 11/17/11 Time: 0733

Lab File ID: G3972 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 0845 1230

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2950000	1.1376000	0.01	-12.15	20.01	AVRG
2-Methylnaphthalene-D10	1.0190000	1.0075000	0.01	-1.13	20.00	AVRG
Fluorene-D10	0.9090000	0.8671700	0.01	-4.60	20.00	AVRG
Pyrene-D10	0.9840000	1.1530000	0.01	17.18	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD930 DFTPP Injection Date: 11/18/11

Instrument ID: GCMS-G DFTPP Injection Time: 0811

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.0
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	43.5
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.3
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	4.2
441	0.0 - 100.0% of mass 443	11.2 (75.7)2
442	40.0 - 100.0% of mass 198	78.9
443	17.0 - 23.0% of mass 442	14.8 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1118	G3992	11/18/11	0921
02		SSTD8.00G1118	G3993	11/18/11	1008
03		SSTD5.00G1128	G3994	11/18/11	1053
04		SSTD2.00G1118	G3995	11/18/11	1138
05		SSTD0.50G1118	G3996	11/18/11	1223
06		SSTD0.20G1118	G3997	11/18/11	1308
07		SIM IND CHECK	G3998	11/18/11	1352
08					
09					
10					
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13					
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15					
16					
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18					
19					
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Katahdin Analytical Services A0000064

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date(s): 11/18/11 11/18/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0921 1308

LAB FILE ID: RF0.2: G3997 RF0.5: G3996 RF1: G3992
RF2: G3995 RF5: G3994 RF8: G3993

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.106	1.273	1.089	1.214	1.243	1.181	AVRG	1.18431525	6.251	15.000
2-Methylnaphthalene-D10	0.923	1.105	1.074	1.046	1.114	1.110	AVRG	1.06178611	6.869	15.000
Fluorene-D10	0.725	0.898	0.846	0.981	1.000	0.960	AVRG	0.90178144	11.474	15.000
Pyrene-D10	1.320	1.228	1.173	1.134	1.470	1.411	AVRG	1.28928653	10.401	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD931 DFTPP Injection Date: 11/18/11

Instrument ID: GCMS-G DFTPP Injection Time: 1447

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	39.3
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	55.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	12.1 (70.0)2
442	40.0 - 100.0% of mass 198	88.6
443	17.0 - 23.0% of mass 442	17.2 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1118	G3999	11/18/11	1505
02	DSY-SD-C13-1224	SE6620-5	G4003	11/18/11	1805
03	DSY-SD-C13-2448	SE6620-6	G4004	11/18/11	1849
04	DSY-SD-C29-2448	SE6620-7	G4005	11/18/11	1933
05	DSY-SD-C17-0012	SE6620-8	G4006	11/18/11	2017
06	DSY-SD-C17-1224	SE6620-9	G4007	11/18/11	2101
07	DSY-SD-C17-2448	SE6620-10	G4008	11/18/11	2145
08					
09					
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11					
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14					
15					
16					
17					
18					
19					
20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 11/18/11 Time: 1505

Lab File ID: G3999 Init. Calib. Date(s): 11/18/11 11/18/11

Init. Calib. Times: 0921 1308

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Benzo(a)pyrene	1.1840000	1.1364000	0.01	-4.02	20.01	AVRG	
2-Methylnaphthalene-D10	1.0620000	1.0282000	0.01	-3.18	20.00	AVRG	
Fluorene-D10	0.9020000	0.9425100	0.01	4.49	20.00	AVRG	
Pyrene-D10	1.2890000	0.9958600	0.01	-22.74	20.00	AVRG	<-

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD939 DFTPP Injection Date: 11/28/11

Instrument ID: GCMS-G DFTPP Injection Time: 1154

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.1
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	41.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	55.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	3.5
441	0.0 - 100.0% of mass 443	11.9 (71.0)2
442	40.0 - 100.0% of mass 198	84.5
443	17.0 - 23.0% of mass 442	16.8 (19.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1128	G4149	11/28/11	1215
02		SSTD8.00G1128	G4150	11/28/11	1306
03		SSTD5.00G1128	G4151	11/28/11	1350
04		SSTD0.50G1128	G4153	11/28/11	1519
05		SSTD0.20G1128	G4154	11/28/11	1603
06		SIM IND CHECK	G4155	11/28/11	1647
07					
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Katahdin Analytical Services A0000066

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date(s): 11/28/11 11/28/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1215 1603

LAB FILE ID: RF0.2: G4154 RF0.5: G4153 RF1: G4149
RF2: G4152 RF5: G4151 RF8: G4150

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.892	1.559	1.547		1.445	1.357	AVRG	1.56003073	13.017	15.000
2-Methylnaphthalene-D10	1.133	1.134	1.211		1.118	1.042	AVRG	1.12760377	5.332	15.000
Fluorene-D10	0.962	0.936	1.052		1.008	0.938	AVRG	0.97934035	5.115	15.000
Pyrene-D10	1.478	1.167	1.333		1.137	1.008	AVRG	1.22451390	14.954	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: GD940 DFTPP Injection Date: 11/29/11

Instrument ID: GCMS-G DFTPP Injection Time: 0626

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.0
68	Less than 2.0% of mass 69	0.7 (1.5)1
69	Less than 100.0% of mass 198	45.1
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	59.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	23.1
365	1.0 - 100.0% of mass 198	3.3
441	0.0 - 100.0% of mass 443	10.8 (75.7)2
442	40.0 - 100.0% of mass 198	75.3
443	17.0 - 23.0% of mass 442	14.3 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1129	G4165	11/29/11	0645
02	DSY-SD-C29-1224	SE6620-3DL	G4180	11/29/11	1749
03					
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Instrument ID: GCMS-G Calibration Date: 11/29/11 Time: 0645

Lab File ID: G4165 Init. Calib. Date(s): 11/28/11 11/28/11

Init. Calib. Times: 1215 1603

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.5600000	1.4971000	0.01	-4.03	20.01	AVRG
2-Methylnaphthalene-D10	1.1280000	1.2079000	0.01	7.08	20.00	AVRG
Fluorene-D10	0.9790000	1.0413000	0.01	6.36	20.00	AVRG
Pyrene-D10	1.2250000	1.2999000	0.01	6.11	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99422-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: G3616 Lab Sample ID: WG99422-1

Instrument ID: GCMS-G Date Extracted: 10/19/11

Matrix: (soil/water) SOIL Date Analyzed: 10/28/11

Level: (low/med) LOW Time Analyzed: 1925

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-DUP30-100711	SE6620-1	G3984	11/17/11	1628
02	DSY-SD-C29-0012	SE6620-2	G3985	11/17/11	1713
03	DSY-SD-C13-0012	SE6620-4	G3987	11/17/11	1842
04	DSY-SD-C13-1224	SE6620-5	G4003	11/18/11	1805
05	DSY-SD-C13-2448	SE6620-6	G4004	11/18/11	1849
06	DSY-SD-C29-2448	SE6620-7	G4005	11/18/11	1933
07	DSY-SD-C17-0012	SE6620-8	G4006	11/18/11	2017
08	DSY-SD-C17-1224	SE6620-9	G4007	11/18/11	2101
09	DSY-SD-C17-2448	SE6620-10	G4008	11/18/11	2145
10	DSY-SD-C29-1224	SE6620-3DL	G4180	11/29/11	1749
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30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99422-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99422

Analysis Date: 28-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 29-nov-2011 15:23

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		34.7	%					
Fluorene-D10		44.8	%					
Pyrene-D10		46.7	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98968-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID: G3329 Lab Sample ID: WG98968-1

Instrument ID: GCMS-G Date Extracted: 10/11/11

Matrix: (soil/water) WATER Date Analyzed: 10/16/11

Level: (low/med) LOW Time Analyzed: 1253

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98968-LCS	WG98968-2	G3345	10/17/11	0930
02	WG98968-LCSD	WG98968-3	G3346	10/17/11	1014
03	DSY-SD-RB12-100711	SE6620-11	G3948	11/15/11	1530
04					
05					
06					
07					
08					
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30					

COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000056

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98968-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21
Lab File ID: G3329.D

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 16-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 29-nov-2011 15:08

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		46.8	%					
Fluorene-D10		57.3	%					
Pyrene-D10		72.4	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98968-2
LCSD ID: WG98968-3
Project:
SDG: DSY-21
Report Date: 29-nov-2011 15:08

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98968

Analysis Date: 17-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.17	58.5*	1.13	56.5*	ug/L	3	30	63-98
2-Methylnaphthalene-D10			40.5*		43.8				43-92
Fluorene-D10			51.0		51.7				29-101
Pyrene-D10			58.1		57.7				53-166

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID / LAB SAMPLE ID						
01	SSTD1.00G1016	48557	9.14	120803	12.10	54980	16.42
02	WG98968-BLANK / WG98968-1	50750	9.16	134196	12.11	67169	16.42
03	SSTD1.00G1017	39324	9.14	102062	12.09	48369	16.41
04	WG98968-LCS / WG98968-2	44447	9.14	116697	12.10	57824	16.41
05	WG98968-LCSD / WG98968-3	41433	9.14	113990	12.09	58056	16.41
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		64726		20.09		32119		26.71		23689		30.04	
UPPER LIMIT		129452		20.63		64238		27.25		47378		30.58	
LOWER LIMIT		32363		19.55		16060		26.17		11845		29.50	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1016		67816		20.05		28319		26.68		18809	30.00
02	WG98968-BLANK	WG98968-1		88848		20.06		45162		26.68		28279	30.00
03		SSTD1.00G1017		58271		20.03		22735		26.65		20437	29.98
04	WG98968-LCS	WG98968-2		75106		20.03		45184		26.65		37176	29.98
05	WG98968-LCSD	WG98968-3		76069		20.03		41299		26.65		35793	29.98
06													
07													
08													
09													
10													
11													
12													
13													
14													
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16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		54590		8.47		163072		11.41		86969		15.71	
UPPER LIMIT		109180		9.01		326144		11.95		173938		16.25	
LOWER LIMIT		27295		7.93		81536		10.87		43485		15.17	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1117		56809		8.39		182940		11.34		93158	15.64
02	DSY-SD-DUP30-100711	SE6620-1		53287		8.40		175455		11.35		93292	15.64
03	DSY-SD-C29-0012	SE6620-2		48699		8.40		172539		11.35		87031	15.65
04	DSY-SD-C13-0012	SE6620-4		45363		8.40		165383		11.35		89234	15.64
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3939 Date Analyzed: 11/15/11

Instrument ID: GCMS-G Time Analyzed: 0845

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		127329	19.32	92483	25.90	69188	29.21
UPPER LIMIT		254658	19.86	184966	26.44	138376	29.75
LOWER LIMIT		63665	18.78	46242	25.36	34594	28.67
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1117	127439	19.22	64701	25.81	43134	29.10
02	DSY-SD-DUP30-100711	SE6620-1	122817	19.25	62908	25.84	27057*	29.13
03	DSY-SD-C29-0012	SE6620-2	140811	19.25	43343*	25.85	26518*	29.15
04	DSY-SD-C13-0012	SE6620-4	133969	19.24	48514	25.82	24419*	29.13
05								
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3461 Date Analyzed: 10/22/11

Instrument ID: GCMS-G Time Analyzed: 1153

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		31419		9.08		109849		12.03		58198		16.34	
UPPER LIMIT		62838		9.62		219698		12.57		116396		16.88	
LOWER LIMIT		15710		8.54		54925		11.49		29099		15.80	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1028		36120		9.00		124949		11.95		67755	16.26
02	WG99422-BLANK	WG99422-1		55400		8.99		211995		11.96		116973*	16.26
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IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3461 Date Analyzed: 10/22/11

Instrument ID: GCMS-G Time Analyzed: 1153

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		86135		19.96		40046		26.58		30827		29.91	
UPPER LIMIT		172270		20.50		80092		27.12		61654		30.45	
LOWER LIMIT		43068		19.42		20023		26.04		15414		29.37	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1028		105418		19.88		61842		26.50		46471	29.81
02	WG99422-BLANK	WG99422-1		195934	*	19.89		122961	*	26.50		85901	* 29.81
03													
04													
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19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3992 Date Analyzed: 11/18/11

Instrument ID: GCMS-G Time Analyzed: 0921

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		45499		8.37		146760		11.32		70260		15.61	
UPPER LIMIT		90998		8.91		293520		11.86		140520		16.15	
LOWER LIMIT		22750		7.83		73380		10.78		35130		15.07	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1118		59720		8.35		216410		11.31		116498		15.61	
02	DSY-SD-C13-1224	SE6620-5		47300		8.35		170154		11.30		91856		15.61	
03	DSY-SD-C13-2448	SE6620-6		48986		8.35		170130		11.31		91868		15.61	
04	DSY-SD-C29-2448	SE6620-7		42730		8.35		163864		11.32		101030		15.61	
05	DSY-SD-C17-0012	SE6620-8		48390		8.35		160046		11.32		89164		15.61	
06	DSY-SD-C17-1224	SE6620-9		47981		8.35		170206		11.30		91953		15.61	
07	DSY-SD-C17-2448	SE6620-10		48002		8.35		173797		11.32		91670		15.61	
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18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G3992 Date Analyzed: 11/18/11

Instrument ID: GCMS-G Time Analyzed: 0921

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		91478		19.21		42688		25.81		25588		29.10	
UPPER LIMIT		182956		19.75		85376		26.35		51176		29.64	
LOWER LIMIT		45739		18.67		21344		25.27		12794		28.56	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1118		181885		19.19		116519*		25.78		83698*	29.09
02	DSY-SD-C13-1224	SE6620-5		139108		19.21		86514*		25.79		55384*	29.09
03	DSY-SD-C13-2448	SE6620-6		141230		19.21		89280*		25.79		54321*	29.09
04	DSY-SD-C29-2448	SE6620-7		148209		19.21		60159		25.81		37244	29.10
05	DSY-SD-C17-0012	SE6620-8		146740		19.20		76545		25.78		42902	29.09
06	DSY-SD-C17-1224	SE6620-9		139867		19.21		88953*		25.79		52844*	29.09
07	DSY-SD-C17-2448	SE6620-10		141232		19.21		92029*		25.79		50083	29.09
08													
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G4149 Date Analyzed: 11/28/11

Instrument ID: GCMS-G Time Analyzed: 1215

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		42499	8.16	143688	11.10	67591	15.38
UPPER LIMIT		84998	8.70	287376	11.64	135182	15.92
LOWER LIMIT		21250	7.62	71844	10.56	33796	14.84
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1129	37364	8.14	123791	11.07	58350	15.36
02	DSY-SD-C29-1224	SE6620-3DL	51274	8.14	162667	11.09	107059	15.39
03								
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19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-21

Lab File ID (Standard): G4149 Date Analyzed: 11/28/11

Instrument ID: GCMS-G Time Analyzed: 1215

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		99082		18.96		51427		25.53		35086		28.84	
UPPER LIMIT		198164		19.50		102854		26.07		70172		29.38	
LOWER LIMIT		49541		18.42		25714		24.99		17543		28.30	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1129		85493		18.95		47394		25.52		34366		28.82	
02	DSY-SD-C29-1224	SE6620-3DL		115687		19.00		76432		25.60		48988		28.93	
03															
04															
05															
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19															
20															

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98971-BLANK	WG98971-1	38*	46*	59	51			2
02	WG98971-LCS	WG98971-2	38*	45*	86	73			2
03	WG98971-LCSD	WG98971-3	45*	53*	77	65			2
04	DSY-SD-RB12-100711	SE6620-11	51*	56*	20*	17*			4
05									
06									
07									
08									
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28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000107

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm) GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99849-BLANK	WG99849-1	94	93	113	102			0
02	WG99849-LCS	WG99849-2	97	96	115	102			0
03	WG99849-LCSD	WG99849-3	87	85	110	95			0
04	DSY-SD-C13-2448MS	WG99849-4	71	80	52*	64			1
05	DSY-SD-C13-2448MSD	WG99849-5	74	72	49*	53*			2
06	DSY-SD-DUP30-100711	SE6620-1	67	68	48*	51*			2
07	DSY-SD-C29-0012	SE6620-2	31*	36*	30*	37*			4
08	DSY-SD-C29-1224	SE6620-3	42*	56	45*	72			2
09	DSY-SD-C13-0012	SE6620-4	55*	64	39*	51*			3
10	DSY-SD-C13-1224	SE6620-5	67	67	42*	48*			2
11	DSY-SD-C13-2448	SE6620-6	69	69	53*	58*			2
12	DSY-SD-C29-2448	SE6620-7	51*	60	54*	67			2
13	DSY-SD-C17-0012	SE6620-8	48*	54*	41*	44*			4
14	DSY-SD-C17-1224	SE6620-9	67	75	64	68			0
15	DSY-SD-C17-2448	SE6620-10	60	67	60	63			0
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17									
18									
19									
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22									
23									
24									
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28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000108

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000154

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	13.28	3.82
02	WG98971-BLANK	WG98971-1	10/25/11	1259	13.29	3.83
03	WG98971-LCS	WG98971-2	10/25/11	1325	13.30	3.83
04	WG98971-LCSD	WG98971-3	10/25/11	1351	13.29	3.83
05		AR1660 0.25	10/25/11	1509	13.29	3.82
06		AR1660 1.0	10/25/11	2137	13.29	3.81
07	DSY-SD-RB12-100711	SE6620-11	10/26/11	0010	13.29	3.81
08		AR1660 0.25	10/26/11	0218	13.29	3.81
09						
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18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Katahdin Analytical Services A0000155

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.82

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	10/26/11	2254	13.29	3.82
02	WG99849-BLANK	WG99849-1	10/27/11	0310	13.29	3.82
03	WG99849-LCS	WG99849-2	10/27/11	0336	13.29	3.82
04	WG99849-LCSD	WG99849-3	10/27/11	0402	13.29	3.82
05		AR1660 1.0	10/27/11	0518	13.29	3.82
06						
07						
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19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000156

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.24 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	2205	13.24	3.80
02		AR1254 1.0	11/03/11	2322		
03	DSY-SD-C13-2448MS	WG99849-4	11/04/11	0013	13.24	3.80
04	DSY-SD-C13-2448MSD	WG99849-5	11/04/11	0039	13.24	3.80
05	DSY-SD-DUP30-100711	SE6620-1	11/04/11	0104	13.24	3.81
06	DSY-SD-C29-0012	SE6620-2	11/04/11	0130	13.23	3.80
07	DSY-SD-C29-1224	SE6620-3	11/04/11	0155	13.24	3.80
08	DSY-SD-C13-0012	SE6620-4	11/04/11	0221	13.23	3.80
09	DSY-SD-C13-1224	SE6620-5	11/04/11	0246	13.24	3.80
10	DSY-SD-C13-2448	SE6620-6	11/04/11	0312	13.24	3.80
11	DSY-SD-C29-2448	SE6620-7	11/04/11	0338	13.23	3.80
12		AR1660 1.0	11/04/11	0429	13.24	3.80
13		AR1254 1.0	11/04/11	0547		
14		AR1660 0.25	11/04/11	2139	13.23	3.80
15		AR1254 1.0	11/04/11	2257		
16	DSY-SD-C17-0012	SE6620-8	11/04/11	2322	13.23	3.81
17	DSY-SD-C17-1224	SE6620-9	11/04/11	2348	13.23	3.81
18	DSY-SD-C17-2448	SE6620-10	11/05/11	0014	13.23	3.80
19		AR1660 1.0	11/05/11	0408	13.23	3.80
20		AR1254 1.0	11/05/11	0526		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	Ave, <20%
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1830000	1.0000000	37768000	0.001	18.30	20.00	2RDR
(2)	1.1354000	1.0000000	21264000	0.001	13.54	20.00	2RDR
(3)	1.0897000	1.0000000	53895000	0.001	8.97	20.00	2RDR
(4)	1.0366000	1.0000000	30635000	0.001	3.66	20.00	2RDR
(5)	0.9511900	1.0000000	25113000	0.001	-4.88	20.00	2RDR
Average %D: 7.9200							
Aroclor-1260	0.8772200	1.0000000	43989000	0.001	-12.28	20.00	2RDR
(2)	0.9016300	1.0000000	58365000	0.001	-9.84	20.00	2RDR
(3)	0.9620000	1.0000000	45532000	0.001	-3.80	20.00	2RDR
(4)	0.8836600	1.0000000	41669000	0.001	-11.63	20.00	2RDR
(5)	0.8547600	1.0000000	26401000	0.001	-14.52	20.00	2RDR
Average %D: -10.41							
Decachlorobiphenyl	1.75e-002	2.e-002	522250000	0.001	-12.50	20.00	2RDR
Tetrachloro-m-xylene	2.24e-002	2.e-002	1.3e+009	0.001	12.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2735100	0.2500000	34489000	0.001	9.40	20.00	2RDR
(2)	0.2769800	0.2500000	20424000	0.001	10.79	20.00	2RDR
(3)	0.2394900	0.2500000	41239000	0.001	-4.20	20.00	2RDR
(4)	0.2595400	0.2500000	28584000	0.001	3.82	20.00	2RDR
(5)	0.2543200	0.2500000	24379000	0.001	1.73	20.00	2RDR
Average %D: 4.3200							
Aroclor-1260	0.2717700	0.2500000	49175000	0.001	8.71	20.00	2RDR
(2)	0.2671800	0.2500000	59586000	0.001	6.87	20.00	2RDR
(3)	0.2742700	0.2500000	45441000	0.001	9.71	20.00	2RDR
(4)	0.2710200	0.2500000	46132000	0.001	8.41	20.00	2RDR
(5)	0.2979600	0.2500000	35279000	0.001	19.18	20.00	2RDR
Average %D: 10.560							
Decachlorobiphenyl	5.71e-003	5.e-003	640580000	0.001	14.20	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	1.13e+009	0.001	0.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1320000	1.0000000	36153000	0.001	13.20	20.00	2RDR
(2)	1.1266000	1.0000000	21101000	0.001	12.66	20.00	2RDR
(3)	1.0274000	1.0000000	50675000	0.001	2.74	20.00	2RDR
(4)	1.0853000	1.0000000	32111000	0.001	8.53	20.00	2RDR
(5)	1.0609000	1.0000000	28130000	0.001	6.09	20.00	2RDR
Average %D: 8.6400							
Aroclor-1260	1.1455000	1.0000000	58212000	0.001	14.55	20.00	2RDR
(2)	1.1247000	1.0000000	73535000	0.001	12.47	20.00	2RDR
(3)	1.1560000	1.0000000	55336000	0.001	15.60	20.00	2RDR
(4)	1.1523000	1.0000000	55069000	0.001	15.23	20.00	2RDR
(5)	1.1983000	1.0000000	37467000	0.001	19.83	20.00	2RDR
Average %D: 15.540							
Decachlorobiphenyl	2.37e-002	2.e-002	714850000	0.001	18.50	20.00	2RDR
Tetrachloro-m-xylene	2.05e-002	2.e-002	1.19e+009	0.001	2.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2803200	0.2500000	35374000	0.001	12.13	20.00	2RDR
(2)	0.2813800	0.2500000	20760000	0.001	12.55	20.00	2RDR
(3)	0.2535500	0.2500000	44095000	0.001	1.42	20.00	2RDR
(4)	0.2553800	0.2500000	28081000	0.001	2.15	20.00	2RDR
(5)	0.2580300	0.2500000	24782000	0.001	3.21	20.00	2RDR
Average %D: 6.2800							
Aroclor-1260	0.2715700	0.2500000	49133000	0.001	8.63	20.00	2RDR
(2)	0.2705600	0.2500000	60518000	0.001	8.22	20.00	2RDR
(3)	0.2747000	0.2500000	45525000	0.001	9.88	20.00	2RDR
(4)	0.2694600	0.2500000	45828000	0.001	7.78	20.00	2RDR
(5)	0.2759900	0.2500000	32539000	0.001	10.40	20.00	2RDR
Average %D: 9.0000							
Decachlorobiphenyl	5.56e-003	5.e-003	622780000	0.001	11.20	20.00	2RDR
Tetrachloro-m-xylene	5.46e-003	5.e-003	1.22e+009	0.001	9.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2896900	0.2500000	36591000	0.001	15.88	20.00	2RDR
(2)	0.2657000	0.2500000	19563000	0.001	6.28	20.00	2RDR
(3)	0.2752800	0.2500000	48510000	0.001	10.11	20.00	2RDR
(4)	0.2673200	0.2500000	29523000	0.001	6.93	20.00	2RDR
(5)	0.2634400	0.2500000	25368000	0.001	5.38	20.00	2RDR
Average %D: 8.9200							
Aroclor-1260	0.2540000	0.2500000	45486000	0.001	1.60	20.00	2RDR
(2)	0.2641200	0.2500000	58742000	0.001	5.65	20.00	2RDR
(3)	0.2707500	0.2500000	44749000	0.001	8.30	20.00	2RDR
(4)	0.2534300	0.2500000	42703000	0.001	1.37	20.00	2RDR
(5)	0.2711600	0.2500000	31938000	0.001	8.46	20.00	2RDR
Average %D: 5.0800							
Decachlorobiphenyl	5.e-003	5.e-003	554440000	0.001	0.00	20.00	2RDR
Tetrachloro-m-xylene	5.73e-003	5.e-003	1.29e+009	0.001	14.60	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0568000	1.0000000	33769000	0.001	5.68	20.00	2RDR
(2)	0.9379300	1.0000000	17587000	0.001	-6.21	20.00	2RDR
(3)	1.0722000	1.0000000	52991000	0.001	7.22	20.00	2RDR
(4)	0.9271100	1.0000000	27320000	0.001	-7.29	20.00	2RDR
(5)	0.8455800	1.0000000	22214000	0.001	-15.44	20.00	2RDR
Average %D: -3.210							
Aroclor-1260	0.8304700	1.0000000	41522000	0.001	-16.95	20.00	2RDR
(2)	0.8770600	1.0000000	56691000	0.001	-12.29	20.00	2RDR
(3)	0.9754000	1.0000000	46206000	0.001	-2.46	20.00	2RDR
(4)	0.8297200	1.0000000	38992000	0.001	-17.03	20.00	2RDR
(5)	1.0154000	1.0000000	31554000	0.001	1.54	20.00	2RDR
Average %D: -9.440							
Decachlorobiphenyl	1.62e-002	2.e-002	481100000	0.001	-19.00	20.00	2RDR
Tetrachloro-m-xylene	1.99e-002	2.e-002	1.15e+009	0.001	-0.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2360800	0.2500000	29622000	0.001	-5.57	20.00	2RDR	
(2)	0.2372200	0.2500000	17387000	0.001	-5.11	20.00	2RDR	
(3)	0.2305400	0.2500000	39423000	0.001	-7.78	20.00	2RDR	
(4)	0.2147500	0.2500000	23179000	0.001	-14.10	20.00	2RDR	
(5)	0.1813300	0.2500000	16469000	0.001	-27.47	20.00	2RDR	<-
Average %D: -12.00								
Aroclor-1260	0.1785000	0.2500000	29837000	0.001	-28.60	20.00	2RDR	<-
(2)	0.1957500	0.2500000	39887000	0.001	-21.70	20.00	2RDR	<-
(3)	0.2060400	0.2500000	32071000	0.001	-17.58	20.00	2RDR	
(4)	0.1810600	0.2500000	28623000	0.001	-27.58	20.00	2RDR	<-
(5)	0.1896100	0.2500000	21790000	0.001	-24.16	20.00	2RDR	<-
Average %D: -23.92								
Decachlorobiphenyl	3.38e-003	5.e-003	357550000	0.001	-32.40	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.12e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8584600	1.0000000	34898000	0.001	-14.15	20.00	2RDR
(2)	0.8799400	1.0000000	43730000	0.001	-12.01	20.00	2RDR
(3)	0.8480600	1.0000000	27413000	0.001	-15.19	20.00	2RDR
(4)	0.8432800	1.0000000	29899000	0.001	-15.67	20.00	2RDR
(5)	0.9351200	1.0000000	34029000	0.001	-6.49	20.00	2RDR
Average %D: -12.70							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1814000	1.0000000	37718000	0.001	18.14	20.00	2RDR	
(2)	1.1421000	1.0000000	21389000	0.001	14.21	20.00	2RDR	
(3)	1.0620000	1.0000000	52465000	0.001	6.20	20.00	2RDR	
(4)	1.0295000	1.0000000	30420000	0.001	2.95	20.00	2RDR	
(5)	0.8983900	1.0000000	23663000	0.001	-10.16	20.00	2RDR	
Average %D: 6.2700								
Aroclor-1260	0.8317500	1.0000000	41590000	0.001	-16.82	20.00	2RDR	
(2)	0.8579100	1.0000000	55385000	0.001	-14.21	20.00	2RDR	
(3)	0.9233700	1.0000000	43588000	0.001	-7.66	20.00	2RDR	
(4)	0.8385000	1.0000000	39427000	0.001	-16.15	20.00	2RDR	
(5)	0.9340200	1.0000000	28938000	0.001	-6.60	20.00	2RDR	
Average %D: -12.29								
Decachlorobiphenyl	1.59e-002	2.e-002	471100000	0.001	-20.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.49e-002	2.e-002	1.46e+009	0.001	24.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9869400	1.0000000	40396000	0.001	-1.31	20.00	2RDR
(2)	1.0166000	1.0000000	51003000	0.001	1.66	20.00	2RDR
(3)	1.0154000	1.0000000	33256000	0.001	1.54	20.00	2RDR
(4)	1.0011000	1.0000000	35809000	0.001	0.11	20.00	2RDR
(5)	1.0734000	1.0000000	39521000	0.001	7.34	20.00	2RDR
Average %D: 1.8700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2721100	0.2500000	34307000	0.001	8.84	20.00	2RDR
(2)	0.2791400	0.2500000	20589000	0.001	11.66	20.00	2RDR
(3)	0.2361500	0.2500000	40562000	0.001	-5.54	20.00	2RDR
(4)	0.2453600	0.2500000	26872000	0.001	-1.86	20.00	2RDR
(5)	0.2123500	0.2500000	19830000	0.001	-15.06	20.00	2RDR
Average %D: -0.400							
Aroclor-1260	0.2134400	0.2500000	37075000	0.001	-14.62	20.00	2RDR
(2)	0.2276000	0.2500000	48672000	0.001	-8.96	20.00	2RDR
(3)	0.2395000	0.2500000	38622000	0.001	-4.20	20.00	2RDR
(4)	0.2161300	0.2500000	35443000	0.001	-13.55	20.00	2RDR
(5)	0.2541100	0.2500000	29813000	0.001	1.64	20.00	2RDR
Average %D: -7.920							
Decachlorobiphenyl	4.07e-003	5.e-003	441840000	0.001	-18.60	20.00	2RDR
Tetrachloro-m-xylene	5.82e-003	5.e-003	1.31e+009	0.001	16.40	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9420600	1.0000000	38474000	0.001	-5.79	20.00	2RDR
(2)	0.9616100	1.0000000	48072000	0.001	-3.84	20.00	2RDR
(3)	0.9609300	1.0000000	31350000	0.001	-3.91	20.00	2RDR
(4)	0.9584900	1.0000000	34212000	0.001	-4.15	20.00	2RDR
(5)	0.9873300	1.0000000	36099000	0.001	-1.27	20.00	2RDR
Average %D: -3.790							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1398000	1.0000000	36400000	0.001	13.98	20.00	2RDR	
(2)	1.1697000	1.0000000	21902000	0.001	16.97	20.00	2RDR	
(3)	0.9541300	1.0000000	46887000	0.001	-4.59	20.00	2RDR	
(4)	1.0249000	1.0000000	30282000	0.001	2.49	20.00	2RDR	
(5)	0.9308100	1.0000000	24553000	0.001	-6.92	20.00	2RDR	
Average %D: 4.3900								
Aroclor-1260	0.8735500	1.0000000	43796000	0.001	-12.64	20.00	2RDR	
(2)	0.9044700	1.0000000	58558000	0.001	-9.55	20.00	2RDR	
(3)	0.9753200	1.0000000	46202000	0.001	-2.47	20.00	2RDR	
(4)	0.9416600	1.0000000	44552000	0.001	-5.83	20.00	2RDR	
(5)	1.1569000	1.0000000	36124000	0.001	15.69	20.00	2RDR	
Average %D: -2.960								
Decachlorobiphenyl	1.79e-002	2.e-002	534070000	0.001	-10.50	20.00	2RDR	
Tetrachloro-m-xylene	2.42e-002	2.e-002	1.41e+009	0.001	21.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9984700	1.0000000	40890000	0.001	-0.15	20.00	2RDR
(2)	1.0254000	1.0000000	51469000	0.001	2.54	20.00	2RDR
(3)	1.0341000	1.0000000	33911000	0.001	3.41	20.00	2RDR
(4)	1.0799000	1.0000000	38770000	0.001	7.99	20.00	2RDR
(5)	1.1094000	1.0000000	40956000	0.001	10.94	20.00	2RDR
Average %D: 4.9500							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000158

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/25/11	0421	17.03	4.31
02	WG98971-BLANK	WG98971-1	10/25/11	1259	17.04	4.32
03	WG98971-LCS	WG98971-2	10/25/11	1325	17.04	4.32
04	WG98971-LCSD	WG98971-3	10/25/11	1351	17.04	4.32
05		AR1660 0.25	10/25/11	1509	17.03	4.31
06		AR1660 1.0	10/25/11	2137	17.03	4.31
07	DSY-SD-RB12-100711	SE6620-11	10/26/11	0010	17.03	4.31
08		AR1660 0.25	10/26/11	0218	17.03	4.31
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000159

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	10/26/11	2254	17.03	4.31
02	WG99849-BLANK	WG99849-1	10/27/11	0310	17.03	4.31
03	WG99849-LCS	WG99849-2	10/27/11	0336	17.03	4.31
04	WG99849-LCSD	WG99849-3	10/27/11	0402	17.03	4.31
05		AR1660 1.0	10/27/11	0518	17.03	4.31
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.97 TCX: 4.30

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	2205	16.97	4.30
02		AR1254 1.0	11/03/11	2322		
03	DSY-SD-C13-2448MS	WG99849-4	11/04/11	0013	16.96	4.29
04	DSY-SD-C13-2448MSD	WG99849-5	11/04/11	0039	16.96	4.29
05	DSY-SD-DUP30-100711	SE6620-1	11/04/11	0104	16.96	4.30
06	DSY-SD-C29-0012	SE6620-2	11/04/11	0130	16.95	4.29
07	DSY-SD-C29-1224	SE6620-3	11/04/11	0155	16.96	4.29
08	DSY-SD-C13-0012	SE6620-4	11/04/11	0221	16.96	4.29
09	DSY-SD-C13-1224	SE6620-5	11/04/11	0246	16.96	4.29
10	DSY-SD-C13-2448	SE6620-6	11/04/11	0312	16.96	4.29
11	DSY-SD-C29-2448	SE6620-7	11/04/11	0338	16.96	4.29
12		AR1660 1.0	11/04/11	0429	16.96	4.29
13		AR1254 1.0	11/04/11	0547		
14		AR1660 0.25	11/04/11	2139	16.95	4.29
15		AR1254 1.0	11/04/11	2257		
16	DSY-SD-C17-0012	SE6620-8	11/04/11	2322	16.95	4.30
17	DSY-SD-C17-1224	SE6620-9	11/04/11	2348	16.95	4.29
18	DSY-SD-C17-2448	SE6620-10	11/05/11	0014	16.95	4.29
19		AR1660 1.0	11/05/11	0408	16.95	4.29
20		AR1254 1.0	11/05/11	0526		

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000161

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM VI PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 0421

Lab File ID: 7EJ826 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1076000	1.0000000	3861800.0	0.001	10.76	20.00	2RDR
(2)	1.1020000	1.0000000	6314600.0	0.001	10.20	20.00	2RDR
(3)	1.0410000	1.0000000	10786000	0.001	4.10	20.00	2RDR
(4)	1.0197000	1.0000000	5610900.0	0.001	1.97	20.00	2RDR
(5)	1.0098000	1.0000000	4961400.0	0.001	0.98	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	1.0331000	1.0000000	7258000.0	0.001	3.31	20.00	2RDR
(2)	1.0394000	1.0000000	8839300.0	0.001	3.94	20.00	2RDR
(3)	1.0611000	1.0000000	6314800.0	0.001	6.11	20.00	2RDR
(4)	1.0261000	1.0000000	5859400.0	0.001	2.61	20.00	2RDR
(5)	1.0370000	1.0000000	5911400.0	0.001	3.70	20.00	2RDR
Average %D: 3.9400							
Decachlorobiphenyl	1.91e-002	2.e-002	91785000	0.001	-4.50	20.00	2RDR
Tetrachloro-m-xylene	2.17e-002	2.e-002	236440000	0.001	8.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 1509

Lab File ID: 7EJ842 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2471500	0.2500000	3488200.0	0.001	-1.14	20.00	2RDR
(2)	0.2518000	0.2500000	5857500.0	0.001	0.72	20.00	2RDR
(3)	0.2368700	0.2500000	9583300.0	0.001	-5.25	20.00	2RDR
(4)	0.2359300	0.2500000	5042500.0	0.001	-5.63	20.00	2RDR
(5)	0.2542900	0.2500000	4956100.0	0.001	1.72	20.00	2RDR
Average %D: -1.920							
Aroclor-1260	0.2510600	0.2500000	6928600.0	0.001	0.42	20.00	2RDR
(2)	0.2392400	0.2500000	7753400.0	0.001	-4.30	20.00	2RDR
(3)	0.2469500	0.2500000	5555000.0	0.001	-1.22	20.00	2RDR
(4)	0.2535000	0.2500000	5604300.0	0.001	1.40	20.00	2RDR
(5)	0.2414000	0.2500000	5165200.0	0.001	-3.44	20.00	2RDR
Average %D: -1.440							
Decachlorobiphenyl	4.97e-003	5.e-003	93873000	0.001	-0.60	20.00	2RDR
Tetrachloro-m-xylene	4.64e-003	5.e-003	198710000	0.001	-7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/25/11 Time: 2137

Lab File ID: 7EJ857 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9821600	1.0000000	3427800.0	0.001	-1.78	20.00	2RDR
(2)	1.0035000	1.0000000	5756200.0	0.001	0.35	20.00	2RDR
(3)	0.9733700	1.0000000	10084000	0.001	-2.66	20.00	2RDR
(4)	0.9545600	1.0000000	5249500.0	0.001	-4.54	20.00	2RDR
(5)	1.0030000	1.0000000	4928000.0	0.001	0.30	20.00	2RDR
Average %D: -1.670							
Aroclor-1260	1.0067000	1.0000000	7071600.0	0.001	0.67	20.00	2RDR
(2)	0.9734300	1.0000000	8269900.0	0.001	-2.66	20.00	2RDR
(3)	0.9749700	1.0000000	5792600.0	0.001	-2.50	20.00	2RDR
(4)	1.0067000	1.0000000	5747400.0	0.001	0.67	20.00	2RDR
(5)	0.9626400	1.0000000	5477400.0	0.001	-3.74	20.00	2RDR
Average %D: -1.510							
Decachlorobiphenyl	1.99e-002	2.e-002	95610000	0.001	-0.50	20.00	2RDR
Tetrachloro-m-xylene	1.9e-002	2.e-002	206810000	0.001	-5.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 0218

Lab File ID: 7EJ868 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2638600	0.2500000	3721500.0	0.001	5.54	20.00	2RDR
(2)	0.2605800	0.2500000	6059600.0	0.001	4.23	20.00	2RDR
(3)	0.2489800	0.2500000	10092000	0.001	-0.41	20.00	2RDR
(4)	0.2452300	0.2500000	5249100.0	0.001	-1.91	20.00	2RDR
(5)	0.2581700	0.2500000	5032500.0	0.001	3.27	20.00	2RDR
Average %D: 2.1600							
Aroclor-1260	0.2589400	0.2500000	7151500.0	0.001	3.58	20.00	2RDR
(2)	0.2541200	0.2500000	8266700.0	0.001	1.65	20.00	2RDR
(3)	0.2570300	0.2500000	5798200.0	0.001	2.81	20.00	2RDR
(4)	0.2586700	0.2500000	5723600.0	0.001	3.47	20.00	2RDR
(5)	0.2563700	0.2500000	5511200.0	0.001	2.55	20.00	2RDR
Average %D: 2.8000							
Decachlorobiphenyl	5.15e-003	5.e-003	97352000	0.001	3.00	20.00	2RDR
Tetrachloro-m-xylene	5.04e-003	5.e-003	216340000	0.001	0.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2711800	0.2500000	3823700.0	0.001	8.47	20.00	2RDR
(2)	0.2602800	0.2500000	6052700.0	0.001	4.11	20.00	2RDR
(3)	0.2509300	0.2500000	10174000	0.001	0.37	20.00	2RDR
(4)	0.2575200	0.2500000	5522000.0	0.001	3.01	20.00	2RDR
(5)	0.2705500	0.2500000	5276500.0	0.001	8.22	20.00	2RDR
Average %D: 4.8400							
Aroclor-1260	0.2524000	0.2500000	6966600.0	0.001	0.96	20.00	2RDR
(2)	0.2545000	0.2500000	8279500.0	0.001	1.80	20.00	2RDR
(3)	0.2942500	0.2500000	6697100.0	0.001	17.70	20.00	2RDR
(4)	0.2613900	0.2500000	5786300.0	0.001	4.56	20.00	2RDR
(5)	0.2576800	0.2500000	5541600.0	0.001	3.07	20.00	2RDR
Average %D: 5.6000							
Decachlorobiphenyl	4.9e-003	5.e-003	92449000	0.001	-2.00	20.00	2RDR
Tetrachloro-m-xylene	5.34e-003	5.e-003	229140000	0.001	6.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9688000	1.0000000	3381600.0	0.001	-3.12	20.00	2RDR
(2)	0.9852400	1.0000000	5652900.0	0.001	-1.48	20.00	2RDR
(3)	0.9685300	1.0000000	10034000	0.001	-3.15	20.00	2RDR
(4)	0.9472300	1.0000000	5208800.0	0.001	-5.28	20.00	2RDR
(5)	0.9356600	1.0000000	4596200.0	0.001	-6.43	20.00	2RDR
Average %D: -3.890							
Aroclor-1260	0.9532300	1.0000000	6693900.0	0.001	-4.68	20.00	2RDR
(2)	0.9705600	1.0000000	8245100.0	0.001	-2.94	20.00	2RDR
(3)	1.0507000	1.0000000	6251800.0	0.001	5.07	20.00	2RDR
(4)	0.9373600	1.0000000	5347000.0	0.001	-6.26	20.00	2RDR
(5)	0.9893200	1.0000000	5633000.0	0.001	-1.07	20.00	2RDR
Average %D: -1.980							
Decachlorobiphenyl	1.77e-002	2.e-002	85224000	0.001	-11.50	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196580000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2304000	0.2500000	3254200.0	0.001	-7.84	20.00	2RDR	
(2)	0.2191900	0.2500000	5107200.0	0.001	-12.32	20.00	2RDR	
(3)	0.2083200	0.2500000	8384600.0	0.001	-16.67	20.00	2RDR	
(4)	0.2008400	0.2500000	4263000.0	0.001	-19.66	20.00	2RDR	
(5)	0.2052900	0.2500000	3990400.0	0.001	-17.88	20.00	2RDR	
Average %D: -14.88								
Aroclor-1260	0.2085400	0.2500000	5726200.0	0.001	-16.58	20.00	2RDR	
(2)	0.2132700	0.2500000	6858200.0	0.001	-14.69	20.00	2RDR	
(3)	0.2220000	0.2500000	4952500.0	0.001	-11.20	20.00	2RDR	
(4)	0.2105200	0.2500000	4612800.0	0.001	-15.79	20.00	2RDR	
(5)	0.2200200	0.2500000	4671100.0	0.001	-11.99	20.00	2RDR	
Average %D: -14.04								
Decachlorobiphenyl	3.8e-003	5.e-003	71218000	0.001	-24.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.55e-003	5.e-003	194740000	0.001	-9.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8628200	1.0000000	3493600.0	0.001	-13.72	20.00	2RDR
(2)	0.8810900	1.0000000	5814300.0	0.001	-11.89	20.00	2RDR
(3)	0.8485400	1.0000000	6345400.0	0.001	-15.15	20.00	2RDR
(4)	0.8666500	1.0000000	8151300.0	0.001	-13.34	20.00	2RDR
(5)	0.9313800	1.0000000	5236000.0	0.001	-6.86	20.00	2RDR
Average %D: -12.19							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845100	1.0000000	3436000.0	0.001	-1.55	20.00	2RDR
(2)	0.9754400	1.0000000	5597300.0	0.001	-2.46	20.00	2RDR
(3)	0.9170500	1.0000000	9499500.0	0.001	-8.30	20.00	2RDR
(4)	0.8745500	1.0000000	4805500.0	0.001	-12.54	20.00	2RDR
(5)	0.8678600	1.0000000	4262100.0	0.001	-13.21	20.00	2RDR
Average %D: -7.610							
Aroclor-1260	0.8651300	1.0000000	6071700.0	0.001	-13.49	20.00	2RDR
(2)	0.8918100	1.0000000	7565700.0	0.001	-10.82	20.00	2RDR
(3)	0.9141600	1.0000000	5424000.0	0.001	-8.58	20.00	2RDR
(4)	0.8998600	1.0000000	5130400.0	0.001	-10.01	20.00	2RDR
(5)	0.8968900	1.0000000	5094300.0	0.001	-10.31	20.00	2RDR
Average %D: -10.64							
Decachlorobiphenyl	1.64e-002	2.e-002	78910000	0.001	-18.00	20.00	2RDR
Tetrachloro-m-xylene	1.87e-002	2.e-002	202830000	0.001	-6.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9415000	1.0000000	3812600.0	0.001	-5.85	20.00	2RDR
(2)	0.9712900	1.0000000	6411100.0	0.001	-2.87	20.00	2RDR
(3)	0.9187100	1.0000000	6876500.0	0.001	-8.13	20.00	2RDR
(4)	0.9223700	1.0000000	8688800.0	0.001	-7.76	20.00	2RDR
(5)	0.9870000	1.0000000	5559800.0	0.001	-1.30	20.00	2RDR
Average %D: -5.180							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2625300	0.2500000	3702900.0	0.001	5.01	20.00	2RDR
(2)	0.2588500	0.2500000	6019700.0	0.001	3.54	20.00	2RDR
(3)	0.2368200	0.2500000	9581500.0	0.001	-5.27	20.00	2RDR
(4)	0.2285400	0.2500000	4878400.0	0.001	-8.58	20.00	2RDR
(5)	0.2364600	0.2500000	4604800.0	0.001	-5.42	20.00	2RDR
Average %D: -2.160							
Aroclor-1260	0.2437000	0.2500000	6720700.0	0.001	-2.52	20.00	2RDR
(2)	0.2414400	0.2500000	7829200.0	0.001	-3.42	20.00	2RDR
(3)	0.2525200	0.2500000	5689500.0	0.001	1.01	20.00	2RDR
(4)	0.2469500	0.2500000	5453200.0	0.001	-1.22	20.00	2RDR
(5)	0.2457300	0.2500000	5265200.0	0.001	-1.71	20.00	2RDR
Average %D: -1.560							
Decachlorobiphenyl	4.49e-003	5.e-003	84641000	0.001	-10.20	20.00	2RDR
Tetrachloro-m-xylene	5.39e-003	5.e-003	231630000	0.001	7.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9587500	1.0000000	3882500.0	0.001	-4.12	20.00	2RDR
(2)	1.0246000	1.0000000	6763400.0	0.001	2.46	20.00	2RDR
(3)	0.9353800	1.0000000	7002600.0	0.001	-6.46	20.00	2RDR
(4)	0.9313500	1.0000000	8775400.0	0.001	-6.86	20.00	2RDR
(5)	1.0111000	1.0000000	5700300.0	0.001	1.11	20.00	2RDR
Average %D: -2.780							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0514000	1.0000000	3667500.0	0.001	5.14	20.00	2RDR
(2)	1.0686000	1.0000000	6125500.0	0.001	6.86	20.00	2RDR
(3)	0.9594500	1.0000000	9940000.0	0.001	-4.06	20.00	2RDR
(4)	0.9068200	1.0000000	4984600.0	0.001	-9.32	20.00	2RDR
(5)	0.9355200	1.0000000	4595500.0	0.001	-6.45	20.00	2RDR
Average %D: -1.560							
Aroclor-1260	0.9979600	1.0000000	7009900.0	0.001	-0.20	20.00	2RDR
(2)	0.9520600	1.0000000	8085500.0	0.001	-4.79	20.00	2RDR
(3)	0.9950900	1.0000000	5914600.0	0.001	-0.49	20.00	2RDR
(4)	1.0133000	1.0000000	5785200.0	0.001	1.33	20.00	2RDR
(5)	0.9766400	1.0000000	5559000.0	0.001	-2.34	20.00	2RDR
Average %D: -1.300							
Decachlorobiphenyl	1.87e-002	2.e-002	89870000	0.001	-6.50	20.00	2RDR
Tetrachloro-m-xylene	2.26e-002	2.e-002	245260000	0.001	13.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0070000	1.0000000	4078200.0	0.001	0.70	20.00	2RDR
(2)	1.1115000	1.0000000	7337700.0	0.001	11.15	20.00	2RDR
(3)	0.9857100	1.0000000	7383400.0	0.001	-1.43	20.00	2RDR
(4)	0.9711300	1.0000000	9158900.0	0.001	-2.89	20.00	2RDR
(5)	1.0638000	1.0000000	6007200.0	0.001	6.38	20.00	2RDR
Average %D: 2.7800							

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99849-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Lab Sample ID: WG99849-1 Lab File ID: 7EJ909

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 10/27/11 Date Analyzed (2): 10/27/11

Time Analyzed (1): 0310 Time Analyzed (2): 0310

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99849-LCS	WG99849-2	7EJ910	10/27/11	10/27/11
02	WG99849-LCSD	WG99849-3	7EJ911	10/27/11	10/27/11
03	DSY-SD-C13-2448MS	WG99849-4	7EK127	11/04/11	11/04/11
04	DSY-SD-C13-2448MSD	WG99849-5	7EK128	11/04/11	11/04/11
05	DSY-SD-DUP30-100711	SE6620-1	7EK129	11/04/11	11/04/11
06	DSY-SD-C29-0012	SE6620-2	7EK130	11/04/11	11/04/11
07	DSY-SD-C29-1224	SE6620-3	7EK131	11/04/11	11/04/11
08	DSY-SD-C13-0012	SE6620-4	7EK132	11/04/11	11/04/11
09	DSY-SD-C13-1224	SE6620-5	7EK133	11/04/11	11/04/11
10	DSY-SD-C13-2448	SE6620-6	7EK134	11/04/11	11/04/11
11	DSY-SD-C29-2448	SE6620-7	7EK135	11/04/11	11/04/11
12	DSY-SD-C17-0012	SE6620-8	7EK172	11/04/11	11/04/11
13	DSY-SD-C17-1224	SE6620-9	7EK173	11/04/11	11/04/11
14	DSY-SD-C17-2448	SE6620-10	7EK174	11/05/11	11/05/11
15					
16					
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COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH
nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99849-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 22-nov-2011 13:36

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		93.7	%					
Decachlorobiphenyl		113.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99849-2
LCSD ID: WG99849-3
Project:
SDG: DSY-21
Report Date: 22-nov-2011 13:36

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	175.	105.	167.	100.	ug/Kgdrywt	5	50	53-123
Aroclor-1260	167.	175.	105.	168.	100.	ug/Kgdrywt	4	50	58-120
Tetrachloro-M-Xylene			97.3		86.8				56-115
Decachlorobiphenyl			115.		110.				59-124

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ANALYTICAL SERVICES

Cert No E87604

MS/MSD Recovery Report

MS ID: WG99849-4
MSD ID: WG99849-5
Sample ID: SE6620-6
Client ID: DSY-SD-C13-2448
Project:
SDG: DSY-21

Received Date: 07-OCT-11
Extract Date: 26-oct-0011 00:00
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849
Report Date: 22-nov-2011 13:37

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 78.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	213.	214.	ug/Kgdrywt	U11.	160	150	75.1	69.9	6	30	53-123
Aroclor-1260	213.	214.	ug/Kgdrywt	U11.	140	140	65.7	63.4	3	30	58-120
Tetrachloro-M-Xylene							80.0	73.6			56-115
Decachlorobiphenyl							63.8	53.3*			59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98971-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-21

Lab Sample ID: WG98971-1 Lab File ID: 7EJ837

Matrix (soil/water) WATER Extraction: (SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/11/11

Date Analyzed (1): 10/25/11 Date Analyzed (2): 10/25/11

Time Analyzed (1): 1259 Time Analyzed (2): 1259

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98971-LCS	WG98971-2	7EJ838	10/25/11	10/25/11
02	WG98971-LCSD	WG98971-3	7EJ839	10/25/11	10/25/11
03	DSY-SD-RB12-100711	SE6620-11	7EJ863	10/26/11	10/26/11
04					
05					
06					
07					
08					
09					
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23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98971-1
Client ID: Method Blank Sample
Project:
SDG: DSY-21

Sample Date:
Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 22-nov-2011 13:36

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	45.6	%					
Decachlorobiphenyl		59.5	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98971-2
LCSD ID: WG98971-3
Project:
SDG: DSY-21
Report Date: 22-nov-2011 13:36

Received Date: 11-OCT-11
Extract Date: 11-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG98971

Analysis Date: 25-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	1.00	0.572	57.2*	0.693	69.3	ug/L	19	30	65-112
Aroclor-1260	1.00	0.654	65.4	0.677	67.7	ug/L	3	30	62-104
Tetrachloro-M-Xylene			45.1*		53.0*				62-111
Decachlorobiphenyl			86.5		77.0				44-135

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C13-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-21

Lab Sample ID: SE6620-4 Date(s) Analyzed: 11/04/11 11/04/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	81.5		
Aroclor-1254	2	6.48	6.41	6.55	122		
	3	6.84	6.77	6.91	93.6		
COLUMN 1	4	7.68	7.61	7.75	120		
	5	8.14	8.08	8.22	150	113	
	1	6.37	6.30	6.44	84.7		
	2	7.33	7.26	7.40	102		
	3	7.62	7.55	7.69	117		
COLUMN 2	4	8.44	8.37	8.51	134		
	5	10.13	10.07	10.21	169	122	7.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C29-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-21

Lab Sample ID: SE6620-2 Date(s) Analyzed: 11/04/11 11/04/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	312		
Aroclor-1254	2	6.47	6.41	6.55	410		
	3	6.83	6.77	6.91	435		
COLUMN 1	4	7.67	7.61	7.75	475		
	5	8.14	8.08	8.22	545	435	
	1	6.36	6.30	6.44	415		
	2	7.33	7.26	7.40	431		
	3	7.61	7.55	7.69	444		
COLUMN 2	4	8.43	8.37	8.51	446		
	5	10.13	10.07	10.21	602	468	7.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C29-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-21

Lab Sample ID: SE6620-3 Date(s) Analyzed: 11/04/11 11/04/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	263		
Aroclor-1254	2	6.47	6.41	6.55	398		
	3	6.83	6.77	6.91	648		
COLUMN 1	4	7.67	7.61	7.75	522		
	5	8.13	8.08	8.22	526	471	
	1	6.37	6.30	6.44	500		
	2	7.33	7.26	7.40	541		
	3	7.62	7.55	7.69	508		
COLUMN 2	4	8.43	8.37	8.51	477		
	5	10.12	10.07	10.21	723	550	15.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-C29-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-21

Lab Sample ID: SE6620-7 Date(s) Analyzed: 11/04/11 11/04/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	41.2		
Aroclor-1254	2	6.48	6.41	6.55	75.6		
	3	6.83	6.77	6.91	74.3		
COLUMN 1	4	7.68	7.61	7.75	46.2		
	5	8.14	8.08	8.22	58.4	59.1	
	1	6.37	6.30	6.44	76.9		
	2	7.34	7.26	7.40	69.3		
	3	7.62	7.55	7.69	39.4		
COLUMN 2	4	8.44	8.37	8.51	46.8		
	5	10.12	10.07	10.21	55.4	57.6	2.6
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 16, 2012**

FROM: **JOSEPH KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PAH / PCB**
NAVSTA, NEWPORT, CTO WE61
SDG DSY-22

SAMPLES: 23 / Sediment / PAH / PCB

DSY-SD-DUP31-101211	DSY-SD-DUP32-101211	DSY-SD-G01-0012
DSY-SD-G01-1224	DSY-SD-G01-2448	DSY-SD-G05-0012
DSY-SD-G05-1224	DSY-SD-G05-2448	DSY-SD-G09-0012
DSY-SD-G09-1224	DSY-SD-G09-2448	DSY-SD-G13-0012
DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-G21-0012
DSY-SD-G21-1224	DSY-SD-G21-2448	DSY-SD-G25-0012
DSY-SD-G25-1224	DSY-SD-G25-2448	

OVERVIEW

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-22 consisted of twenty-three (23) sediment environmental samples. The samples were analyzed as listed above for polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyls (PCB). Two field duplicate sample pairs were included in this sample delivery group (SDG): DSY-SD-DUP31-101211 / DSY-SD-G05-2448 and DSY-SD-DUP32-101211 / DSY-SD-G17-2448.

The samples were collected by Tetra Tech on October 12, 2011 and analyzed by Katahdin Analytical Services, Inc. All analyses were conducted in accordance with EPA SW-846 Methods 8270C Full Scan for PAHs and Selective Ion Monitoring (SIM) for benzo(a)pyrene (for samples with benzo(a)pyrene less than the limit of quantitation, LOQ) and 8082 for PCBs, analytical and reporting protocols. A Tier II validation was conducted on the referenced sample analyses. The data was evaluated based on the following parameters:

*	• Data Completeness
	• Holding Times
*	• GC/MS Instrument Tuning and System Performance
	• Initial and Continuing Calibration
*	• Blank Results
*	• Blank Spike/Blank Spike Duplicate Results
	• Surrogate Spike Recoveries
*	• Internal Standard Recoveries
*	• Matrix Spike/Matrix Spike Duplicate Recoveries
*	• Field Duplicate Precision
	• Compound Identification and Quantification
*	• Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are

presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

HOLD TIME

The PAH Full Scan sample collection to extraction hold time of 14 days was exceeded by >2X (36 days) for the re-extracted and re-analyzed sediment samples DSY-SD-G17-0012 and DSY-SD-G21-1224. The samples were re-analyzed for the PAH Full Scan analysis as a result of low surrogate percent recoveries (%Rs) for the initial sample analyses. The original sample DSY-SD-G17-0012 PAH full scan analysis results were reported and validated due to the sample to extraction hold time exceedance. The sample re-extraction and re-analysis results for sample DSY-SD-G21-1224 were reported and validated. Positive PAH analyte results were qualified estimated, (J), and the non-detected PAH analyte results were qualified rejected, (UR), due to the sample collection to extraction hold time non-compliance.

Per the laboratory narrative for the PAH analysis (both Full Scan and SIM analysis), sample DSY-SD-G09-2448 " ..was lost due to a laboratory accident during concentration.." and the sample was re-extracted outside of the sample collection to extraction hold time of 14 days (26 days, <2X hold time). The positive and non-detected PAH results for sample DSY-SD-G09-2448 were qualified estimated, (J) and (UJ), respectively.

BLANKS

No issues were identified.

CALIBRATIONS

The PAH continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for fluoranthene on 11/16/11 @ 11:31 on instrument GCMS-N affecting samples as listed.

Affected Samples:

DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-DUP32-101211
DSY-SD-G21-0012		

Action: The positive fluoranthene results for the aforementioned samples were qualified estimated, (J).

The PAH CCV %D was greater than the 20% quality control limit for pyrene and benzo(g,h,i)perylene on 11/18/11 @ 11:29 on instrument GCMS-N affecting samples as listed.

Affected Samples:

DSY-SD-G25-1224 DSY-SD-G25-2448

Action: The positive pyrene and benzo(g,h,i)perylene results for the aforementioned samples were qualified estimated, (J).

The PAH CCV %D was greater than the 20% quality control limit for indeno(1,2,3-cd)pyrene on 11/22/11 @ 09:07 on instrument GCMS-N affecting the sample as listed.

Affected Sample: DSY-SD-G21-1224 re-analysis

Action: The non-detected indeno(1,2,3-cd)pyrene result for the sample DSY-SD-G21-1224 re-analysis was qualified estimated, (UJ).

The Aroclor-1260 CCV %D was greater than the 20% quality control limit on 11/03/11 @ 22:05 on instrument GC07 for column RTX-CLPESTICIDES (23.92%) affecting the samples as listed.

Affected Samples: DSY-SD-G25-0012, DSY-SD-G25-1224, and DSY-SD-G25-2448

Action: The non-detected Aroclor-1260 result for sample DSY-SD-G25-0012 was not qualified as the alternate column RTX-CLPESTICIDES2 CCV %D for Aroclor-1260 was within the quality control limits. The positive result for sample DSY-SD-G25-2448 was not qualified as the result was reported from the RTX-CLPESTICIDES2 column which was within the quality control limits. The positive result for sample DSY-SD-G25-1224 was reported from the RTX-CLPESTICIDES column and was qualified estimated, (J).

The Aroclor CCV %Ds were quality control limit non-compliant for samples as listed below.

Analyte	AVG CCV %D RTX-CLPESTICIDES	AVG CCV %D RTX-CLPESTICIDES2	Date/Time
Aroclor-1260	31.51%	---	11/07/11 @ 23:38
Aroclor-1016	28.68%	---	11/08/11 @ 06:07
Aroclor-1254	26.03%	---	11/08/11 @ 07:25

Affected Samples:

DSY-SD-DUP31-101211	DSY-SD-G01-0012	DSY-SD-G01-1224
DSY-SD-G01-2448	DSY-SD-G05-0012	DSY-SD-G05-1224
DSY-SD-G05-2448	DSY-SD-G09-0012	DSY-SD-G09-1224
DSY-SD-G09-2448	DSY-SD-G13-0012	

Action: The non-detected Aroclor-1260, Aroclor-1016, and Aroclor-1254 results for the affected samples were not qualified as the alternate column RTX-CLPESTICIDES2 CCV %Ds were within the quality control limits. The positive Aroclor-1254 results for samples DSY-SD-DUP31-101211 and DSY-SD-G05-2448 were qualified estimated, (J), as they were reported from the RTX-CLPESTICIDES column.

The Aroclor CCV %Ds were quality control limit non-compliant for samples as listed below.

Analyte	AVG CCV %D RTX-CLPESTICIDES	AVG CCV %D RTX-CLPESTICIDES2	Date/Time
Aroclor-1016	26.80%	---	11/14/11 @ 15:48
Aroclor-1260	26.24%	---	11/14/11 @ 15:48
Aroclor-1016	23.56%	---	11/14/11 @ 22:14
Aroclor-1254	21.01%	---	11/14/11 @ 23:30
Aroclor-1016	50.67%	---	11/15/11 @ 03:20
Aroclor-1260	39.60%	---	11/15/11 @ 03:20

Affected Samples:

DSY-SD-DUP32-101211	DSY-SD-G13-0012	DSY-SD-G13-1224
DSY-SD-G13-2448	DSY-SD-G17-0012	DSY-SD-G17-1224
DSY-SD-G17-2448	DSY-SD-G21-0012	DSY-SD-G21-1224
DSY-SD-G21-2448		

Action: The non-detected Aroclor-1260, Aroclor-1016, and Aroclor-1254 results for the affected samples were not qualified as the alternate column RTX-CLPESTICIDES2 CCV %Ds were within the quality control limits. The positive Aroclor-1254 result for sample DSY-SD-G25-2448 was not qualified as it was reported from the RTX-CLPESTICIDES2 column. The positive Aroclor-1254 results for sample DSY-SD-G13-2448 analyzed on 11/03/11 @ 19:04 was qualified estimated, (J), as it was reported from the RTX-CLPESTICIDES column.

LABORATORY CONTROL SPIKE (LCS) /LABORATORY CONTROL SPIKE DUPLICATE (LCSD)

No LCS was performed for the PAH SIM analysis for benzo(a)pyrene. No validation action was taken for this issue.

The Aroclor-1016 LCS %R was less than the quality control limit and the LCS/LCSD relative percent difference (RPD) was greater than the quality control limit for WG99856-2 affecting samples as listed.

Affected Samples:
DSY-SD-G25-0012 DSY-SD-G25-1224 DSY-SD-G25-2448

Action: The non-detected Aroclor-1016 results for the aforementioned samples were qualified estimated, (UJ).

MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD)

No issues were identified.

INTERNAL STANDARDS

No issues were identified.

SURROGATE SPIKE RECOVERIES

Sample DSY-SD-G21-1224 PAH surrogate %Rs for 2-fluorobiphenyl, terphenyl-d14, and nitrobenzene-d5 were less than the quality control limit and less than 10%. The sample DSY-SD-G21-1224 was re-analyzed with all the surrogate PAH %Rs within the quality control limits. Due to the extremely low surrogate %Rs for the initial sample analysis, re-extraction and re-analysis PAH results were reported and validated even though the sample to extraction hold time was exceeded.

The sample DSY-SD-G17-0012 had a PAH surrogate %R for nitrobenzene-d5 less than the quality control limit (>10%). The sample was re-analyzed with surrogate PAH %Rs within the quality control limit, however, the sample to extraction hold time of 14 days was exceeded by >2X the hold time. Therefore the original sample analysis PAH Full scan results were reported. No action was required because only one surrogate was below acceptance limits.

The sample DSY-SD-G09-2448 and associated method blank PAH SIM extractions were inadvertently not spiked with SIM surrogates but only with Full Scan surrogates. Therefore, there was 0% recovery of the SIM surrogates. The positive benzo(a)pyrene sample result for sample DSY-SD-G09-2448 was qualified estimated, (J), as a relevant surrogate recovery could not be determined.

The Aroclor surrogate %Rs were outside the quality control limits for analytical columns as listed below.

TCX - tetrachloro-m-xylene (56-115) DCB - decachlorobiphenyl (59-124)
COL 1 - column RTX-CLPESTICIDES COL 2 RTX-CLPESTICIDES2

SAMPLES	TCX COL 1	TCX COL 2	DCB COL 1	DCB COL 2
DSY-SD-G01-0012 [2.]	----	----	----	58
DSY-SD-G01-2448 [2.]	38	----	55	----
DSY-SD-G05-2448 [3.]	----	----	57	----
DSY-SD-G09-0012 [1.]	----	----	55	57
DSY-SD-G25-0012 [2.]	----	----	50	----
DSY-SD-G25-1224 [3.]	----	----	54	----
DSY-SD-G25-2448 [2.]	----	----	53	----

Actions:

1. Non-detected Aroclor results for sample DSY-SD-G09-0012, were qualified estimated, (UJ).
2. The remainder of the samples' non-detected Aroclor results were not qualified as the alternate column surrogate %Rs were within the quality control limits.
3. The sample DSY-SD-G05-2448 and DSY-SD-G25-1224 positive Aroclor-1254 results were qualified as they were reported from the RTX-CLPESTICIDES column with surrogate %Rs which were below the lower quality control limit.
4. No validation action was taken for the LCS and method blank surrogate %R quality control limit non-compliances.

COMPOUND QUANTIFICATION

The RPD for the Aroclor-1254 results for the column RTX-CLPESTICIDES and RTX-CLPESTICIDES2 was greater than the 40% quality control limit for sample DSY-SD-G25-1224. The Aroclor-1254 positive result for sample DSY-SD-G25-1224 was qualified estimated, (J).

ADDITIONAL COMMENTS

Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

The PAH Form 5 GC/MS instrument tuning and system performance check for DFTTP (decafluorotriphenylphosphine) for instrument GCMS-N on 11/15/11 @ 16:04 indicated that the ion abundance criteria for the mass ion of 442 (relative to mass 198) exceeded the laboratory quality control limit of 100% (100.2%). The laboratory narrative identified the issue and resolved the issue by stating that 100.2% rounds down to 100%. The EPA Method 8270C does not have an upper quality control limit for mass 442 and therefore no validation action was taken for this issue.

The project LOQ for the PAH benzo(a)pyrene could not be achieved using the Full Scan PAH Method 8270C methodology for samples with benzo(a)pyrene concentrations below the LOQ. Therefore, the samples with benzo(a)pyrene results below the LOQ were re-analyzed using the Method 8270C SIM PAH methodology.

The higher of the two analytical column results was reported for the sample positive Aroclor results.

Sample results were reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: The PAH sample analysis to extraction hold time of 14 days was exceeded for sediment analyses for samples DSY-SD-G21-1224 and DSY-SD-G09-2448 resulting in rejection and qualification of PAH sample data. PAH and Aroclor analyte results were qualified for CCV %D quality control limit non-compliances. Aroclor-1016 non-detected results were qualified for a LCS %R and LCS/LCSD RPD quality control limit non-compliances. PAH and Aroclor results were qualified for surrogate %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the limit of quantitation (LOQ) but above the method detection limit were qualified as estimated, (J). One sample Aroclor-1254 result was qualified for a column RPD quality control limit non-compliance.

The data for these analyses were reviewed with reference to the EPA SW-846 Method 8270C and Method 8082, "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the (DOD) QSM document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Regional Worksheets
Appendix D – Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012			DSY-SD-G01-1224		
SDG: DSY-22	LAB_ID	SE6767-7			SE6767-17			SE6767-1			SE6767-2		
FRACTION: OS	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.9			32.2			38.2			36.2		
	DUP_OF	DSY-SD-G05-2448			DSY-SD-G17-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1000			750	J	P	450	J	P	400	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		940			600	J	P	400	J	P	390	J	P
BENZO(G,H,I)PERYLENE		630	U		730	U		620	U		660	U	
BENZO(K)FLUORANTHENE		450	J	P	330	J	P	210	U		660	U	
CHRYSENE		1300			830	J	P	520	J	P	480	J	P
DIBENZO(A,H)ANTHRACENE		630	U		730	U		620	U		660	U	
FLUORANTHENE		3400			1700	J	C	1500			2300		
INDENO(1,2,3-CD)PYRENE		630	U		730	U		620	U		660	U	
PYRENE		3000			1500			1200			1800		

PROJ_NO: 02747	NSAMPLE	DSY-SD-G01-2448			DSY-SD-G05-0012			DSY-SD-G05-1224			DSY-SD-G05-2448		
SDG: DSY-22	LAB_ID	SE6767-3			SE6767-4			SE6767-5			SE6767-6		
FRACTION: OS	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.2			42.3			33.4			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		970			290	J	P	440	J	P	1000		
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		840	J	P	330	J	P	510	J	P	910	J	P
BENZO(G,H,I)PERYLENE		700	U		550	U		670	U		680	U	
BENZO(K)FLUORANTHENE		380	J	P	550	U		670	U		440	J	P
CHRYSENE		1100			330	J	P	660	J	P	1200		
DIBENZO(A,H)ANTHRACENE		700	U		550	U		670	U		680	U	
FLUORANTHENE		4300			660	J	P	1100			3100		
INDENO(1,2,3-CD)PYRENE		700	U		550	U		670	U		680	U	
PYRENE		3800			790			1100			2700		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G09-0012			DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012		
	LAB_ID	SE6767-8			SE6767-9			SE6767-10			SE6767-11		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.6			32.5			32.6			38.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		310	J	P	700	J	P	480	J	HP	300	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		400	J	P	720	J	P	470	J	HP	590	U	
BENZO(G,H,I)PERYLENE		670	U		740	U		730	UJ	H	590	U	
BENZO(K)FLUORANTHENE		670	U		360	J	P	730	UJ	H	590	U	
CHRYSENE		430	J	P	1000			560	J	HP	410	J	P
DIBENZO(A,H)ANTHRACENE		670	U		740	U		730	UJ	H	590	U	
FLUORANTHENE		690	J	P	1000			1300	J	H	470	J	P
INDENO(1,2,3-CD)PYRENE		670	U		740	U		730	UJ	H	590	U	
PYRENE		800	J	P	1100			1100	J	H	580	J	P

PROJ_NO: 02747 SDG: DSY-22 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012			DSY-SD-G17-1224		
	LAB_ID	SE6767-12			SE6767-13			SE6767-14			SE6767-15		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	30.9			30.1			36.7			30.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		390	J	P	340	J	P	630	U		340	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		750	U		770	U		630	U		470	J	P
BENZO(G,H,I)PERYLENE		750	U		770	U		630	U		690	U	
BENZO(K)FLUORANTHENE		750	U		770	U		630	U		230	J	P
CHRYSENE		480	J	P	430	J	P	240	J	P	500	J	P
DIBENZO(A,H)ANTHRACENE		750	U		770	U		630	U		690	U	
FLUORANTHENE		960	J	CP	720	J	CP	470	J	CP	1200	J	C
INDENO(1,2,3-CD)PYRENE		750	U		770	U		630	U		690	U	
PYRENE		840	J	P	970	J	P	420	J	P	900	J	P

PROJ_NO: 02747 SDG: DSY-22 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G17-2448			DSY-SD-G21-0012			DSY-SD-G21-1224RE			DSY-SD-G21-2448		
	LAB_ID	SE6767-16			SE6767-18			SE6767-19RE			SE6767-20		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	31.8			30.6			34.0			37.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		590	J	P	490	J	P	290	J	HP	870		
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		620	J	P	590	J	P	720	UR	H	890		
BENZO(G,H,I)PERYLENE		740	U		730	U		720	UR	H	630	U	
BENZO(K)FLUORANTHENE		740	U		300	J	P	720	UR	H	380	J	P
CHRYSENE		680	J	P	720	J	P	330	J	HP	940		
DIBENZO(A,H)ANTHRACENE		740	U		730	U		720	UR	H	630	U	
FLUORANTHENE		1600	J	C	1000	J	C	530	J	HP	2300		
INDENO(1,2,3-CD)PYRENE		740	U		730	U		720	UR	CH	630	U	
PYRENE		1500			1100			720	J	HP	2100		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G25-0012			DSY-SD-G25-1224			DSY-SD-G25-2448		
	LAB_ID	SE6767-21			SE6767-22			SE6767-23		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.7			35.5			35.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		2100			3900			3900		
BENZO(A)PYRENE		1200			2200			2100		
BENZO(B)FLUORANTHENE		1900			3500			3300		
BENZO(G,H,I)PERYLENE		410	J	P	700	J	CP	750	J	CP
BENZO(K)FLUORANTHENE		830	J	P	1500			1500		
CHRYSENE		2000			3900			4600		
DIBENZO(A,H)ANTHRACENE		640	U		680	U		700	U	
FLUORANTHENE		2700			1600			1500		
INDENO(1,2,3-CD)PYRENE		510	J	P	810	J	P	910	J	P
PYRENE		3400			8700	J	C	7800	J	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012			DSY-SD-G01-1224		
SDG: DSY-22	LAB_ID	SE6767-7			SE6767-17			SE6767-1			SE6767-2		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.9			32.2			38.2			36.2		
	DUP_OF	DSY-SD-G05-2448			DSY-SD-G17-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		470			360			210			200		

PROJ_NO: 02747	NSAMPLE	DSY-SD-G01-2448			DSY-SD-G05-0012			DSY-SD-G05-1224			DSY-SD-G05-2448		
SDG: DSY-22	LAB_ID	SE6767-3			SE6767-4			SE6767-5			SE6767-6		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.2			42.3			33.4			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		400			160			210			440		

PROJ_NO: 02747	NSAMPLE	DSY-SD-G09-0012			DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012		
SDG: DSY-22	LAB_ID	SE6767-8			SE6767-9			SE6767-10			SE6767-11		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.6			32.5			32.6			38.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		190			320			240	J	HR	160		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012			DSY-SD-G17-1224		
	LAB_ID	SE6767-12			SE6767-13			SE6767-14			SE6767-15		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	30.9			30.1			36.7			30.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		210			190			130			240		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G17-2448			DSY-SD-G21-0012			DSY-SD-G21-1224			DSY-SD-G21-2448		
	LAB_ID	SE6767-16			SE6767-18			SE6767-19			SE6767-20		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	31.8			30.6			34.0			37.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		340			250			270			430		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012			DSY-SD-G01-1224		
SDG: DSY-22	LAB_ID	SE6767-7			SE6767-17			SE6767-1			SE6767-2		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.9			32.2			38.2			36.2		
	DUP_OF	DSY-SD-G05-2448			DSY-SD-G17-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		23	U		26	U		22	U		23	U	
AROCLOR-1221		23	U		26	U		22	U		23	U	
AROCLOR-1232		27	U		31	U		26	U		27	U	
AROCLOR-1242		23	U		26	U		22	U		23	U	
AROCLOR-1248		23	U		26	U		22	U		23	U	
AROCLOR-1254		240	J	C	26	U		22	U		23	U	
AROCLOR-1260		23	U		26	U		22	U		23	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-G01-2448			DSY-SD-G05-0012			DSY-SD-G05-1224			DSY-SD-G05-2448		
SDG: DSY-22	LAB_ID	SE6767-3			SE6767-4			SE6767-5			SE6767-6		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.2			42.3			33.4			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		19	U		25	U		24	U	
AROCLOR-1221		24	U		19	U		25	U		24	U	
AROCLOR-1232		28	U		23	U		30	U		28	U	
AROCLOR-1242		24	U		19	U		25	U		24	U	
AROCLOR-1248		24	U		19	U		25	U		24	U	
AROCLOR-1254		24	U		19	U		25	U		150	J	CR
AROCLOR-1260		24	U		19	U		25	U		24	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-G09-0012			DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012		
SDG: DSY-22	LAB_ID	SE6767-8			SE6767-9			SE6767-10			SE6767-11		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	35.6			32.5			32.6			38.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		23	UJ	R	26	U		26	U		21	U	
AROCLOR-1221		23	UJ	R	26	U		26	U		21	U	
AROCLOR-1232		28	UJ	R	30	U		31	U		24	U	
AROCLOR-1242		23	UJ	R	26	U		26	U		21	U	
AROCLOR-1248		23	UJ	R	26	U		26	U		21	U	
AROCLOR-1254		23	UJ	R	26	U		26	U		21	U	
AROCLOR-1260		23	UJ	R	26	U		26	U		21	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012			DSY-SD-G17-1224		
SDG: DSY-22	LAB_ID	SE6767-12			SE6767-13			SE6767-14			SE6767-15		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	30.9			30.1			36.7			30.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		27	U		23	U		28	U	
AROCLOR-1221		24	U		27	U		23	U		28	U	
AROCLOR-1232		29	U		32	U		27	U		33	U	
AROCLOR-1242		24	U		27	U		23	U		28	U	
AROCLOR-1248		24	U		27	U		23	U		28	U	
AROCLOR-1254		24	U		130	J	C	23	U		28	U	
AROCLOR-1260		24	U		27	U		23	U		28	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-G17-2448			DSY-SD-G21-0012			DSY-SD-G21-1224			DSY-SD-G21-2448		
SDG: DSY-22	LAB_ID	SE6767-16			SE6767-18			SE6767-19			SE6767-20		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	31.8			30.6			34.0			37.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		26	U		27	U		24	U		22	U	
AROCLOR-1221		26	U		27	U		24	U		22	U	
AROCLOR-1232		31	U		32	U		29	U		26	U	
AROCLOR-1242		26	U		27	U		24	U		22	U	
AROCLOR-1248		26	U		27	U		24	U		22	U	
AROCLOR-1254		26	U		27	U		24	U		22	U	
AROCLOR-1260		26	U		27	U		24	U		22	U	

PROJ_NO: 02747 SDG: DSY-22 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G25-0012			DSY-SD-G25-1224			DSY-SD-G25-2448		
	LAB_ID	SE6767-21			SE6767-22			SE6767-23		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.7			35.5			35.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		22	UJ	E	23	UJ	E	22	UJ	E
AROCLOR-1221		22	U		23	U		22	U	
AROCLOR-1232		26	U		27	U		26	U	
AROCLOR-1242		22	U		23	U		22	U	
AROCLOR-1248		22	U		23	U		22	U	
AROCLOR-1254		22	U		170	J	PRU	190	J	R
AROCLOR-1260		22	U		23	U		22	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-7
Client ID: DSY-SD-DUP31-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2568.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1000	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene		940	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	J	450	ug/Kgdrywt	1	330	840	210	630
Chrysene		1300	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	320	630
Fluoranthene		3400	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene		3000	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		32.0	%					
2-Fluorobiphenyl		45.5	%					
Terphenyl-d14		56.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-17
Client ID: DSY-SD-DUP32-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2582.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	750	ug/Kgdrywt	1	330	970	250	730
Benzo(b)fluoranthene	J	600	ug/Kgdrywt	1	330	970	390	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	970	300	730
Benzo(k)fluoranthene	J	330	ug/Kgdrywt	1	330	970	240	730
Chrysene	J	830	ug/Kgdrywt	1	330	970	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	970	380	730
Fluoranthene		1700	ug/Kgdrywt	1	330	970	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	970	360	730
Pyrene		1500	ug/Kgdrywt	1	330	970	300	730
Nitrobenzene-d5		32.7	%					
2-Fluorobiphenyl		43.4	%					
Terphenyl-d14		43.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-1
Client ID: DSY-SD-G01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2562.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 15-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	450	ug/Kgdrywt	1	330	820	210	620
Benzo(b)fluoranthene	J	400	ug/Kgdrywt	1	330	820	330	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	820	260	620
Benzo(k)fluoranthene	U	210	ug/Kgdrywt	1	330	820	210	620
Chrysene	J	520	ug/Kgdrywt	1	330	820	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	820	320	620
Fluoranthene		1500	ug/Kgdrywt	1	330	820	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	820	300	620
Pyrene		1200	ug/Kgdrywt	1	330	820	250	620
Nitrobenzene-d5		44.0	%					
2-Fluorobiphenyl		52.9	%					
Terphenyl-d14		49.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-2
Client ID: DSY-SD-G01-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2563.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 15-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	400	ug/Kgdrywt	1	330	880	230	660
Benzo(b)fluoranthene	J	390	ug/Kgdrywt	1	330	880	360	660
Benzo(g,h,i)perylene	U	660	ug/Kgdrywt	1	330	880	280	660
Benzo(k)fluoranthene	U	660	ug/Kgdrywt	1	330	880	220	660
Chrysene	J	480	ug/Kgdrywt	1	330	880	250	660
Dibenzo(a,h)anthracene	U	660	ug/Kgdrywt	1	330	880	340	660
Fluoranthene		2300	ug/Kgdrywt	1	330	880	280	660
Indeno(1,2,3-cd)pyrene	U	660	ug/Kgdrywt	1	330	880	330	660
Pyrene		1800	ug/Kgdrywt	1	330	880	270	660
Nitrobenzene-d5		41.6	%					
2-Fluorobiphenyl		50.8	%					
Terphenyl-d14		54.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-3
Client ID: DSY-SD-G01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2564.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 15-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		970	ug/Kgdrywt	1	330	930	240	700
Benzo(b)fluoranthene	J	840	ug/Kgdrywt	1	330	930	380	700
Benzo(g,h,i)perylene	U	700	ug/Kgdrywt	1	330	930	290	700
Benzo(k)fluoranthene	J	380	ug/Kgdrywt	1	330	930	230	700
Chrysene		1100	ug/Kgdrywt	1	330	930	270	700
Dibenzo(a,h)anthracene	U	700	ug/Kgdrywt	1	330	930	360	700
Fluoranthene		4300	ug/Kgdrywt	1	330	930	300	700
Indeno(1,2,3-cd)pyrene	U	700	ug/Kgdrywt	1	330	930	340	700
Pyrene		3800	ug/Kgdrywt	1	330	930	280	700
Nitrobenzene-d5		44.2	%					
2-Fluorobiphenyl		54.0	%					
Terphenyl-d14		68.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-4
Client ID: DSY-SD-G05-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2565.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 15-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	290	ug/Kgdrywt	1	330	730	190	550
Benzo(b)fluoranthene	J	330	ug/Kgdrywt	1	330	730	300	550
Benzo(g,h,i)perylene	U	550	ug/Kgdrywt	1	330	730	230	550
Benzo(k)fluoranthene	U	550	ug/Kgdrywt	1	330	730	180	550
Chrysene	J	330	ug/Kgdrywt	1	330	730	210	550
Dibenzo(a,h)anthracene	U	550	ug/Kgdrywt	1	330	730	280	550
Fluoranthene	J	660	ug/Kgdrywt	1	330	730	230	550
Indeno(1,2,3-cd)pyrene	U	550	ug/Kgdrywt	1	330	730	270	550
Pyrene		790	ug/Kgdrywt	1	330	730	220	550
Nitrobenzene-d5		45.1	%					
2-Fluorobiphenyl		58.2	%					
Terphenyl-d14		71.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-5
Client ID: DSY-SD-G05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2566.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	440	ug/Kgdrywt	1	330	890	230	670
Benzo(b)fluoranthene	J	510	ug/Kgdrywt	1	330	890	360	670
Benzo(g,h,i)perylene	U	670	ug/Kgdrywt	1	330	890	280	670
Benzo(k)fluoranthene	U	670	ug/Kgdrywt	1	330	890	220	670
Chrysene	J	660	ug/Kgdrywt	1	330	890	260	670
Dibenzo(a,h)anthracene	U	670	ug/Kgdrywt	1	330	890	340	670
Fluoranthene		1100	ug/Kgdrywt	1	330	890	280	670
Indeno(1,2,3-cd)pyrene	U	670	ug/Kgdrywt	1	330	890	330	670
Pyrene		1100	ug/Kgdrywt	1	330	890	270	670
Nitrobenzene-d5		31.6	%					
2-Fluorobiphenyl		38.1	%					
Terphenyl-d14		37.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-6
Client ID: DSY-SD-G05-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2567.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1000	ug/Kgdrywt	1	330	910	240	680
Benzo(b)fluoranthene	J	910	ug/Kgdrywt	1	330	910	370	680
Benzo(g,h,i)perylene	U	680	ug/Kgdrywt	1	330	910	290	680
Benzo(k)fluoranthene	J	440	ug/Kgdrywt	1	330	910	230	680
Chrysene		1200	ug/Kgdrywt	1	330	910	260	680
Dibenzo(a,h)anthracene	U	680	ug/Kgdrywt	1	330	910	350	680
Fluoranthene		3100	ug/Kgdrywt	1	330	910	290	680
Indeno(1,2,3-cd)pyrene	U	680	ug/Kgdrywt	1	330	910	340	680
Pyrene		2700	ug/Kgdrywt	1	330	910	280	680
Nitrobenzene-d5		38.7	%					
2-Fluorobiphenyl		48.3	%					
Terphenyl-d14		52.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-8
Client ID: DSY-SD-G09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2569.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	310	ug/Kgdrywt	1	330	890	230	670
Benzo(b)fluoranthene	J	400	ug/Kgdrywt	1	330	890	360	670
Benzo(g,h,i)perylene	U	670	ug/Kgdrywt	1	330	890	280	670
Benzo(k)fluoranthene	U	670	ug/Kgdrywt	1	330	890	220	670
Chrysene	J	430	ug/Kgdrywt	1	330	890	260	670
Dibenzo(a,h)anthracene	U	670	ug/Kgdrywt	1	330	890	350	670
Fluoranthene	J	690	ug/Kgdrywt	1	330	890	290	670
Indeno(1,2,3-cd)pyrene	U	670	ug/Kgdrywt	1	330	890	330	670
Pyrene	J	800	ug/Kgdrywt	1	330	890	270	670
Nitrobenzene-d5		27.0	%					
2-Fluorobiphenyl		39.2	%					
Terphenyl-d14		42.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-9
Client ID: DSY-SD-G09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2570.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	700	ug/Kgdrywt	1	330	990	260	740
Benzo(b)fluoranthene	J	720	ug/Kgdrywt	1	330	990	400	740
Benzo(g,h,i)perylene	U	740	ug/Kgdrywt	1	330	990	310	740
Benzo(k)fluoranthene	J	360	ug/Kgdrywt	1	330	990	250	740
Chrysene		1000	ug/Kgdrywt	1	330	990	280	740
Dibenzo(a,h)anthracene	U	740	ug/Kgdrywt	1	330	990	380	740
Fluoranthene		1000	ug/Kgdrywt	1	330	990	320	740
Indeno(1,2,3-cd)pyrene	U	740	ug/Kgdrywt	1	330	990	360	740
Pyrene		1100	ug/Kgdrywt	1	330	990	300	740
Nitrobenzene-d5		43.8	%					
2-Fluorobiphenyl		54.2	%					
Terphenyl-d14		63.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-10
Client ID: DSY-SD-G09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2597.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 07-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100596

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	480	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	J	470	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	U	730	ug/Kgdrywt	1	330	980	240	730
Chrysene	J	560	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene		1300	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene		1100	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		42.8	%					
2-Fluorobiphenyl		52.9	%					
Terphenyl-d14		64.3	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-11
Client ID: DSY-SD-G13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2598.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	300	ug/Kgdrywt	1	330	790	210	590
Benzo(b)fluoranthene	U	590	ug/Kgdrywt	1	330	790	320	590
Benzo(g,h,i)perylene	U	590	ug/Kgdrywt	1	330	790	250	590
Benzo(k)fluoranthene	U	590	ug/Kgdrywt	1	330	790	200	590
Chrysene	J	410	ug/Kgdrywt	1	330	790	230	590
Dibenzo(a,h)anthracene	U	590	ug/Kgdrywt	1	330	790	310	590
Fluoranthene	J	470	ug/Kgdrywt	1	330	790	250	590
Indeno(1,2,3-cd)pyrene	U	590	ug/Kgdrywt	1	330	790	290	590
Pyrene	J	580	ug/Kgdrywt	1	330	790	240	590
Nitrobenzene-d5		29.1	%					
2-Fluorobiphenyl		35.8	%					
Terphenyl-d14		32.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-12
Client ID: DSY-SD-G13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2577.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 31.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	390	ug/Kgdrywt	1	330	1000	260	750
Benzo(b)fluoranthene	U	750	ug/Kgdrywt	1	330	1000	410	750
Benzo(g,h,i)perylene	U	750	ug/Kgdrywt	1	330	1000	320	750
Benzo(k)fluoranthene	U	750	ug/Kgdrywt	1	330	1000	250	750
Chrysene	J	480	ug/Kgdrywt	1	330	1000	290	750
Dibenzo(a,h)anthracene	U	750	ug/Kgdrywt	1	330	1000	390	750
Fluoranthene	J	960	ug/Kgdrywt	1	330	1000	320	750
Indeno(1,2,3-cd)pyrene	U	750	ug/Kgdrywt	1	330	1000	370	750
Pyrene	J	840	ug/Kgdrywt	1	330	1000	310	750
Nitrobenzene-d5		36.4	%					
2-Fluorobiphenyl		39.4	%					
Terphenyl-d14		48.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-13
Client ID: DSY-SD-G13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2578.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	340	ug/Kgdrywt	1	330	1000	260	770
Benzo(b)fluoranthene	U	770	ug/Kgdrywt	1	330	1000	410	770
Benzo(g,h,i)perylene	U	770	ug/Kgdrywt	1	330	1000	320	770
Benzo(k)fluoranthene	U	770	ug/Kgdrywt	1	330	1000	260	770
Chrysene	J	430	ug/Kgdrywt	1	330	1000	290	770
Dibenzo(a,h)anthracene	U	770	ug/Kgdrywt	1	330	1000	400	770
Fluoranthene	J	720	ug/Kgdrywt	1	330	1000	330	770
Indeno(1,2,3-cd)pyrene	U	770	ug/Kgdrywt	1	330	1000	380	770
Pyrene	J	970	ug/Kgdrywt	1	330	1000	310	770
Nitrobenzene-d5		30.7	%					
2-Fluorobiphenyl		38.6	%					
Terphenyl-d14		44.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-14
Client ID: DSY-SD-G17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	630	ug/Kgdrywt	1	330	830	220	630
Benzo(b)fluoranthene	U	630	ug/Kgdrywt	1	330	830	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	830	260	630
Benzo(k)fluoranthene	U	630	ug/Kgdrywt	1	330	830	210	630
Chrysene	J	240	ug/Kgdrywt	1	330	830	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	830	320	630
Fluoranthene	J	470	ug/Kgdrywt	1	330	830	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	830	310	630
Pyrene	J	420	ug/Kgdrywt	1	330	830	250	630
Nitrobenzene-d5	*	23.0	%					
2-Fluorobiphenyl		35.6	%					
Terphenyl-d14		30.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-14RE
Client ID: DSY-SD-G17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2688.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101261

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	640	ug/Kgdrywt	1	330	850	220	640
Benzo(b)fluoranthene	U	640	ug/Kgdrywt	1	330	850	340	640
Benzo(g,h,i)perylene	U	640	ug/Kgdrywt	1	330	850	270	640
Benzo(k)fluoranthene	U	640	ug/Kgdrywt	1	330	850	210	640
Chrysene	U	640	ug/Kgdrywt	1	330	850	240	640
Dibenzo(a,h)anthracene	U	640	ug/Kgdrywt	1	330	850	330	640
Fluoranthene	J	380	ug/Kgdrywt	1	330	850	270	640
Indeno(1,2,3-cd)pyrene	U	640	ug/Kgdrywt	1	330	850	310	640
Pyrene	J	470	ug/Kgdrywt	1	330	850	260	640
Nitrobenzene-d5		43.5	%					
2-Fluorobiphenyl		56.3	%					
Terphenyl-d14		84.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-15
Client ID: DSY-SD-G17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	340	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	J	470	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	J	230	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	500	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	360	690
Fluoranthene		1200	ug/Kgdrywt	1	330	920	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene	J	900	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		35.0	%					
2-Fluorobiphenyl		48.8	%					
Terphenyl-d14		47.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-16
Client ID: DSY-SD-G17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2581.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	590	ug/Kgdrywt	1	330	980	260	740
Benzo(b)fluoranthene	J	620	ug/Kgdrywt	1	330	980	400	740
Benzo(g,h,i)perylene	U	740	ug/Kgdrywt	1	330	980	310	740
Benzo(k)fluoranthene	U	740	ug/Kgdrywt	1	330	980	250	740
Chrysene	J	680	ug/Kgdrywt	1	330	980	280	740
Dibenzo(a,h)anthracene	U	740	ug/Kgdrywt	1	330	980	380	740
Fluoranthene		1600	ug/Kgdrywt	1	330	980	310	740
Indeno(1,2,3-cd)pyrene	U	740	ug/Kgdrywt	1	330	980	360	740
Pyrene		1500	ug/Kgdrywt	1	330	980	300	740
Nitrobenzene-d5		37.4	%					
2-Fluorobiphenyl		53.0	%					
Terphenyl-d14		53.2	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-18
Client ID: DSY-SD-G21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2583.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	490	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	J	590	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	J	300	ug/Kgdrywt	1	330	980	240	730
Chrysene	J	720	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene		1000	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene		1100	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		32.0	%					
2-Fluorobiphenyl		43.4	%					
Terphenyl-d14		48.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-19
Client ID: DSY-SD-G21-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2584.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	400	ug/Kgdrywt	1	330	910	240	690
Benzo(b)fluoranthene	J	510	ug/Kgdrywt	1	330	910	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	910	290	690
Benzo(k)fluoranthene	U	690	ug/Kgdrywt	1	330	910	230	690
Chrysene	J	520	ug/Kgdrywt	1	330	910	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	910	350	690
Fluoranthene	J	840	ug/Kgdrywt	1	330	910	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	910	340	690
Pyrene	J	870	ug/Kgdrywt	1	330	910	280	690
Nitrobenzene-d5	*	0.0680	%					
2-Fluorobiphenyl	*	0.113	%					
Terphenyl-d14	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-19RE
Client ID: DSY-SD-G21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2689.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101261

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	290	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	J	330	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	530	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	720	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		38.9	%					
2-Fluorobiphenyl		52.0	%					
Terphenyl-d14		76.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-20
Client ID: DSY-SD-G21-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2600.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		870	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene		890	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	270	630
Benzo(k)fluoranthene	J	380	ug/Kgdrywt	1	330	840	210	630
Chrysene		940	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	330	630
Fluoranthene		2300	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene		2100	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		26.0	%					
2-Fluorobiphenyl		50.0	%					
Terphenyl-d14		51.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-21
Client ID: DSY-SD-G25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2603.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99495

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		2100	ug/Kgdrywt	1	330	860	220	640
Benzo(a)pyrene		1200	ug/Kgdrywt	1	330	860	240	640
Benzo(b)fluoranthene		1900	ug/Kgdrywt	1	330	860	350	640
Benzo(g,h,i)perylene	J	410	ug/Kgdrywt	1	330	860	270	640
Benzo(k)fluoranthene	J	830	ug/Kgdrywt	1	330	860	220	640
Chrysene		2000	ug/Kgdrywt	1	330	860	250	640
Dibenzo(a,h)anthracene	U	640	ug/Kgdrywt	1	330	860	330	640
Fluoranthene		2700	ug/Kgdrywt	1	330	860	280	640
Indeno(1,2,3-cd)pyrene	J	510	ug/Kgdrywt	1	330	860	320	640
Pyrene		3400	ug/Kgdrywt	1	330	860	260	640
Nitrobenzene-d5		48.6	%					
2-Fluorobiphenyl		56.0	%					
Terphenyl-d14		59.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-22
Client ID: DSY-SD-G25-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: N2617.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99495

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3900	ug/Kgdrywt	1	330	910	240	680
Benzo(a)pyrene		2200	ug/Kgdrywt	1	330	910	260	680
Benzo(b)fluoranthene		3500	ug/Kgdrywt	1	330	910	370	680
Benzo(g,h,i)perylene	J	700	ug/Kgdrywt	1	330	910	290	680
Benzo(k)fluoranthene		1500	ug/Kgdrywt	1	330	910	230	680
Chrysene		3900	ug/Kgdrywt	1	330	910	260	680
Dibenzo(a,h)anthracene	U	680	ug/Kgdrywt	1	330	910	350	680
Fluoranthene		1600	ug/Kgdrywt	1	330	910	290	680
Indeno(1,2,3-cd)pyrene	J	810	ug/Kgdrywt	1	330	910	340	680
Pyrene		8700	ug/Kgdrywt	1	330	910	280	680
Nitrobenzene-d5		30.3	%					
2-Fluorobiphenyl		50.8	%					
Terphenyl-d14		48.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-23
Client ID: DSY-SD-G25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: N2618.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99495

Analysis Date: 18-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3900	ug/Kgdrywt	1	330	930	240	700
Benzo(a)pyrene		2100	ug/Kgdrywt	1	330	930	260	700
Benzo(b)fluoranthene		3300	ug/Kgdrywt	1	330	930	380	700
Benzo(g,h,i)perylene	J	750	ug/Kgdrywt	1	330	930	290	700
Benzo(k)fluoranthene		1500	ug/Kgdrywt	1	330	930	230	700
Chrysene		4600	ug/Kgdrywt	1	330	930	270	700
Dibenzo(a,h)anthracene	U	700	ug/Kgdrywt	1	330	930	360	700
Fluoranthene		1500	ug/Kgdrywt	1	330	930	300	700
Indeno(1,2,3-cd)pyrene	J	910	ug/Kgdrywt	1	330	930	340	700
Pyrene		7800	ug/Kgdrywt	1	330	930	280	700
Nitrobenzene-d5		24.1	%					
2-Fluorobiphenyl		39.3	%					
Terphenyl-d14		32.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-7
Client ID: DSY-SD-DUP31-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4107.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		470	ug/Kgdrywt	1	20	51.	8.4	25.
2-Methylnaphthalene-D10		32.0	%					
Fluorene-D10		50.1	%					
Pyrene-D10		67.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-17
Client ID: DSY-SD-DUP32-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4118.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		360	ug/Kgdrywt	1	20	59.	9.7	29.
2-Methylnaphthalene-D10		30.3	%					
Fluorene-D10		44.0	%					
Pyrene-D10		46.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-1
Client ID: DSY-SD-G01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4092.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		210	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10		37.5	%					
Fluorene-D10		49.3	%					
Pyrene-D10		65.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-2
Client ID: DSY-SD-G01-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: G4093.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	54.	8.8	27.
2-Methylnaphthalene-D10		37.9	%					
Fluorene-D10		48.5	%					
Pyrene-D10		58.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-3
Client ID: DSY-SD-G01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4094.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 35.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		400	ug/Kgdrywt	1	20	56.	9.3	28.
2-Methylnaphthalene-D10		37.1	%					
Fluorene-D10		53.2	%					
Pyrene-D10		63.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-4
Client ID: DSY-SD-G05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4095.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	44.	7.3	22.
2-Methylnaphthalene-D10		33.1	%					
Fluorene-D10		47.6	%					
Pyrene-D10		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-5
Client ID: DSY-SD-G05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4105.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		210	ug/Kgdrywt	1	20	54.	8.9	27.
2-Methylnaphthalene-D10		28.2	%					
Fluorene-D10		35.9	%					
Pyrene-D10		44.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-6
Client ID: DSY-SD-G05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4106.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		440	ug/Kgdrywt	1	20	55.	9.1	28.
2-Methylnaphthalene-D10		31.9	%					
Fluorene-D10		42.3	%					
Pyrene-D10		48.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-8
Client ID: DSY-SD-G09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4108.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	54.	8.9	27.
2-Methylnaphthalene-D10		23.3	%					
Fluorene-D10		37.7	%					
Pyrene-D10		50.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-9
Client ID: DSY-SD-G09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4109.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		320	ug/Kgdrywt	1	20	60.	9.9	30.
2-Methylnaphthalene-D10		37.6	%					
Fluorene-D10		49.2	%					
Pyrene-D10		64.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-10
Client ID: DSY-SD-G09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4110.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 07-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101758

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-11
Client ID: DSY-SD-G13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4111.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	48.	7.9	24.
2-Methylnaphthalene-D10		25.0	%					
Fluorene-D10		31.0	%					
Pyrene-D10		36.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-12
Client ID: DSY-SD-G13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4112.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 31.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		210	ug/Kgdrywt	1	20	61.	10.	30.
2-Methylnaphthalene-D10		36.2	%					
Fluorene-D10		47.4	%					
Pyrene-D10		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-13
Client ID: DSY-SD-G13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4114.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	62.	10.	31.
2-Methylnaphthalene-D10		38.6	%					
Fluorene-D10		49.5	%					
Pyrene-D10		50.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-14
Client ID: DSY-SD-G17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4115.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		130	ug/Kgdrywt	1	20	50.	8.3	25.
2-Methylnaphthalene-D10		25.4	%					
Fluorene-D10		40.8	%					
Pyrene-D10		46.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-15
Client ID: DSY-SD-G17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4116.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	56.	9.2	28.
2-Methylnaphthalene-D10		34.8	%					
Fluorene-D10		49.8	%					
Pyrene-D10		53.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-16
Client ID: DSY-SD-G17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4117.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		340	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		38.4	%					
Fluorene-D10		56.1	%					
Pyrene-D10		63.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-18
Client ID: DSY-SD-G21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4119.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		250	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		23.2	%					
Fluorene-D10		38.2	%					
Pyrene-D10		39.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-19
Client ID: DSY-SD-G21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4120.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		270	ug/Kgdrywt	1	20	55.	9.1	28.
2-Methylnaphthalene-D10		36.4	%					
Fluorene-D10		55.7	%					
Pyrene-D10		61.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-20
Client ID: DSY-SD-G21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: G4121.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		430	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10		31.8	%					
Fluorene-D10		52.9	%					
Pyrene-D10		59.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-7
Client ID: DSY-SD-DUP31-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK278.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	17.	23.
Aroclor-1254		240	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		95.2	%					
Decachlorobiphenyl		92.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-17
Client ID: DSY-SD-DUP32-101211
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: 7EK551.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	52.	24.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	52.	29.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	52.	19.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	52.	14.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Tetrachloro-M-Xylene		106.	%					
Decachlorobiphenyl		107.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-1
Client ID: DSY-SD-G01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK272.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Tetrachloro-M-Xylene		70.8	%					
Decachlorobiphenyl		61.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-2
Client ID: DSY-SD-G01-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: 7EK273.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	45.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	45.	21.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	45.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	45.	15.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	45.	16.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	45.	12.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	45.	16.	23.
Tetrachloro-M-Xylene		71.2	%					
Decachlorobiphenyl		69.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-3
Client ID: DSY-SD-G01-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: 7EK274.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		59.9	%					
Decachlorobiphenyl		107.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-4
Client ID: DSY-SD-G05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK275.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	39.	14.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	39.	18.	19.
Aroclor-1232	U	23.	ug/Kgdrywt	1	17	39.	21.	23.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	39.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	39.	14.	19.
Aroclor-1254	U	19.	ug/Kgdrywt	1	17	39.	11.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	39.	14.	19.
Tetrachloro-M-Xylene		78.7	%					
Decachlorobiphenyl		62.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-5
Client ID: DSY-SD-G05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK276.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	50.	28.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene		87.0	%					
Decachlorobiphenyl		89.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-6
Client ID: DSY-SD-G05-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: 7EK277.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254		150	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		70.6	%					
Decachlorobiphenyl		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-8
Client ID: DSY-SD-G09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK279.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	47.	22.	23.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	47.	17.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	47.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Tetrachloro-M-Xylene		76.5	%					
Decachlorobiphenyl	*	57.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-9
Client ID: DSY-SD-G09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK280.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	52.	24.	26.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	52.	28.	30.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	52.	14.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Tetrachloro-M-Xylene		76.6	%					
Decachlorobiphenyl		74.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-10
Client ID: DSY-SD-G09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK281.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 08-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	52.	24.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	52.	28.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	52.	19.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	52.	14.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	52.	18.	26.
Tetrachloro-M-Xylene		100.	%					
Decachlorobiphenyl		94.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-11
Client ID: DSY-SD-G13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK545.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	41.	19.	21.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	41.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	41.	11.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	41.	14.	21.
Tetrachloro-M-Xylene		84.5	%					
Decachlorobiphenyl		98.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-12
Client ID: DSY-SD-G13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK546.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 31.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	49.	23.	24.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	49.	18.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	49.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Tetrachloro-M-Xylene		82.7	%					
Decachlorobiphenyl		95.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-13
Client ID: DSY-SD-G13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK547.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1221	U	27.	ug/Kgdrywt	1	17	54.	25.	27.
Aroclor-1232	U	32.	ug/Kgdrywt	1	17	54.	30.	32.
Aroclor-1242	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1248	U	27.	ug/Kgdrywt	1	17	54.	20.	27.
Aroclor-1254		130	ug/Kgdrywt	1	17	54.	15.	27.
Aroclor-1260	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Tetrachloro-M-Xylene		92.6	%					
Decachlorobiphenyl		100.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-14
Client ID: DSY-SD-G17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK548.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	17.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		79.8	%					
Decachlorobiphenyl		94.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-15
Client ID: DSY-SD-G17-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-22
Lab File ID: 7EK549.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	28.	ug/Kgdrywt	1	17	56.	20.	28.
Aroclor-1221	U	28.	ug/Kgdrywt	1	17	56.	26.	28.
Aroclor-1232	U	33.	ug/Kgdrywt	1	17	56.	30.	33.
Aroclor-1242	U	28.	ug/Kgdrywt	1	17	56.	19.	28.
Aroclor-1248	U	28.	ug/Kgdrywt	1	17	56.	20.	28.
Aroclor-1254	U	28.	ug/Kgdrywt	1	17	56.	15.	28.
Aroclor-1260	U	28.	ug/Kgdrywt	1	17	56.	20.	28.
Tetrachloro-M-Xylene		80.2	%					
Decachlorobiphenyl		91.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-16
Client ID: DSY-SD-G17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK550.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	53.	25.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	53.	29.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	53.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	53.	15.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Tetrachloro-M-Xylene		98.1	%					
Decachlorobiphenyl		100.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-18
Client ID: DSY-SD-G21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK552.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1221	U	27.	ug/Kgdrywt	1	17	54.	25.	27.
Aroclor-1232	U	32.	ug/Kgdrywt	1	17	54.	30.	32.
Aroclor-1242	U	27.	ug/Kgdrywt	1	17	54.	18.	27.
Aroclor-1248	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1254	U	27.	ug/Kgdrywt	1	17	54.	15.	27.
Aroclor-1260	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Tetrachloro-M-Xylene		104.	%					
Decachlorobiphenyl		116.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-19
Client ID: DSY-SD-G21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK558.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 14-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	49.	23.	24.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	49.	18.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	49.	14.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	49.	17.	24.
Tetrachloro-M-Xylene		92.7	%					
Decachlorobiphenyl		105.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-20
Client ID: DSY-SD-G21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK559.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 15-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Tetrachloro-M-Xylene		85.1	%					
Decachlorobiphenyl		88.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-21
Client ID: DSY-SD-G25-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK114.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	21.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Tetrachloro-M-Xylene		73.5	%					
Decachlorobiphenyl		63.6	%					

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Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-22
Client ID: DSY-SD-G25-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK115.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	21.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1254	J	170	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		75.6	%					
Decachlorobiphenyl		80.1	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6767-23
Client ID: DSY-SD-G25-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-22
Lab File ID: 7EK116.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	45.	16.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	45.	21.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	45.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	45.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	45.	16.	22.
Aroclor-1254		190	ug/Kgdrywt	1	17	45.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	45.	16.	22.
Tetrachloro-M-Xylene		71.3	%					
Decachlorobiphenyl		88.9	%					

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APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name MAVSTA NEWPORT
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. 02747 CLP WE 61
SDG No. 054-22
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name J. Kalinyak Company Name Katahdin Phone Number _____

Date Validation Started _____ Date Validation Completed _____

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

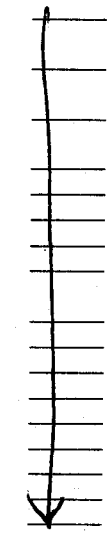
VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)
VOA/SV-III	INITIAL CALIBRATION
VOA/SV-IV	CONTINUING CALIBRATION
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS
VOA-VI	VOA SURROGATE SPIKE RECOVERIES
SV-VI	SV SURROGATE SPIKE RECOVERIES
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK
VOA/SV-Pest/PCB-XI	ACCURACY CHECK
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS
VOA/SV-XV	SEMIVOLATILE CLEANUP
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA

PAH

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION
Pest/PCB-III	INITIAL CALIBRATION
Pest/PCB-IV	CONTINUING CALIBRATION
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT
Pest/PCB-VII	PESTICIDE CLEANUP
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK
VOA/SV-Pest/PCB-XI	ACCURACY CHECK
Pest/PCB-XII	COMPOUND IDENTIFICATION
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA

PCB



I certify that all criteria were met for the worksheets checked above.

Signature: [signature]

Name: Joseph Kalinyak

Date: 12/28/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

N/A

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

See DV Report

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: See DV Report

Missing Information	Date Lab Contacted	Date Received

Validator: JK Date: 12/28/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler:_____ Company:_____ Contacted: Yes No Date:_____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

See DV Report

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: _____

Date: 12/28/11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

See DV Report

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV-III

See DV Report

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: JK

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

See DV Report

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:_____

Sampler: _____ Company: _____

Contacted: Yes No Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

See DV Report

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: JC

Date: 12/28/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
SV-VI

See DV Report

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

See DV Report

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: _____

Date: 12/28/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

See DV Report

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: _____ Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

See DV Report

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

See DV Report

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: _____ Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

See DV Report

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

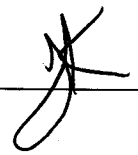
XIII. SAMPLE QUANTITATION

N/A Tier II

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: 

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

See DV Report

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	RRT	Est. Conc.	Action

Validator: _____

Date: 12/28/11

EPA-NE - Data Validation Worksheet
VOA/SV-XV

See DV Report

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: _____ Date: 12/28/11

APPENDIX D

SUPPORT DOCUMENTATION

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	SUR	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	SUR	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	SUR	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-21	OS	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-23	OS	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7DL	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-24	OS	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-19	OS	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-20	SIM	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	SIM	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-21	SIM	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	SIM	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-22	SIM	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-23	SIM	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-24	SIM	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-21	SIM	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-22	SIM	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-23	SIM	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-24	SIM	UG/KG	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-21	PCB	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-21	PCB	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-19	PCB	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8481

Address	City	State	Zip Code
250 ANDOVER ST. SUITE 200	WILMINGTON	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61 Derecktor SY	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton

Copies To:

LAB USE ONLY WORK ORDER #: SE6767

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-G01-0012	10/12/11/0920	SED	3	X	X	X	X						
	DSY-SD-G01-1224	/0923		2	X	X	X							
	DSY-SD-G01-2448	/0926		2	X	X	X							
	DSY-SD-G05-0012	/1205		3	X	X	X	X						
	DSY-SD-G05-1224	/1208		2	X	X	X							
	DSY-SD-G05-2448	/1211		2	X	X	X							
	DSY-SD-DUP31-101211	/—		2	X	X	X							
	DSY-SD-G09-0012	/1240		3	X	X	X	X						
	DSY-SD-G09-1224	/1243		2	X	X	X							
	DSY-SD-G09-2448	/1246		2	X	X	X							
	DSY-SD-G13-0012	/1310		3	X	X	X	X						
	DSY-SD-G13-1224	/1313		2	X	X	X							
	DSY-SD-G13-2448	/1316		2	X	X	X							
	DSY-SD-G17-0012	/1325		3	X	X	X	X						
	DSY-SD-G17-1224	/1328		2	X	X	X							
	DSY-SD-G17-2448	/1331		2	X	X	X							

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horter /	

LAB USE ONLY WORK ORDER #: SE6767 / SE6768

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Asbestos (Filt. ☐Y ☐N)					
	DSY-SD-DUP32-101211	10/12/11 / —	SED	2	X	X	X							
	DSY-SD-G21-0012	/ 1345		3	X	X	X	X						
	DSY-SD-G21-1224	/ 1348		2	X	X	X							
	DSY-SD-G21-2448	/ 1351		4	X	X	X							
	DSY-SD-G25-0012	/ 1405		3	X	X	X	X						
	DSY-SD-G25-1224	/ 1408		2	X	X	X							
	DSY-SD-G25-2448	/ 1411		2	X	X	X							
	DSY-SD-AA01-0012	/ 1420		4	X	X	X	X	X					
	DSY-SD-AA01-1224	/ 1423		3	X	X	X		X					
	DSY-SD-AA01-2448	/ 1428		3	X	X	X		X					
	DSY-SD-DUP33-101211	/ —		3	X	X	X		X					
	DSY-SD-AA05-0012	/ 1445		4	X	X	X	X	X					
	DSY-SD-AA05-1224	/ 1448		3	X	X	X		X					
	DSY-SD-AA05-2448	/ 1451	↓	3	X	X	X		X					
	DSY-SD-RB13-101211	/ 1600	AQ	5	X	X	X							
		/												

COMMENTS DSY-SD-G21-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

000014

ORIGINAL

Client: Tetra Tech	KAS PM: JC	Sampled By:	
Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Ha	
SDG #:	Cooler: 1 of 3	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

AA0S-0012 - no TOC jar in cooler.

Client: Tetra Tech	KAS PM: JC		
Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767 / SE6768	KIMS Review By: JN	Received By: Andrew Hale	
SDG #:	Cooler: 2 of 3	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Tetra Tech	KAS PM: JC	Sampled By:	
Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Harlow	
SDG #:	Cooler: 3 of 13	Date/Time Rec.: 10/13/11 18:03	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 0.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 30, 2011
05:16 AM

Login Number: SE6767

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Primary Report Address:
Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

Primary Invoice Address:
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming: TT-DERECKTOR

Login Information:

ANALYSIS INSTRUCTIONS	:	DoD QSM with lab limits. ND to LOD. "J" flag between MDL and LOQ. For sediments, decant standing water, homogenize and determine solids prior to analysis. Increase sample wt or centrifuge to eliminate more water to meet project LOQ goals. If moisture still too high, contact client for further procedures. SVOA is PAH (8270D) only. Extract for both SIM and scan. Run Scan first. If BAP "U" or "J" flagged, analyze BAP by SIM. Metals (6010C)- run MS/lab dup, post dig spike and serial dilution.
CHECK NO.	:	
CLIENT PO#	:	1045366 50-CTO WE61 112G03016 112G02747
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	1.2, 1.7, 0.9
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	KAS119QC-CSV
LOGIN INITIALS	:	GN
PM	:	JO
PROJECT NAME	:	~~NAVSTA Newport GTO WE61 Derecktor~~
QC LEVEL	:	IV
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	Summary package needs all forms. Send HC, CD and original COC to Lucy. Send CD, EDD and copy of COC to Tobrena.
SDG ID	:	DSY-22
SDG STATUS	:	Begin/End

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-1	DSY-SD-G01-0012	12-OCT-11 09:20	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-2	DSY-SD-G01-1224	12-OCT-11 09:23	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-3	DSY-SD-G01-2448	12-OCT-11 09:26	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

11.30.11

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Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 30, 2011
05:16 AM

Login Number: SE6767

Quote/Incoming: TT-DERECKTOR

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-4	DSY-SD-G05-0012	12-OCT-11 12:05	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-5	DSY-SD-G05-1224	12-OCT-11 12:08	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-6	DSY-SD-G05-2448	12-OCT-11 12:11	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-7	DSY-SD-DUP31-101211	12-OCT-11 00:00	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-8	DSY-SD-G09-0012	12-OCT-11 12:40	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

11.30.11

0000016

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Login Number: SE6767

Quote/Incoming: TT-DERECKTOR

Account: TETRAT001 Web

Tetra Tech NUS, Inc.

Project: TT-DERECKTOR

TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-9	DSY-SD-G09-1224	12-OCT-11 12:43	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-10	DSY-SD-G09-2448	12-OCT-11 12:46	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-11	DSY-SD-G13-0012	12-OCT-11 13:10	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-12	DSY-SD-G13-1224	12-OCT-11 13:13	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-13	DSY-SD-G13-2448	12-OCT-11 13:16	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

11.30.11

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 30, 2011
05:16 AM

Login Number: SE6767

Quote/Incoming: TT-DERECKTOR

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-14	DSY-SD-G17-0012	12-OCT-11 13:25	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-15	DSY-SD-G17-1224	12-OCT-11 13:28	13-OCT-11		01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-16	DSY-SD-G17-2448	12-OCT-11 13:31	13-OCT-11		01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-17	DSY-SD-DUP32-101211	12-OCT-11 00:00	13-OCT-11		01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-18	DSY-SD-G21-0012	12-OCT-11 13:45	13-OCT-11		01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

11.30.11

0000018

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 30, 2011
05:16 AM

Login Number: SE6767

Quote/Incoming: TT-DERECKTOR

Account: TETRAT001
Tetra Tech NUS, Inc.

Web

Project: TT-DERECKTOR
TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6767-19	DSY-SD-G21-1224	12-OCT-11 13:48	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-20	DSY-SD-G21-2448	12-OCT-11 13:51	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD MS/MSD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	26-OCT-11	4oz Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-21	DSY-SD-G25-0012	12-OCT-11 14:05	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	26-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	26-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	26-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	8oz Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-22	DSY-SD-G25-1224	12-OCT-11 14:08	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

SE6767-23	DSY-SD-G25-2448	12-OCT-11 14:11	13-OCT-11			01-NOV-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	09-APR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	09-APR-12	8oz Glass		
Solid	S	SW6010-LEAD	09-APR-12	8oz Glass		
Solid	S	SW6010-ZINC	09-APR-12	8oz Glass		
Solid	S	SW8082-S	26-OCT-11	100g Glass		
Solid	S	SW8270-S	26-OCT-11	1L N-Amber Glass		
Solid	S	TS	11-NOV-11	8oz Glass		

Total Samples: ***23*** ***Total Analyses:*** ***202***

11:30·11

000009

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-22
SE6767

Sample Receipt

The following samples were received on October 13, 2011 and were logged in under Katahdin Analytical Services work order number SE6767 for a hardcopy due date of November 1, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6767-1	DSY-SD-G01-0012
SE6767-2	DSY-SD-G01-1224
SE6767-3	DSY-SD-G01-2448
SE6767-4	DSY-SD-G05-0012
SE6767-5	DSY-SD-G05-1224
SE6767-6	DSY-SD-G05-2448
SE6767-7	DSY-SD-DUP31-101211
SE6767-8	DSY-SD-G09-0012
SE6767-9	DSY-SD-G09-1224
SE6767-10	DSY-SD-G09-2448
SE6767-11	DSY-SD-G13-0012
SE6767-12	DSY-SD-G13-1224
SE6767-13	DSY-SD-G13-2448
SE6767-14	DSY-SD-G17-0012
SE6767-15	DSY-SD-G17-1224
SE6767-16	DSY-SD-G17-2448
SE6767-17	DSY-SD-DUP32-101211
SE6767-18	DSY-SD-G21-0012
SE6767-19	DSY-SD-G21-1224
SE6767-20	DSY-SD-G21-2448
SE6767-21	DSY-SD-G25-0012
SE6767-22	DSY-SD-G25-1224
SE6767-23	DSY-SD-G25-2448

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-22 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6767-20 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Sample SE6767-10 was lost due to a laboratory accident during concentration and the sample was reextracted 12 days out of hold time.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. Sample SE6767-10 and the associated method blank WG101758-1 were spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

Sample SE6767-3 was manually integrated for the surrogate fluorene-d10. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on

the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6767-14 had a low recovery for one surrogate, which was outside the laboratory established acceptance limits. The sample was reextracted twenty-two days out of hold time, analyzed and had acceptable surrogate recoveries. The results for both extractions are reported.

Sample SE6767-19 had low recoveries for two surrogates and no recovery for another surrogate, which were outside the laboratory established acceptance limits. The sample was reextracted twenty-two days out of hold time, analyzed and had acceptable surrogate recoveries. The results for both extractions are reported.

Sample SE6767-10 was lost due to a laboratory accident during concentration and the sample was reextracted 12 days out of hold time.

Samples SE6767-1, 15 and 18 were manually integrated for the analytes benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The CV (file N2574) had a high response for the analyte fluoranthene. The CV (file N2613) had high responses for the analytes pyrene, benzo(g,h,i)perylene and the surrogate terphenyl-d14. The CV (file N2682) had a low response for the analyte indeno(1,2,3-cd)pyrene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

<u>8082 Analysis</u>

Surrogate recoveries for all samples and QC, as well as spike recoveries for the laboratory control samples and laboratory control sample duplicates (LCS/LCSDs), were evaluated using laboratory established acceptance limits.

Samples SE6767-2, 4, 6, 7, 11, 12, 13, 14, 15, 16, 18, 19, 22 and 23 were manually integrated for Aroclor 1254 and/or the surrogate TCX. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6767-22 had a %RPD for Aroclor 1254 that was outside of the method acceptance limits of 40%. This analyte is flagged with a "J" qualifier on the report of analysis (ROA).

Samples SE6767-1, 6, 21, 22 and 23 had low recoveries for the surrogate DCB on one channel, which were outside of the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channel, no further action was taken.

The LCS WG100155-2 had low recoveries for the surrogate DCB on channel A, which were outside of the laboratory established acceptance limits. Since the recovery for DCB was acceptable on channel B and the spike recoveries were acceptable, no further action was taken.

The MS/MSD WG100155-4 and 5 had low recoveries for the surrogate TCX on one or both channels and DBC on both channels, which were outside of the laboratory established acceptance limits. Since the spike recoveries were acceptable, no further action was taken.

Sample SE6767-3 had low recoveries for the surrogates TCX and DCB on channel A, which were outside of the laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

Sample SE6767-8 had low recoveries for the surrogate DCB on both channels, which were outside the laboratory established acceptance limits.

The opening/closing calibration verification standards (CVs) (files 7EK107 and 7EK153) had high responses for the surrogate TCX on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK122) had low responses for the surrogate DCB on both channels and a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recoveries for DCB may be biased low for the associated samples.

The opening CV (file 7EK268) had low responses for Aroclor 1260 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK283) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016 and DCB were acceptable on channel B, the associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The opening/closing CVs (files 7EK286 and 7EK557) had high responses for Aroclor 1254 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CVs (files 7EK539 and 7EK566) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016, Aroclor 1260 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016, Aroclor 1260 and DCB were acceptable on channel B, the

associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The opening/closing CV (file 7EK554) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016 and DCB were acceptable on channel B, the associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The LCS WG99856-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. The LCS also had low recoveries for the surrogate TCX on both channels, which were outside of the laboratory established acceptance limits. Since the LCSD had acceptable surrogate and spike recoveries, the associated samples were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-22 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6767-(1-20) were digested for ICP analysis on 10/27/11 (QC Batch BJ27ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6767-20 was prepared in duplicate and with a matrix-spiked aliquot.

Solid-matrix Katahdin Sample Numbers SE6767-(21-23) were digested for ICP analysis on 10/31/11 (QC Batch BJ31ICS1) in accordance with USEPA Method 3050B.

ICP analyses of SDG DSY-22 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6767-20 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added). The measured recovery of lead in a post-digestion spike of Katahdin Sample Number SE6444-10 is within the project acceptance criteria (75% - 125% recovery of the added element).

The duplicate analysis of Katahdin Sample Number SE6767-20 is within the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample Number SE6767-20 is within the project acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all analytes.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-22 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recoveries, relative to both the TOC (1) and TOC(2) results for the unspiked sample, for the matrix spike aliquot of Katahdin Sample No. SE6767-11 are outside the laboratory's acceptance limits of 75% - 125%.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.07.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: ND180 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP Injection Time: 1604

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5 (1.4)1	
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2 (0.6)1	
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4 (73.4)2	
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6 (19.5)3	

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08	DSY-SD-G01-0012	SE6767-1	N2562	11/15/11	2137
09	DSY-SD-G01-1224	SE6767-2	N2563	11/15/11	2223
10	DSY-SD-G01-2448	SE6767-3	N2564	11/15/11	2307
11	DSY-SD-G05-0012	SE6767-4	N2565	11/15/11	2352
12	DSY-SD-G05-1224	SE6767-5	N2566	11/16/11	0036
13	DSY-SD-G05-2448	SE6767-6	N2567	11/16/11	0121
14	DSY-SD-DUP31-101211	SE6767-7	N2568	11/16/11	0205
15	DSY-SD-G09-0012	SE6767-8	N2569	11/16/11	0249
16	DSY-SD-G09-1224	SE6767-9	N2570	11/16/11	0334
17					
18					
19					
20					

Katahdin Analytical Services A0000045

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : N2556.DN2557.DN2555.D
N2558.DN2559.DN2560.D

SDG: DSY-22
Instrument ID: GCMS-N
Calibration Date(s): 15-NOV-11 16:23
15-NOV-11 20:07

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	10.0000	25.0000	50.0000	75.0000	100.0000	125.0000	New	b	m1	m2	%RSD	%RSD	
Fluoranthene	558752	1422052	2304238	4306477	5111984	6314071	QUA	-0.0081	0.95099	0.20145	0.99971	0.99000	O
Pyrene	1.35704	1.32974	1.16554	1.10244	1.02761	0.98510	AVG		1.16125		13.29001	15.00000	O
Benzo(a)anthracene	0.95816	0.94601	0.87590	0.87144	0.85598	0.84135	AVG		0.89147		5.45799	15.00000	O
Chrysene	0.92893	0.89955	0.78848	0.79504	0.77132	0.76175	AVG		0.82418		8.65987	15.00000	O
Benzo(b)fluoranthene	1.03381	0.99641	1.01878	1.02056	1.00035	1.11500	AVG		1.03082		4.21928	15.00000	O
Benzo(k)fluoranthene	1.01777	1.07940	0.98180	0.92536	0.90933	0.95028	AVG		0.97732		6.49217	15.00000	O
Benzo(a)pyrene	0.87140	0.89980	0.84876	0.84229	0.85409	0.83227	AVG		0.85810		2.82393	30.00000	O
Indeno(1,2,3-cd)pyrene	0.62585	0.69894	0.65196	0.61158	0.65143	0.54298	AVG		0.63046		8.27918	15.00000	O
Dibenzo(a,h)anthracene	0.66592	0.74007	0.69378	0.65089	0.69463	0.59130	AVG		0.67276		7.46543	15.00000	O
Benzo(g,h,i)perylene	0.66159	0.72178	0.66545	0.60243	0.62372	0.53286	AVG		0.63464		10.15921	15.00000	O
Nitrobenzene-D5	0.32744	0.33867	0.30688	0.30398	0.30079	0.28936	AVG		0.31119		5.88091	15.00000	
2-Fluorobiphenyl	1.18443	1.18635	1.04086	0.97163	0.94843	0.88824	AVG		1.03666		12.07191	15.00000	
Terphenyl-D14	0.76913	0.76985	0.68789	0.68306	0.64778	0.63881	AVG		0.69942		8.22861	15.00000	

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-N Calibration Date: 11/15/11 Time: 1623

Lab File ID: N2555 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	49.038000	50.000000	0.8478300	0.01	-1.92	20.01	2RDR
Pyrene	1.1610000	1.1655000	1.1655000	0.01	0.39	20.00	AVRG
Benzo(a)anthracene	0.8910000	0.8759000	0.8759000	0.01	-1.69	20.00	AVRG
Chrysene	0.8240000	0.7884800	0.7884800	0.01	-4.31	20.00	AVRG
Benzo(b)fluoranthene	1.0310000	1.0188000	1.0188000	0.01	-1.18	20.00	AVRG
Benzo(k)fluoranthene	0.9770000	0.9818000	0.9818000	0.01	0.49	20.00	AVRG
Benzo(a)pyrene	0.8580000	0.8487600	0.8487600	0.01	-1.08	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6300000	0.6519600	0.6519600	0.01	3.48	20.00	AVRG
Dibenzo(a,h)anthracene	0.6730000	0.6937800	0.6937800	0.01	3.09	20.00	AVRG
Benzo(g,h,i)perylene	0.6350000	0.6654500	0.6654500	0.01	4.80	20.00	AVRG
Nitrobenzene-D5	0.3110000	0.3068800	0.3068800	0.01	-1.32	20.00	AVRG
2-Fluorobiphenyl	1.0360000	1.0408000	1.0408000	0.01	0.46	20.00	AVRG
Terphenyl-D14	0.7000000	0.6878900	0.6878900	0.01	-1.73	20.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: ND181 DFTPP Injection Date: 11/16/11

Instrument ID: GCMS-N DFTPP Injection Time: 1110

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.7
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	35.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	54.4
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	22.3
365	1.0 - 100.0% of mass 198	2.4
441	0.0 - 100.0% of mass 443	11.9 (73.6)2
442	40.0 - 100.0% of mass 198	85.9
443	17.0 - 23.0% of mass 442	16.2 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1116	N2574	11/16/11	1131
02	WG99494-BLANK	WG99494-1	N2575	11/16/11	1217
03	DSY-SD-G13-1224	SE6767-12	N2577	11/16/11	1438
04	DSY-SD-G13-2448	SE6767-13	N2578	11/16/11	1520
05	DSY-SD-G17-0012	SE6767-14	N2579	11/16/11	1603
06	DSY-SD-G17-1224	SE6767-15	N2580	11/16/11	1647
07	DSY-SD-G17-2448	SE6767-16	N2581	11/16/11	1730
08	DSY-SD-DUP32-101211	SE6767-17	N2582	11/16/11	1812
09	DSY-SD-G21-0012	SE6767-18	N2583	11/16/11	1854
10	DSY-SD-G21-1224	SE6767-19	N2584	11/16/11	1936
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Katahdin Analytical Services A0000046

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-N Calibration Date: 11/16/11 Time: 1131

Lab File ID: N2574 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	60.592000	50.000000	1.0107000	0.01	21.18	20.01	2RDR	<-
Pyrene	1.1610000	1.2308000	1.2308000	0.01	6.01	20.00	AVRG	
Benzo(a)anthracene	0.8910000	0.9701100	0.9701100	0.01	8.88	20.00	AVRG	
Chrysene	0.8240000	0.9011000	0.9011000	0.01	9.36	20.00	AVRG	
Benzo(b)fluoranthene	1.0310000	1.0548000	1.0548000	0.01	2.31	20.00	AVRG	
Benzo(k)fluoranthene	0.9770000	1.0575000	1.0575000	0.01	8.24	20.00	AVRG	
Benzo(a)pyrene	0.8580000	0.8132400	0.8132400	0.01	-5.22	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6300000	0.6949200	0.6949200	0.01	10.30	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6730000	0.6804100	0.6804100	0.01	1.10	20.00	AVRG	
Benzo(g,h,i)perylene	0.6350000	0.7339500	0.7339500	0.01	15.58	20.00	AVRG	
Nitrobenzene-D5	0.3110000	0.3248100	0.3248100	0.01	4.44	20.00	AVRG	
2-Fluorobiphenyl	1.0360000	1.0889000	1.0889000	0.01	5.11	20.00	AVRG	
Terphenyl-D14	0.7000000	0.8384600	0.8384600	0.01	19.78	20.00	AVRG	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: ND182 DFTPP Injection Date: 11/17/11

Instrument ID: GCMS-N DFTPP Injection Time: 0820

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	35.1
68	Less than 2.0% of mass 69	0.5 (1.5)1
69	Less than 100.0% of mass 198	34.5
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	40.0 - 60.0% of mass 198	54.6
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.3
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	10.5 (72.0)2
442	40.0 - 100.0% of mass 198	73.2
443	17.0 - 23.0% of mass 442	14.6 (20.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1117	N2588	11/17/11	0839
02	WG99495-BLANK	WG99495-1	N2589	11/17/11	0923
03	WG100596-BLANK	WG100596-1	N2590	11/17/11	1005
04	WG99495-LCS	WG99495-2	N2591	11/17/11	1047
05	WG99495-LCSD	WG99495-3	N2592	11/17/11	1129
06	WG100596-LCS	WG100596-2	N2593	11/17/11	1212
07	WG100596-LCSD	WG100596-3	N2594	11/17/11	1254
08	WG99494-LCS	WG99494-2	N2595	11/17/11	1337
09	WG99494-LCSD	WG99494-3	N2596	11/17/11	1419
10	DSY-SD-G09-2448	SE6767-10	N2597	11/17/11	1501
11	DSY-SD-G13-0012	SE6767-11	N2598	11/17/11	1543
12	DSY-SD-G21-2448	SE6767-20	N2600	11/17/11	1708
13	DSY-SD-G21-2448MS	WG99494-4	N2601	11/17/11	1750
14	DSY-SD-G21-2448MSD	WG99494-5	N2602	11/17/11	1833
15	DSY-SD-G25-0012	SE6767-21	N2603	11/17/11	1915
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-N Calibration Date: 11/17/11 Time: 0839

Lab File ID: N2588 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	56.274000	50.000000	0.9509100	0.01	12.55	20.01	2RDR
Pyrene	1.1610000	1.2076000	1.2076000	0.01	4.01	20.00	AVRG
Benzo(a)anthracene	0.8910000	0.9289600	0.9289600	0.01	4.26	20.00	AVRG
Chrysene	0.8240000	0.8504800	0.8504800	0.01	3.21	20.00	AVRG
Benzo(b)fluoranthene	1.0310000	1.0967000	1.0967000	0.01	6.37	20.00	AVRG
Benzo(k)fluoranthene	0.9770000	1.0310000	1.0310000	0.01	5.53	20.00	AVRG
Benzo(a)pyrene	0.8580000	0.9343700	0.9343700	0.01	8.90	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6300000	0.6626100	0.6626100	0.01	5.18	20.00	AVRG
Dibenzo(a,h)anthracene	0.6730000	0.7034300	0.7034300	0.01	4.52	20.00	AVRG
Benzo(g,h,i)perylene	0.6350000	0.6759800	0.6759800	0.01	6.45	20.00	AVRG
Nitrobenzene-D5	0.3110000	0.3248100	0.3248100	0.01	4.44	20.00	AVRG
2-Fluorobiphenyl	1.0360000	1.1037000	1.1037000	0.01	6.53	20.00	AVRG
Terphenyl-D14	0.7000000	0.6995000	0.6995000	0.01	-0.07	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: ND183 DFTPP Injection Date: 11/18/11

Instrument ID: GCMS-N DFTPP Injection Time: 1105

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.8
68	Less than 2.0% of mass 69	0.5 (1.4)1
69	Less than 100.0% of mass 198	33.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	52.1
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.7
365	1.0 - 100.0% of mass 198	2.4
441	0.0 - 100.0% of mass 443	11.7 (73.3)2
442	40.0 - 100.0% of mass 198	81.5
443	17.0 - 23.0% of mass 442	15.9 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1118	N2613	11/18/11	1129
02	DSY-SD-G25-1224	SE6767-22	N2617	11/18/11	1422
03	DSY-SD-G25-2448	SE6767-23	N2618	11/18/11	1504
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-N Calibration Date: 11/18/11 Time: 1129

Lab File ID: N2613 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	46.944000	50.000000	0.8172600	0.01	-6.11	20.01	2RDR	
Pyrene	1.1610000	1.4782000	1.4782000	0.01	27.32	20.00	AVRG	<-
Benzo(a)anthracene	0.8910000	0.9198000	0.9198000	0.01	3.23	20.00	AVRG	
Chrysene	0.8240000	0.9197900	0.9197900	0.01	11.62	20.00	AVRG	
Benzo(b)fluoranthene	1.0310000	1.0676000	1.0676000	0.01	3.55	20.00	AVRG	
Benzo(k)fluoranthene	0.9770000	1.1204000	1.1204000	0.01	14.68	20.00	AVRG	
Benzo(a)pyrene	0.8580000	0.9537900	0.9537900	0.01	11.16	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6300000	0.7036600	0.7036600	0.01	11.69	20.00	AVRG	
Dibenzo(a,h)anthracene	0.6730000	0.7467400	0.7467400	0.01	10.96	20.00	AVRG	
Benzo(g,h,i)perylene	0.6350000	0.7823600	0.7823600	0.01	23.21	20.00	AVRG	<-
Nitrobenzene-D5	0.3110000	0.3227100	0.3227100	0.01	3.76	20.00	AVRG	
2-Fluorobiphenyl	1.0360000	1.1185000	1.1185000	0.01	7.96	20.00	AVRG	
Terphenyl-D14	0.7000000	0.8462400	0.8462400	0.01	20.89	20.00	AVRG	<-

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: ND187 DFTPP Injection Date: 11/22/11

Instrument ID: GCMS-N DFTPP Injection Time: 0846

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Less than 100.0% of mass 198	31.3
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	12.0 (73.1)2
442	40.0 - 100.0% of mass 198	87.2
443	17.0 - 23.0% of mass 442	16.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1122	N2682	11/22/11	0907
02	WG101261-BLANK	WG101261-1	N2683	11/22/11	0949
03	WG101261-LCS	WG101261-2	N2684	11/22/11	1032
04	WG101261-LCSD	WG101261-3	N2685	11/22/11	1114
05	DSY-SD-G17-0012	SE6767-14RE	N2688	11/22/11	1320
06	DSY-SD-G21-1224	SE6767-19RE	N2689	11/22/11	1402
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-N Calibration Date: 11/22/11 Time: 0907

Lab File ID: N2682 Init. Calib. Date(s): 11/15/11 11/15/11

Init. Calib. Times: 1623 2007

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	45.529000	50.000000	0.7964100	0.01	-8.94	20.01	2RDR	
Pyrene	1.1610000	1.3674000	1.3674000	0.01	17.78	20.00	AVRG	
Benzo(a)anthracene	0.8910000	0.8571100	0.8571100	0.01	-3.80	20.00	AVRG	
Chrysene	0.8240000	0.8190800	0.8190800	0.01	-0.60	20.00	AVRG	
Benzo(b)fluoranthene	1.0310000	1.0433000	1.0433000	0.01	1.19	20.00	AVRG	
Benzo(k)fluoranthene	0.9770000	1.1048000	1.1048000	0.01	13.08	20.00	AVRG	
Benzo(a)pyrene	0.8580000	0.8536800	0.8536800	0.01	-0.50	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	0.6300000	0.4979600	0.4979600	0.01	-20.96	20.00	AVRG	<-
Dibenzo(a,h)anthracene	0.6730000	0.5457700	0.5457700	0.01	-18.90	20.00	AVRG	
Benzo(g,h,i)perylene	0.6350000	0.5236800	0.5236800	0.01	-17.53	20.00	AVRG	
Nitrobenzene-D5	0.3110000	0.2784900	0.2784900	0.01	-10.45	20.00	AVRG	
2-Fluorobiphenyl	1.0360000	0.9877300	0.9877300	0.01	-4.66	20.00	AVRG	
Terphenyl-D14	0.7000000	0.8104100	0.8104100	0.01	15.77	20.00	AVRG	

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99494-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: N2575 Lab Sample ID: WG99494-1

Instrument ID: GCMS-N Date Extracted: 10/20/11

Matrix: (soil/water) SOIL Date Analyzed: 11/16/11

Level: (low/med) LOW Time Analyzed: 1217

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-G01-0012	SE6767-1	N2562	11/15/11	2137
02	DSY-SD-G01-1224	SE6767-2	N2563	11/15/11	2223
03	DSY-SD-G01-2448	SE6767-3	N2564	11/15/11	2307
04	DSY-SD-G05-0012	SE6767-4	N2565	11/15/11	2352
05	DSY-SD-G05-1224	SE6767-5	N2566	11/16/11	0036
06	DSY-SD-G05-2448	SE6767-6	N2567	11/16/11	0121
07	DSY-SD-DUP31-101211	SE6767-7	N2568	11/16/11	0205
08	DSY-SD-G09-0012	SE6767-8	N2569	11/16/11	0249
09	DSY-SD-G09-1224	SE6767-9	N2570	11/16/11	0334
10	DSY-SD-G13-1224	SE6767-12	N2577	11/16/11	1438
11	DSY-SD-G13-2448	SE6767-13	N2578	11/16/11	1520
12	DSY-SD-G17-0012	SE6767-14	N2579	11/16/11	1603
13	DSY-SD-G17-1224	SE6767-15	N2580	11/16/11	1647
14	DSY-SD-G17-2448	SE6767-16	N2581	11/16/11	1730
15	DSY-SD-DUP32-101211	SE6767-17	N2582	11/16/11	1812
16	DSY-SD-G21-0012	SE6767-18	N2583	11/16/11	1854
17	DSY-SD-G21-1224	SE6767-19	N2584	11/16/11	1936
18	WG99494-LCS	WG99494-2	N2595	11/17/11	1337
19	WG99494-LCSD	WG99494-3	N2596	11/17/11	1419
20	DSY-SD-G13-0012	SE6767-11	N2598	11/17/11	1543
21	DSY-SD-G21-2448	SE6767-20	N2600	11/17/11	1708
22	DSY-SD-G21-2448MS	WG99494-4	N2601	11/17/11	1750
23	DSY-SD-G21-2448MSD	WG99494-5	N2602	11/17/11	1833
24					
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99494-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: N2575.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 16-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 10:14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		50.7	%					
2-Fluorobiphenyl		62.8	%					
Terphenyl-d14		91.8	%					

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ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99494-2
LCSD ID: WG99494-3
Project:
SDG: DSY-22
Report Date: 30-nov-2011 10:14

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1200	71.8	1280	76.6	ug/Kgdrywt	6	30	40-100
Benzo(a)pyrene	1670	1340	80.2	1410	84.4	ug/Kgdrywt	5	30	40-100
Benzo(b)fluoranthene	1670	1190	71.2	1240	74.2	ug/Kgdrywt	4	30	40-100
Benzo(g,h,i)perylene	1670	1410	84.4	1460	87.4	ug/Kgdrywt	3	30	40-100
Benzo(k)fluoranthene	1670	1290	77.2	1360	81.4	ug/Kgdrywt	5	30	40-100
Chrysene	1670	1320	79.0	1380	82.6	ug/Kgdrywt	4	30	40-100
Dibenzo(a,h)anthracene	1670	1320	79.0	1420	85.0	ug/Kgdrywt	7	30	40-100
Fluoranthene	1670	1360	81.4	1460	87.4	ug/Kgdrywt	7	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1360	81.4	1410	84.4	ug/Kgdrywt	4	30	40-100
Pyrene	1670	1340	80.2	1410	84.4	ug/Kgdrywt	5	30	40-100
Nitrobenzene-d5			65.2		62.3				24-81
2-Fluorobiphenyl			75.0		73.6				29-83
Terphenyl-d14			78.3		82.8				24-136

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99495-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: N2589 Lab Sample ID: WG99495-1

Instrument ID: GCMS-N Date Extracted: 10/20/11

Matrix: (soil/water) SOIL Date Analyzed: 11/17/11

Level: (low/med) LOW Time Analyzed: 0923

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG99495-LCS	WG99495-2	N2591	11/17/11	1047
02	WG99495-LCSD	WG99495-3	N2592	11/17/11	1129
03	DSY-SD-G25-0012	SE6767-21	N2603	11/17/11	1915
04	DSY-SD-G25-1224	SE6767-22	N2617	11/18/11	1422
05	DSY-SD-G25-2448	SE6767-23	N2618	11/18/11	1504
06					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000042

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99495-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: N2589.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99495

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 10:14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		50.9	%					
2-Fluorobiphenyl		54.0	%					
Terphenyl-d14		69.5	%					

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ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99495-2
LCSD ID: WG99495-3
Project:
SDG: DSY-22
Report Date: 30-nov-2011 10:14

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99495

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1160	69.5	1080	64.7	ug/Kgdrywt	7	30	40-100
Benzo(a)pyrene	1670	1280	76.6	1200	71.8	ug/Kgdrywt	6	30	40-100
Benzo(b)fluoranthene	1670	1110	66.5	1080	64.7	ug/Kgdrywt	3	30	40-100
Benzo(g,h,i)perylene	1670	1320	79.0	1230	73.6	ug/Kgdrywt	7	30	40-100
Benzo(k)fluoranthene	1670	1240	74.2	1160	69.5	ug/Kgdrywt	7	30	40-100
Chrysene	1670	1300	77.8	1180	70.6	ug/Kgdrywt	10	30	40-100
Dibenzo(a,h)anthracene	1670	1300	77.8	1180	70.6	ug/Kgdrywt	10	30	40-100
Fluoranthene	1670	1320	79.0	1220	73.0	ug/Kgdrywt	8	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1290	77.2	1170	70.0	ug/Kgdrywt	10	30	40-100
Pyrene	1670	1270	76.0	1290	77.2	ug/Kgdrywt	2	30	40-100
Nitrobenzene-d5			55.1		54.3				24-81
2-Fluorobiphenyl			62.9		63.9				29-83
Terphenyl-d14			73.4		74.4				24-136

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100596-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: N2590 Lab Sample ID: WG100596-1

Instrument ID: GCMS-N Date Extracted: 11/07/11

Matrix: (soil/water) SOIL Date Analyzed: 11/17/11

Level: (low/med) LOW Time Analyzed: 1005

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG100596-LCS	WG100596-2	N2593	11/17/11	1212
02	WG100596-LCSD	WG100596-3	N2594	11/17/11	1254
03	DSY-SD-G09-2448	SE6767-10	N2597	11/17/11	1501
04					
05					
06					
07					
08					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000043

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG100596-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: N2590.D

Sample Date:
Received Date: 07-NOV-11
Extract Date: 07-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100596

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 10:14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		56.1	%					
2-Fluorobiphenyl		60.4	%					
Terphenyl-d14		76.7	%					

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ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG100596-2
LCSD ID: WG100596-3
Project:
SDG: DSY-22
Report Date: 30-nov-2011 10:14

Received Date: 07-NOV-11
Extract Date: 07-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100596

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1210	72.4	1260	75.4	ug/Kgdrywt	4	30	40-100
Benzo(a)pyrene	1670	1350	80.8	1420	85.0	ug/Kgdrywt	5	30	40-100
Benzo(b)fluoranthene	1670	1180	70.6	1240	74.2	ug/Kgdrywt	5	30	40-100
Benzo(g,h,i)perylene	1670	1480	88.6	1390	83.2	ug/Kgdrywt	6	30	40-100
Benzo(k)fluoranthene	1670	1260	75.4	1380	82.6	ug/Kgdrywt	9	30	40-100
Chrysene	1670	1300	77.8	1450	86.8	ug/Kgdrywt	11	30	40-100
Dibenzo(a,h)anthracene	1670	1420	85.0	1340	80.2	ug/Kgdrywt	6	30	40-100
Fluoranthene	1670	1390	83.2	1420	85.0	ug/Kgdrywt	2	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1390	83.2	1340	80.2	ug/Kgdrywt	4	30	40-100
Pyrene	1670	1380	82.6	1410	84.4	ug/Kgdrywt	2	30	40-100
Nitrobenzene-d5			55.1		56.5				24-81
2-Fluorobiphenyl			65.0		66.8				29-83
Terphenyl-d14			74.4		78.9				24-136

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FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101261-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: N2683 Lab Sample ID: WG101261-1

Instrument ID: GCMS-N Date Extracted: 11/17/11

Matrix: (soil/water) SOIL Date Analyzed: 11/22/11

Level: (low/med) LOW Time Analyzed: 0949

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG101261-LCS	WG101261-2	N2684	11/22/11	1032
02	WG101261-LCSD	WG101261-3	N2685	11/22/11	1114
03	DSY-SD-G17-0012	SE6767-14RE	N2688	11/22/11	1320
04	DSY-SD-G21-1224	SE6767-19RE	N2689	11/22/11	1402
05					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000044

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101261-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: N2683.D

Sample Date:
Received Date: 17-NOV-11
Extract Date: 17-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101261

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 10:14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		46.1	%					
2-Fluorobiphenyl		54.3	%					
Terphenyl-d14		90.9	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG101261-2
LCSD ID: WG101261-3
Project:
SDG: DSY-22
Report Date: 30-nov-2011 10:14

Received Date: 17-NOV-11
Extract Date: 17-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101261

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	975.	58.4	1100	65.9	ug/Kgdrywt	12	30	40-100
Benzo(a)pyrene	1670	1080	64.7	1230	73.6	ug/Kgdrywt	13	30	40-100
Benzo(b)fluoranthene	1670	1020	61.1	1200	71.8	ug/Kgdrywt	16	30	40-100
Benzo(g,h,i)perylene	1670	800.	47.9	868.	52.0	ug/Kgdrywt	8	30	40-100
Benzo(k)fluoranthene	1670	1210	72.4	1300	77.8	ug/Kgdrywt	7	30	40-100
Chrysene	1670	1100	65.9	1280	76.6	ug/Kgdrywt	15	30	40-100
Dibenzo(a,h)anthracene	1670	830.	49.7	924.	55.3	ug/Kgdrywt	11	30	40-100
Fluoranthene	1670	1100	65.9	1210	72.4	ug/Kgdrywt	10	30	40-100
Indeno(1,2,3-cd)pyrene	1670	736.	44.1	836.	50.0	ug/Kgdrywt	13	30	40-100
Pyrene	1670	1290	77.2	1500	89.8	ug/Kgdrywt	15	30	40-100
Nitrobenzene-d5			47.1		48.2				24-81
2-Fluorobiphenyl			60.2		62.2				29-83
Terphenyl-d14			82.4		91.3				24-136

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http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

MS/MSD Recovery Report

MS ID: WG99494-4
MSD ID: WG99494-5
Sample ID: SE6767-20
Client ID: DSY-SD-G21-2448
Project:
SDG: DSY-22

Received Date: 13-OCT-11
Extract Date: 20-oct-0011 00:00
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG99494
Report Date: 30-nov-2011 10:14

Analysis Date: 17-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	4390	4110	ug/Kgdrywt	870	3300	3100	55.4	53.3	8	30	40-100
Benzo(b)fluoranthene	4390	4110	ug/Kgdrywt	890	3500	3000	60.1	52.5	14	30	40-100
Benzo(g,h,i)perylene	4390	4110	ug/Kgdrywt	U630	2400	2000	54.2	48.0	19	30	40-100
Benzo(k)fluoranthene	4390	4110	ug/Kgdrywt	J380	3200	2800	64.8	59.5	13	30	40-100
Chrysene	4390	4110	ug/Kgdrywt	940	3600	3200	60.8	55.0	12	30	40-100
Dibenzo(a,h)anthracene	4390	4110	ug/Kgdrywt	U630	2200	1800	49.0	44.3	17	30	40-100
Fluoranthene	4390	4110	ug/Kgdrywt	2300	5100	4800	65.4	62.3	6	30	40-100
Indeno(1,2,3-cd)pyrene	4390	4110	ug/Kgdrywt	U630	2300	1900	52.4	46.7	18	30	40-100
Pyrene	4390	4110	ug/Kgdrywt	2100	5200	4700	70.4	61.8	11	30	40-100
Nitrobenzene-d5							41.0	33.3			24-81
2-Fluorobiphenyl							58.3	53.8			29-83
Terphenyl-d14							59.9	60.6			24-136

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-22

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-G01-0012	SE6767-1	52.9		44.0		49.3		0
DSY-SD-G09-2448	SE6767-10	52.9		42.8		64.3		0
DSY-SD-G13-0012	SE6767-11	35.8		29.1		32.8		0
DSY-SD-G13-1224	SE6767-12	39.4		36.4		48.3		0
DSY-SD-G13-2448	SE6767-13	38.6		30.7		44.1		0
DSY-SD-G17-0012	SE6767-14	35.6		23.0	*	30.2		1
DSY-SD-G17-0012	SE6767-14RE	56.3		43.5		84.9		0
DSY-SD-G17-1224	SE6767-15	48.8		35.0		47.1		0
DSY-SD-G17-2448	SE6767-16	53.0		37.4		53.2		0
DSY-SD-DUP32-101211	SE6767-17	43.4		32.7		43.1		0
DSY-SD-G21-0012	SE6767-18	43.4		32.0		48.1		0
DSY-SD-G21-1224	SE6767-19	0.113	*	0.068	*	0.00	*	3
DSY-SD-G21-1224	SE6767-19RE	52.0		38.9		76.4		0
DSY-SD-G01-1224	SE6767-2	50.8		41.6		54.6		0
DSY-SD-G21-2448	SE6767-20	50.0		26.0		51.6		0
DSY-SD-G25-0012	SE6767-21	56.0		48.6		59.2		0
DSY-SD-G25-1224	SE6767-22	50.8		30.3		48.8		0
DSY-SD-G25-2448	SE6767-23	39.3		24.1		32.5		0
DSY-SD-G01-2448	SE6767-3	54.0		44.2		68.9		0
DSY-SD-G05-0012	SE6767-4	58.2		45.1		71.5		0
DSY-SD-G05-1224	SE6767-5	38.1		31.6		37.9		0
DSY-SD-G05-2448	SE6767-6	48.3		38.7		52.4		0
DSY-SD-DUP31-101211	SE6767-7	45.5		32.0		56.2		0
DSY-SD-G09-0012	SE6767-8	39.2		27.0		42.7		0
DSY-SD-G09-1224	SE6767-9	54.2		43.8		63.4		0
Method Blank Sample	WG100596-1	60.4		56.1		76.7		0
Laboratory Control S	WG100596-2	65.0		55.1		74.4		0
Laboratory Control S	WG100596-3	66.8		56.5		78.9		0
Method Blank Sample	WG101261-1	54.3		46.1		90.9		0
Laboratory Control S	WG101261-2	60.2		47.1		82.4		0

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-22

Client Sample ID	Lab Sample ID	2FBP #	NBZ #	TPH #	Total Out
Laboratory Control S	WG101261-3	62.2	48.2	91.3	0
Method Blank Sample	WG99494-1	62.8	50.7	91.8	0
Laboratory Control S	WG99494-2	75.0	65.2	78.3	0
Laboratory Control S	WG99494-3	73.6	62.3	82.8	0
Matrix Spike	WG99494-4	58.3	41.0	59.9	0
Matrix Spike Duplica	WG99494-5	53.8	33.3	60.6	0
Method Blank Sample	WG99495-1	54.0	50.9	69.5	0
Laboratory Control S	WG99495-2	62.9	55.1	73.4	0
Laboratory Control S	WG99495-3	63.9	54.3	74.4	0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		600003	8.76	2389440	11.57	1317918	15.69
UPPER LIMIT		1200006	9.26	4778880	12.07	2635836	16.19
LOWER LIMIT		300002	8.26	1194720	11.07	658959	15.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-G01-0012	SE6767-1	634644	8.76	2428686	11.56	1402150	15.68
02	DSY-SD-G01-1224	SE6767-2	639482	8.76	2469286	11.56	1403171	15.68
03	DSY-SD-G01-2448	SE6767-3	656579	8.76	2498274	11.56	1488012	15.68
04	DSY-SD-G05-0012	SE6767-4	661421	8.76	2534890	11.56	1470132	15.68
05	DSY-SD-G05-1224	SE6767-5	607890	8.77	2344395	11.56	1334450	15.68
06	DSY-SD-G05-2448	SE6767-6	712464	8.77	2749500	11.56	1602179	15.68
07	DSY-SD-DUP31-101211	SE6767-7	639947	8.76	2521251	11.56	1434648	15.68
08	DSY-SD-G09-0012	SE6767-8	517252	8.76	2040802	11.56	1150651	15.68
09	DSY-SD-G09-1224	SE6767-9	472821	8.76	1863628	11.56	1082113	15.68
10		SSTD050N1116	434883	8.76	1760483	11.56	1010422	15.68
11	WG99494-BLANK	WG99494-1	542632	8.76	1880533	11.56	1273434	15.67
12	DSY-SD-G13-1224	SE6767-12	393857	8.74	1824682	11.54	1056569	15.67
13	DSY-SD-G13-2448	SE6767-13	430742	8.76	1855935	11.54	965066	15.67
14	DSY-SD-G17-0012	SE6767-14	543696	8.76	2125949	11.56	1098472	15.67
15	DSY-SD-G17-1224	SE6767-15	592751	8.76	2317958	11.56	1269743	15.67
16	DSY-SD-G17-2448	SE6767-16	728123	8.76	2802283	11.56	1647944	15.67
17	DSY-SD-DUP32-101211	SE6767-17	651133	8.76	2568652	11.56	1494439	15.67
18	DSY-SD-G21-0012	SE6767-18	737448	8.76	2806774	11.56	1643923	15.68
19	DSY-SD-G21-1224	SE6767-19	686462	8.76	2685103	11.56	1530022	15.67
20		SSTD050N1117	589666	8.76	2295341	11.56	1260656	15.68

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000056

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		2174245		19.23		1621980		25.55		1257422		28.69	
UPPER LIMIT		4348490		19.73		3243960		26.05		2514844		29.19	
LOWER LIMIT		1087123		18.73		810990		25.05		628711		28.19	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	DSY-SD-G01-0012	SE6767-1		2325293		19.21		1765276		25.53		1130779		28.68	
02	DSY-SD-G01-1224	SE6767-2		2305132		19.21		1804780		25.53		1092130		28.68	
03	DSY-SD-G01-2448	SE6767-3		2432469		19.21		1668949		25.53		996278		28.69	
04	DSY-SD-G05-0012	SE6767-4		2419339		19.21		1785605		25.53		1080306		28.69	
05	DSY-SD-G05-1224	SE6767-5		2157781		19.21		1663710		25.53		939003		28.69	
06	DSY-SD-G05-2448	SE6767-6		2593880		19.21		1807463		25.55		1066429		28.69	
07	DSY-SD-DUP31-101211	SE6767-7		2311290		19.21		1532064		25.55		870028		28.69	
08	DSY-SD-G09-0012	SE6767-8		1865687		19.21		1276823		25.53		660288		28.68	
09	DSY-SD-G09-1224	SE6767-9		1839071		19.21		1336663		25.53		748464		28.69	
10		SSTD050N1116		1624451		19.21		1247514		25.53		924095		28.70	
11	WG99494-BLANK	WG99494-1		1985338		19.20		1244155		25.52		1241194		28.68	
12	DSY-SD-G13-1224	SE6767-12		1834157		19.20		1485172		25.53		1065020		28.68	
13	DSY-SD-G13-2448	SE6767-13		1896595		19.20		1588912		25.52		1091297		28.68	
14	DSY-SD-G17-0012	SE6767-14		1789543		19.20		1557419		25.52		911740		28.68	
15	DSY-SD-G17-1224	SE6767-15		1978770		19.20		1946580		25.53		1314436		28.68	
16	DSY-SD-G17-2448	SE6767-16		2658453		19.20		1849770		25.53		1182513		28.68	
17	DSY-SD-DUP32-101211	SE6767-17		2503756		19.20		1960778		25.53		1344187		28.69	
18	DSY-SD-G21-0012	SE6767-18		2750705		19.20		1979263		25.53		1301875		28.70	
19	DSY-SD-G21-1224	SE6767-19		2602346		19.20		2008216		25.53		1275712		28.69	
20		SSTD050N1117		2021973		19.21		1625795		25.55		1264348		28.69	

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		600003	8.76	2389440	11.57	1317918	15.69
UPPER LIMIT		1200006	9.26	4778880	12.07	2635836	16.19
LOWER LIMIT		300002	8.26	1194720	11.07	658959	15.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG99495-BLANK	WG99495-1	721493	8.76	2778134	11.56	1561205	15.67
02	WG100596-BLANK	WG100596-1	632737	8.76	2383909	11.54	1325523	15.67
03	WG99495-LCS	WG99495-2	648315	8.76	2520410	11.56	1407427	15.68
04	WG99495-LCSD	WG99495-3	630393	8.76	2416160	11.56	1351988	15.68
05	WG100596-LCS	WG100596-2	623702	8.76	2413656	11.56	1335087	15.68
06	WG100596-LCSD	WG100596-3	654088	8.76	2535562	11.56	1423245	15.68
07	WG99494-LCS	WG99494-2	637848	8.76	2415050	11.56	1336384	15.68
08	WG99494-LCSD	WG99494-3	642080	8.76	2435223	11.56	1338619	15.67
09	DSY-SD-G09-2448	SE6767-10	617073	8.76	2358217	11.54	1342889	15.67
10	DSY-SD-G13-0012	SE6767-11	617325	8.76	2355672	11.54	1325129	15.67
11	DSY-SD-G21-2448	SE6767-20	620364	8.76	2399740	11.54	1369810	15.67
12	DSY-SD-G21-2448MS	WG99494-4	674665	8.76	2617901	11.56	1512153	15.68
13	DSY-SD-G21-2448MSD	WG99494-5	675521	8.76	2617572	11.56	1464886	15.68
14	DSY-SD-G25-0012	SE6767-21	681157	8.76	2583563	11.56	1451602	15.67
15		SSTD050N1118	682872	8.74	2595372	11.56	1421991	15.68
16	DSY-SD-G25-1224	SE6767-22	645035	8.74	2483212	11.54	1433208	15.67
17	DSY-SD-G25-2448	SE6767-23	685683	8.74	2606116	11.54	1487439	15.67
18		SSTD050N1122	590683	8.73	2251914	11.53	1307467	15.66
19	WG101261-BLANK	WG101261-1	618675	8.73	2295976	11.53	1307250	15.66
20	WG101261-LCS	WG101261-2	616333	8.73	2369786	11.53	1365021	15.66

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		2174245	19.23	1621980	25.55	1257422	28.69
UPPER LIMIT		4348490	19.73	3243960	26.05	2514844	29.19
LOWER LIMIT		1087123	18.73	810990	25.05	628711	28.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG99495-BLANK	WG99495-1	2531346	19.20	2276558	25.53	1920916	28.69
02	WG100596-BLANK	WG100596-1	2129665	19.20	1885068	25.52	1471439	28.68
03	WG99495-LCS	WG99495-2	2356369	19.20	2006824	25.53	1601595	28.69
04	WG99495-LCSD	WG99495-3	2210655	19.20	1697403	25.53	1280642	28.68
05	WG100596-LCS	WG100596-2	2193271	19.20	1794989	25.53	1437682	28.68
06	WG100596-LCSD	WG100596-3	2329654	19.20	1898858	25.53	1491924	28.68
07	WG99494-LCS	WG99494-2	2185396	19.20	1795962	25.53	1423665	28.68
08	WG99494-LCSD	WG99494-3	2206240	19.20	1854899	25.53	1490390	28.68
09	DSY-SD-G09-2448	SE6767-10	2188738	19.20	1671496	25.52	1168840	28.68
10	DSY-SD-G13-0012	SE6767-11	2183800	19.20	1694428	25.52	1146858	28.68
11	DSY-SD-G21-2448	SE6767-20	2204379	19.20	1503503	25.53	880380	28.69
12	DSY-SD-G21-2448MS	WG99494-4	2438689	19.21	1590122	25.55	871595	28.69
13	DSY-SD-G21-2448MSD	WG99494-5	2430900	19.21	1664189	25.55	970852	28.69
14	DSY-SD-G25-0012	SE6767-21	2449132	19.20	1803703	25.53	1058467	28.69
15		SSTD050N1118	2014889	19.21	1125613	25.52	821889	28.67
16	DSY-SD-G25-1224	SE6767-22	2132514	19.20	1212397	25.53	717740	28.68
17	DSY-SD-G25-2448	SE6767-23	2256948	19.20	1395713	25.53	887572	28.68
18		SSTD050N1122	2161615	19.19	1257109	25.52	717257	28.67
19	WG101261-BLANK	WG101261-1	2141874	19.18	1304144	25.51	731012	28.67
20	WG101261-LCS	WG101261-2	2312034	19.19	1612335	25.51	922797	28.67

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		600003		8.76		2389440		11.57		1317918		15.69	
UPPER LIMIT		1200006		9.26		4778880		12.07		2635836		16.19	
LOWER LIMIT		300002		8.26		1194720		11.07		658959		15.19	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	WG101261-LCSD	WG101261-3		661291		8.73		2458537		11.53		1416973		15.66	
02	DSY-SD-G17-0012	SE6767-14RE		624009		8.73		2373071		11.53		1409207		15.66	
03	DSY-SD-G21-1224	SE6767-19RE		639904		8.73		2417014		11.53		1376823		15.66	
04															
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): N2555 Date Analyzed: 11/15/11

Instrument ID: GCMS-N Time Analyzed: 1623

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		2174245		19.23		1621980		25.55		1257422		28.69	
UPPER LIMIT		4348490		19.73		3243960		26.05		2514844		29.19	
LOWER LIMIT		1087123		18.73		810990		25.05		628711		28.19	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01	WG101261-LCSD	WG101261-3		2371968		19.19		1516543		25.51		875326		28.67	
02	DSY-SD-G17-0012	SE6767-14RE		2317950		19.18		1435328		25.51		735319		28.67	
03	DSY-SD-G21-1224	SE6767-19RE		2254610		19.18		1349367		25.51		694727		28.67	
04															
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SIM SDG No.: DSY-22

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SIM SDG No.: DSY-22

Instrument ID: GCMS-G Calibration Date(s): 11/19/11 11/19/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1147 1527

LAB FILE ID: RF0.2: G4023 RF0.5: G4022 RF1: G4018
RF2: G4021 RF5: G4020 RF8: G4019

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.226	1.334	1.377	1.285	1.319	1.367	AVRG	1.31790301	4.260	15.000
2-Methylnaphthalene-D10	0.894	1.105	1.150	1.062	1.072	1.103	AVRG	1.06431855	8.374	15.000
Fluorene-D10	0.704	0.898	0.928	0.975	0.995	1.041	AVRG	0.92347346	12.868	15.000
Pyrene-D10	0.963	1.125	1.161	1.028	1.131	1.150	AVRG	1.09297445	7.249	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: GD935 SIM DFTPP Injection Date: 11/22/11

Instrument ID: GCMS-G DFTPP Injection Time: 0932

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.5
68	Less than 2.0% of mass 69	0.8 (1.9)1
69	Less than 100.0% of mass 198	42.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	58.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.9
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	11.8 (72.0)2
442	40.0 - 100.0% of mass 198	84.8
443	17.0 - 23.0% of mass 442	16.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1122	G4080	11/22/11	0952
02	DSY-SD-G01-0012	SE6767-1	G4092	11/22/11	1851
03	DSY-SD-G01-1224	SE6767-2	G4093	11/22/11	1935
04	DSY-SD-G01-2448	SE6767-3	G4094	11/22/11	2019
05	DSY-SD-G05-0012	SE6767-4	G4095	11/22/11	2103
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Instrument ID: GCMS-G Calibration Date: 11/22/11 Time: 0952

Lab File ID: G4080 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.1811000	0.01	-10.39	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.1087000	0.01	4.20	20.00	AVRG
Fluorene-D10	0.9240000	0.9995900	0.01	8.18	20.00	AVRG
Pyrene-D10	1.0930000	1.1996000	0.01	9.75	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID: GD936 SLM DFTPP Injection Date: 11/23/11

Instrument ID: GCMS-G DFTPP Injection Time: 1036

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.7
68	Less than 2.0% of mass 69	0.5 (1.1)1
69	Less than 100.0% of mass 198	42.8
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.4
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	3.6
441	0.0 - 100.0% of mass 443	12.3 (74.3)2
442	40.0 - 100.0% of mass 198	87.1
443	17.0 - 23.0% of mass 442	16.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1123	G4097	11/23/11	1055
02	WG101757-BLANK	WG101757-1	G4098	11/23/11	1152
03	WG101758-BLANK	WG101758-1	G4100	11/23/11	1322
04	DSY-SD-G05-1224	SE6767-5	G4105	11/23/11	1706
05	DSY-SD-G05-2448	SE6767-6	G4106	11/23/11	1750
06	DSY-SD-DUP31-101211	SE6767-7	G4107	11/23/11	1834
07	DSY-SD-G09-0012	SE6767-8	G4108	11/23/11	1917
08	DSY-SD-G09-1224	SE6767-9	G4109	11/23/11	2001
09	DSY-SD-G09-2448	SE6767-10	G4110	11/23/11	2045
10	DSY-SD-G13-0012	SE6767-11	G4111	11/23/11	2128
11	DSY-SD-G13-1224	SE6767-12	G4112	11/23/11	2212
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SIM SDG No.: DSY-22

Instrument ID: GCMS-G Calibration Date: 11/23/11 Time: 1055

Lab File ID: G4097 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.3949000	0.01	5.83	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.0649000	0.01	0.08	20.00	AVRG
Fluorene-D10	0.9240000	0.8346700	0.01	-9.67	20.00	AVRG
Pyrene-D10	1.0930000	1.2051000	0.01	10.26	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SIM SDG No.: DSY-22

Lab File ID: GD937 DFTPP Injection Date: 11/25/11

Instrument ID: GCMS-G DFTPP Injection Time: 0912

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	44.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	23.9
365	1.0 - 100.0% of mass 198	3.6
441	0.0 - 100.0% of mass 443	11.3 (76.3)2
442	40.0 - 100.0% of mass 198	78.6
443	17.0 - 23.0% of mass 442	14.8 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1125	G4113	11/25/11	0930
02	DSY-SD-G13-2448	SE6767-13	G4114	11/25/11	1013
03	DSY-SD-G17-0012	SE6767-14	G4115	11/25/11	1056
04	DSY-SD-G17-1224	SE6767-15	G4116	11/25/11	1140
05	DSY-SD-G17-2448	SE6767-16	G4117	11/25/11	1224
06	DSY-SD-DUP32-101211	SE6767-17	G4118	11/25/11	1307
07	DSY-SD-G21-0012	SE6767-18	G4119	11/25/11	1350
08	DSY-SD-G21-1224	SE6767-19	G4120	11/25/11	1434
09	DSY-SD-G21-2448	SE6767-20	G4121	11/25/11	1517
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SIM SDG No.: DSY-22

Instrument ID: GCMS-G Calibration Date: 11/25/11 Time: 0930

Lab File ID: G4113 Init. Calib. Date(s): 11/19/11 11/19/11

Init. Calib. Times: 1147 1527

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.3180000	1.4313000	0.01	8.60	20.01	AVRG
2-Methylnaphthalene-D10	1.0640000	1.1769000	0.01	10.61	20.00	AVRG
Fluorene-D10	0.9240000	0.9937700	0.01	7.55	20.00	AVRG
Pyrene-D10	1.0930000	1.2905000	0.01	18.07	20.00	AVRG

FORM VII PEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101757-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SIM

SDG No.: DSY-22

Lab File ID: G4098

Lab Sample ID: WG101757-1

Instrument ID: GCMS-G

Date Extracted: 10/20/11

Matrix: (soil/water) SOIL

Date Analyzed: 11/23/11

Level: (low/med) LOW

Time Analyzed: 1152

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-G01-0012	SE6767-1	G4092	11/22/11	1851
02	DSY-SD-G01-1224	SE6767-2	G4093	11/22/11	1935
03	DSY-SD-G01-2448	SE6767-3	G4094	11/22/11	2019
04	DSY-SD-G05-0012	SE6767-4	G4095	11/22/11	2103
05	DSY-SD-G05-1224	SE6767-5	G4105	11/23/11	1706
06	DSY-SD-G05-2448	SE6767-6	G4106	11/23/11	1750
07	DSY-SD-DUP31-101211	SE6767-7	G4107	11/23/11	1834
08	DSY-SD-G09-0012	SE6767-8	G4108	11/23/11	1917
09	DSY-SD-G09-1224	SE6767-9	G4109	11/23/11	2001
10	DSY-SD-G13-0012	SE6767-11	G4111	11/23/11	2128
11	DSY-SD-G13-1224	SE6767-12	G4112	11/23/11	2212
12	DSY-SD-G13-2448	SE6767-13	G4114	11/25/11	1013
13	DSY-SD-G17-0012	SE6767-14	G4115	11/25/11	1056
14	DSY-SD-G17-1224	SE6767-15	G4116	11/25/11	1140
15	DSY-SD-G17-2448	SE6767-16	G4117	11/25/11	1224
16	DSY-SD-DUP32-101211	SE6767-17	G4118	11/25/11	1307
17	DSY-SD-G21-0012	SE6767-18	G4119	11/25/11	1350
18	DSY-SD-G21-1224	SE6767-19	G4120	11/25/11	1434
19	DSY-SD-G21-2448	SE6767-20	G4121	11/25/11	1517
20					
21					
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23					
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28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

SIM

Report of Analytical Results

Client:
Lab ID: WG101757-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: G4098.D

Sample Date:
Received Date: 30-NOV-11
Extract Date: 20-OCT-11
Extracted By: JMS
Extraction Method: SW846 3550
Lab Prep Batch: WG101757

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 13:56

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		42.8	%					
Fluorene-D10		60.2	%					
Pyrene-D10		67.9	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG101758-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT

SIM

Lab File ID: G4100

Instrument ID: GCMS-G

Matrix: (soil/water) SOIL

Level: (low/med) LOW

SDG No.: DSY-22

Lab Sample ID: WG101758-1

Date Extracted: 11/07/11

Date Analyzed: 11/23/11

Time Analyzed: 1322

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-G09-2448	SE6767-10	G4110	11/23/11	2045
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
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25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101758-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: G4100.D

Sample Date:
Received Date: 30-NOV-11
Extract Date: 07-NOV-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101758

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 30-nov-2011 13:56

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Form 2
System Monitoring Compound Recovery

SIM

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-22

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-G01-0012	SE6767-1	37.5		49.3		65.1		0
DSY-SD-G09-2448	SE6767-10	0.00	*	0.00	*	0.00	*	3
DSY-SD-G13-0012	SE6767-11	25.0		31.0		36.0		0
DSY-SD-G13-1224	SE6767-12	36.2		47.4		65.3		0
DSY-SD-G13-2448	SE6767-13	38.6		49.5		50.0		0
DSY-SD-G17-0012	SE6767-14	25.4		40.8		46.6		0
DSY-SD-G17-1224	SE6767-15	34.8		49.8		53.5		0
DSY-SD-G17-2448	SE6767-16	38.4		56.1		63.6		0
DSY-SD-DUP32-101211	SE6767-17	30.3		44.0		46.2		0
DSY-SD-G21-0012	SE6767-18	23.2		38.2		39.1		0
DSY-SD-G21-1224	SE6767-19	36.4		55.7		61.1		0
DSY-SD-G01-1224	SE6767-2	37.9		48.5		58.1		0
DSY-SD-G21-2448	SE6767-20	31.8		52.9		59.6		0
DSY-SD-G01-2448	SE6767-3	37.1		53.2		63.8		0
DSY-SD-G05-0012	SE6767-4	33.1		47.6		65.7		0
DSY-SD-G05-1224	SE6767-5	28.2		35.9		44.7		0
DSY-SD-G05-2448	SE6767-6	31.9		42.3		48.6		0
DSY-SD-DUP31-101211	SE6767-7	32.0		50.1		67.4		0
DSY-SD-G09-0012	SE6767-8	23.3		37.7		50.2		0
DSY-SD-G09-1224	SE6767-9	37.6		49.2		64.3		0
Method Blank Sample	WG101757-1	42.8		60.2		67.9		0
Method Blank Sample	WG101758-1	0.00	*	0.00	*	0.00	*	3

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

SIM

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-22

FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SIM

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G Time Analyzed: 1147

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1122	49182	8.27	163310	11.22	83934	15.49
02	DSY-SD-G01-0012	SE6767-1	54593	8.27	173537	11.22	93521	15.49
03	DSY-SD-G01-1224	SE6767-2	51891	8.27	166079	11.22	86664	15.49
04	DSY-SD-G01-2448	SE6767-3	49703	8.27	166147	11.22	86303	15.49
05	DSY-SD-G05-0012	SE6767-4	48017	8.27	161151	11.22	83587	15.49
06		SSTD1.00G1123	46410	8.26	163926	11.21	85272	15.49
07	WG101757-BLANK	WG101757-1	52237	8.26	165933	11.22	83634	15.49
08	WG101758-BLANK	WG101758-1	50604	8.26	159510	11.22	82600	15.51
09	DSY-SD-G05-1224	SE6767-5	48593	8.26	160878	11.21	84491	15.48
10	DSY-SD-G05-2448	SE6767-6	49292	8.26	155664	11.19	84887	15.48
11	DSY-SD-DUP31-101211	SE6767-7	50720	8.26	162644	11.21	85732	15.48
12	DSY-SD-G09-0012	SE6767-8	48512	8.26	156806	11.21	86020	15.48
13	DSY-SD-G09-1224	SE6767-9	49988	8.26	163543	11.21	91615	15.48
14	DSY-SD-G09-2448	SE6767-10	46348	8.26	149750	11.21	80443	15.49
15	DSY-SD-G13-0012	SE6767-11	43923	8.26	144833	11.21	77535	15.49
16	DSY-SD-G13-1224	SE6767-12	46437	8.26	148885	11.21	82972	15.49
17		SSTD1.00G1125	44485	8.22	153139	11.17	75932	15.45
18	DSY-SD-G13-2448	SE6767-13	44598	8.22	163598	11.16	84078	15.43
19	DSY-SD-G17-0012	SE6767-14	48426	8.22	163160	11.15	84544	15.45
20	DSY-SD-G17-1224	SE6767-15	49126	8.22	179333	11.16	88255	15.45

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Katahdin Analytical Services A0000096

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G SIM Time Analyzed: 1147

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		118014		19.19		75564		25.77		53419		29.09	
UPPER LIMIT		236028		19.73		151128		26.31		106838		29.63	
LOWER LIMIT		59007		18.65		37782		25.23		26710		28.55	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1122		130100	19.09		77756	25.67		62590		28.97	
02	DSY-SD-G01-0012	SE6767-1		170670	19.09		69013	25.67		33369		28.97	
03	DSY-SD-G01-1224	SE6767-2		152760	19.09		68977	25.67		33892		28.98	
04	DSY-SD-G01-2448	SE6767-3		158599	19.09		68392	25.69		32339		28.98	
05	DSY-SD-G05-0012	SE6767-4		149303	19.09		65981	25.67		29769		28.98	
06		SSTD1.00G1123		126447	19.10		74687	25.67		50122		29.00	
07	WG101757-BLANK	WG101757-1		118549	19.10		77482	25.67		49298		28.98	
08	WG101758-BLANK	WG101758-1		115379	19.12		71268	25.67		46250		28.99	
09	DSY-SD-G05-1224	SE6767-5		151523	19.07		71438	25.66		37038		28.96	
10	DSY-SD-G05-2448	SE6767-6		152816	19.08		71710	25.66		40135		28.96	
11	DSY-SD-DUP31-101211	SE6767-7		160748	19.07		61763	25.67		31195		28.97	
12	DSY-SD-G09-0012	SE6767-8		155096	19.07		66527	25.66		35501		28.96	
13	DSY-SD-G09-1224	SE6767-9		161967	19.07		69460	25.66		35988		28.96	
14	DSY-SD-G09-2448	SE6767-10		144407	19.08		68933	25.67		38344		28.98	
15	DSY-SD-G13-0012	SE6767-11		134700	19.07		64957	25.66		31556		28.98	
16	DSY-SD-G13-1224	SE6767-12		146435	19.08		63419	25.66		32181		28.98	
17		SSTD1.00G1125		111184	19.05		64533	25.62		43078		28.94	
18	DSY-SD-G13-2448	SE6767-13		138723	19.03		74274	25.60		52113		28.90	
19	DSY-SD-G17-0012	SE6767-14		143071	19.03		69558	25.60		49609		28.91	
20	DSY-SD-G17-1224	SE6767-15		142417	19.03		67106	25.60		48486		28.91	

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G SIM Time Analyzed: 1147

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		47822	8.34	158215	11.29	80066	15.58
UPPER LIMIT		95644	8.88	316430	11.83	160132	16.12
LOWER LIMIT		23911	7.80	79108	10.75	40033	15.04
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-G17-2448	SE6767-16	43328	8.22	153507	11.17	77932	15.45
02	DSY-SD-DUP32-101211	SE6767-17	46222	8.22	165605	11.16	87282	15.45
03	DSY-SD-G21-0012	SE6767-18	58588	8.22	207215	11.15	100764	15.45
04	DSY-SD-G21-1224	SE6767-19	41080	8.22	144207	11.17	72376	15.45
05	DSY-SD-G21-2448	SE6767-20	40410	8.22	142274	11.17	76936	15.45
06								
07								
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09								
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12								
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18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-22

Lab File ID (Standard): G4018 Date Analyzed: 11/19/11

Instrument ID: GCMS-G SIM Time Analyzed: 1147

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		118014	19.19	75564	25.77	53419	29.09
UPPER LIMIT		236028	19.73	151128	26.31	106838	29.63
LOWER LIMIT		59007	18.65	37782	25.23	26710	28.55
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	DSY-SD-G17-2448	SE6767-16	128522	19.03	65960	25.62	47468	28.91
02	DSY-SD-DUP32-101211	SE6767-17	149900	19.03	78441	25.62	56898	28.92
03	DSY-SD-G21-0012	SE6767-18	155804	19.03	93536	25.62	74230	28.98
04	DSY-SD-G21-1224	SE6767-19	123007	19.03	60551	25.62	41732	28.91
05	DSY-SD-G21-2448	SE6767-20	129670	19.05	68372	25.63	46521	28.93
06								
07								
08								
09								
10								
11								
12								
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14								
15								
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17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000181

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-6.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000182

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

							COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM VI PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	13.23	3.80
02	WG99856-BLANK	WG99856-1	11/03/11	1300	13.24	3.80
03	WG99856-LCS	WG99856-2	11/03/11	1326	13.24	3.80
04	WG99856-LCSD	WG99856-3	11/03/11	1352	13.24	3.80
05		AR1660 1.0	11/03/11	1536	13.24	3.80
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-G25-0012	SE6767-21	11/03/11	1838	13.23	3.80
08	DSY-SD-G25-1224	SE6767-22	11/03/11	1904	13.23	3.81
09	DSY-SD-G25-2448	SE6767-23	11/03/11	1930	13.23	3.80
*10		AR1660 0.25	11/03/11	2205	13.24	3.80
11		AR1254 1.0	11/03/11	2322		
12		AR1660 1.0	11/04/11	1509	13.25	3.81
13	WG100155-BLANK	WG100155-1	11/04/11	1903	13.24	3.81
14	WG100155-LCS	WG100155-2	11/04/11	1929	13.24	3.81
15	WG100155-LCSD	WG100155-3	11/04/11	1955	13.23	3.81
16	DSY-SD-G21-2448MS	WG100155-4	11/04/11	2021	13.23	3.80
17	DSY-SD-G21-2448MSD	WG100155-5	11/04/11	2047	13.23	3.80
18		AR1660 0.25	11/04/11	2139	13.23	3.80
** 19		AR1660 1.0	11/07/11	2338	13.21	3.79
20		AR1254 1.0	11/08/11	0055		

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

* Ar-1260 CCV AVG %D > 20% (23.2%)

** Ar-1260 CCV AVG %D 31.5%

FORM VIII PCB

Katahdin Analytical Services A0000183

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-G01-0012	SE6767-1	11/08/11	0121	13.20	3.79
02	DSY-SD-G01-1224	SE6767-2	11/08/11	0147	13.20	3.79
03	DSY-SD-G01-2448	SE6767-3	11/08/11	0213	13.19	3.79
04	DSY-SD-G05-0012	SE6767-4	11/08/11	0239	13.20	3.78
05	DSY-SD-G05-1224	SE6767-5	11/08/11	0305	13.20	3.79
06	DSY-SD-G05-2448	SE6767-6	11/08/11	0331	13.20	3.79
07	DSY-SD-DUP31-101211	SE6767-7	11/08/11	0357	13.20	3.79
08	DSY-SD-G09-0012	SE6767-8	11/08/11	0423	13.20	3.79
09	DSY-SD-G09-1224	SE6767-9	11/08/11	0449	13.20	3.79
10	DSY-SD-G09-2448	SE6767-10	11/08/11	0515	13.20	3.79
*11		AR1660 0.25	11/08/11	0607	13.21	3.79
**12		AR1254 1.0	11/08/11	0725		
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

* Ar-1016 AVG CCV %D 28.68%

** Ar-1254 avg ccv %D 26.03%

FORM VIII PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2836100	0.2500000	35801000	0.001	13.44	20.00	2RDR
(2)	0.2823200	0.2500000	20832000	0.001	12.93	20.00	2RDR
(3)	0.2545600	0.2500000	44301000	0.001	1.82	20.00	2RDR
(4)	0.2627600	0.2500000	28973000	0.001	5.10	20.00	2RDR
(5)	0.2365100	0.2500000	22448000	0.001	-5.40	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	0.2354700	0.2500000	41642000	0.001	-5.81	20.00	2RDR
(2)	0.2437800	0.2500000	53135000	0.001	-2.49	20.00	2RDR
(3)	0.2556900	0.2500000	41796000	0.001	2.28	20.00	2RDR
(4)	0.2356400	0.2500000	39239000	0.001	-5.74	20.00	2RDR
(5)	0.2470600	0.2500000	28935000	0.001	-1.18	20.00	2RDR
Average %D: -2.600							
Decachlorobiphenyl	4.64e-003	5.e-003	510940000	0.001	-7.20	20.00	2RDR
Tetrachloro-m-xylene	5.92e-003	5.e-003	1.33e+009	0.001	18.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2494000	1.0000000	39862000	0.001	24.94	20.00	2RDR	<-
(2)	1.2631000	1.0000000	23630000	0.001	26.31	20.00	2RDR	<-
(3)	1.1014000	1.0000000	54505000	0.001	10.14	20.00	2RDR	
(4)	1.1811000	1.0000000	35015000	0.001	18.11	20.00	2RDR	
(5)	1.1185000	1.0000000	29717000	0.001	11.85	20.00	2RDR	
Average %D: 18.270								
Aroclor-1260	1.0442000	1.0000000	52828000	0.001	4.42	20.00	2RDR	
(2)	1.0360000	1.0000000	67507000	0.001	3.60	20.00	2RDR	
(3)	1.0815000	1.0000000	51560000	0.001	8.15	20.00	2RDR	
(4)	1.0432000	1.0000000	49615000	0.001	4.32	20.00	2RDR	
(5)	1.1366000	1.0000000	35466000	0.001	13.66	20.00	2RDR	
Average %D: 6.8300								
Decachlorobiphenyl	2.09e-002	2.e-002	627930000	0.001	4.50	20.00	2RDR	
Tetrachloro-m-xylene	2.47e-002	2.e-002	1.44e+009	0.001	23.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1078000	1.0000000	45581000	0.001	10.78	20.00	2RDR
(2)	1.0818000	1.0000000	54483000	0.001	8.18	20.00	2RDR
(3)	1.0835000	1.0000000	35641000	0.001	8.35	20.00	2RDR
(4)	1.0912000	1.0000000	39193000	0.001	9.12	20.00	2RDR
(5)	1.1308000	1.0000000	41809000	0.001	13.08	20.00	2RDR
Average %D: 9.9000							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2360800	0.2500000	29622000	0.001	-5.57	20.00	2RDR	
(2)	0.2372200	0.2500000	17387000	0.001	-5.11	20.00	2RDR	
(3)	0.2305400	0.2500000	39423000	0.001	-7.78	20.00	2RDR	
(4)	0.2147500	0.2500000	23179000	0.001	-14.10	20.00	2RDR	
(5)	0.1813300	0.2500000	16469000	0.001	-27.47	20.00	2RDR	<-
Average %D: -12.00								
Aroclor-1260	0.1785000	0.2500000	29837000	0.001	-28.60	20.00	2RDR	<-
(2)	0.1957500	0.2500000	39887000	0.001	-21.70	20.00	2RDR	<-
(3)	0.2060400	0.2500000	32071000	0.001	-17.58	20.00	2RDR	
(4)	0.1810600	0.2500000	28623000	0.001	-27.58	20.00	2RDR	<-
(5)	0.1896100	0.2500000	21790000	0.001	-24.16	20.00	2RDR	<-
Average %D: -23.92								
Decachlorobiphenyl	3.38e-003	5.e-003	357550000	0.001	-32.40	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.12e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8584600	1.0000000	34898000	0.001	-14.15	20.00	2RDR
(2)	0.8799400	1.0000000	43730000	0.001	-12.01	20.00	2RDR
(3)	0.8480600	1.0000000	27413000	0.001	-15.19	20.00	2RDR
(4)	0.8432800	1.0000000	29899000	0.001	-15.67	20.00	2RDR
(5)	0.9351200	1.0000000	34029000	0.001	-6.49	20.00	2RDR
Average %D: -12.70							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 1509

Lab File ID: 7EK153 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2752000	1.0000000	40679000	0.001	27.52	20.00	2RDR	<-
(2)	1.3163000	1.0000000	24613000	0.001	31.63	20.00	2RDR	<-
(3)	1.0946000	1.0000000	54150000	0.001	9.46	20.00	2RDR	
(4)	1.1744000	1.0000000	34811000	0.001	17.44	20.00	2RDR	
(5)	1.0982000	1.0000000	29158000	0.001	9.82	20.00	2RDR	
Average %D: 19.170								
Aroclor-1260	1.0123000	1.0000000	51139000	0.001	1.23	20.00	2RDR	
(2)	1.0083000	1.0000000	65628000	0.001	0.83	20.00	2RDR	
(3)	1.0751000	1.0000000	51239000	0.001	7.51	20.00	2RDR	
(4)	1.0373000	1.0000000	49321000	0.001	3.73	20.00	2RDR	
(5)	1.2452000	1.0000000	38991000	0.001	24.52	20.00	2RDR	<-
Average %D: 7.5700								
Decachlorobiphenyl	1.99e-002	2.e-002	597080000	0.001	-0.50	20.00	2RDR	
Tetrachloro-m-xylene	2.62e-002	2.e-002	1.53e+009	0.001	31.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2721100	0.2500000	34307000	0.001	8.84	20.00	2RDR
(2)	0.2791400	0.2500000	20589000	0.001	11.66	20.00	2RDR
(3)	0.2361500	0.2500000	40562000	0.001	-5.54	20.00	2RDR
(4)	0.2453600	0.2500000	26872000	0.001	-1.86	20.00	2RDR
(5)	0.2123500	0.2500000	19830000	0.001	-15.06	20.00	2RDR
Average %D: -0.400							
Aroclor-1260	0.2134400	0.2500000	37075000	0.001	-14.62	20.00	2RDR
(2)	0.2276000	0.2500000	48672000	0.001	-8.96	20.00	2RDR
(3)	0.2395000	0.2500000	38622000	0.001	-4.20	20.00	2RDR
(4)	0.2161300	0.2500000	35443000	0.001	-13.55	20.00	2RDR
(5)	0.2541100	0.2500000	29813000	0.001	1.64	20.00	2RDR
Average %D: -7.920							
Decachlorobiphenyl	4.07e-003	5.e-003	441840000	0.001	-18.60	20.00	2RDR
Tetrachloro-m-xylene	5.82e-003	5.e-003	1.31e+009	0.001	16.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.9730600	1.0000000	31110000	0.001	-2.69	20.00	2RDR	
(2)	0.9539500	1.0000000	17886000	0.001	-4.60	20.00	2RDR	
(3)	0.8515000	1.0000000	41596000	0.001	-14.85	20.00	2RDR	
(4)	0.8151500	1.0000000	23932000	0.001	-18.48	20.00	2RDR	
(5)	0.6372600	1.0000000	16514000	0.001	-36.27	20.00	2RDR	<-
Average %D: -15.38								
Aroclor-1260	0.6550900	1.0000000	32297000	0.001	-34.49	20.00	2RDR	<-
(2)	0.6635600	1.0000000	42111000	0.001	-33.64	20.00	2RDR	<-
(3)	0.7133100	1.0000000	33071000	0.001	-28.67	20.00	2RDR	<-
(4)	0.6829200	1.0000000	31730000	0.001	-31.71	20.00	2RDR	<-
(5)	0.7095500	1.0000000	21774000	0.001	-29.04	20.00	2RDR	<-
Average %D: -31.51								
Decachlorobiphenyl	1.35e-002	2.e-002	399930000	0.001	-32.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.12e-002	2.e-002	1.23e+009	0.001	6.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0380000	1.0000000	42584000	0.001	3.80	20.00	2RDR
(2)	1.0008000	1.0000000	50158000	0.001	0.08	20.00	2RDR
(3)	0.9512400	1.0000000	31012000	0.001	-4.88	20.00	2RDR
(4)	0.9639200	1.0000000	34416000	0.001	-3.61	20.00	2RDR
(5)	0.9811400	1.0000000	35853000	0.001	-1.89	20.00	2RDR
Average %D: -1.300							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0607

Lab File ID: 7EK283 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3465000	0.2500000	43965000	0.001	38.60	20.00	2RDR	<-
(2)	0.3531700	0.2500000	26234000	0.001	41.27	20.00	2RDR	<-
(3)	0.2940000	0.2500000	52314000	0.001	17.60	20.00	2RDR	
(4)	0.3248400	0.2500000	36465000	0.001	29.94	20.00	2RDR	<-
(5)	0.2897900	0.2500000	28227000	0.001	15.92	20.00	2RDR	
Average %D: 28.680								
Aroclor-1260	0.2760500	0.2500000	50062000	0.001	10.42	20.00	2RDR	
(2)	0.2714900	0.2500000	60772000	0.001	8.60	20.00	2RDR	
(3)	0.2787900	0.2500000	46327000	0.001	11.52	20.00	2RDR	
(4)	0.2770900	0.2500000	47314000	0.001	10.84	20.00	2RDR	
(5)	0.3153900	0.2500000	37455000	0.001	26.16	20.00	2RDR	<-
Average %D: 13.520								
Decachlorobiphenyl	6.07e-003	5.e-003	684580000	0.001	21.40	20.00	2RDR	<-
Tetrachloro-m-xylene	7.57e-003	5.e-003	1.72e+009	0.001	51.40	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0725

Lab File ID: 7EK286 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2932000	1.0000000	53559000	0.001	29.32	20.00	2RDR	<-
(2)	1.2367000	1.0000000	62782000	0.001	23.67	20.00	2RDR	<-
(3)	1.2440000	1.0000000	41292000	0.001	24.40	20.00	2RDR	<-
(4)	1.2709000	1.0000000	45959000	0.001	27.09	20.00	2RDR	<-
(5)	1.2566000	1.0000000	46847000	0.001	25.66	20.00	2RDR	<-
Average %D: 26.030								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	16.95	4.29
02	WG99856-BLANK	WG99856-1	11/03/11	1300	16.96	4.29
03	WG99856-LCS	WG99856-2	11/03/11	1326	16.96	4.29
04	WG99856-LCSD	WG99856-3	11/03/11	1352	16.96	4.29
05		AR1660 1.0	11/03/11	1536	16.96	4.29
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-G25-0012	SE6767-21	11/03/11	1838	16.96	4.29
08	DSY-SD-G25-1224	SE6767-22	11/03/11	1904	16.96	4.29
09	DSY-SD-G25-2448	SE6767-23	11/03/11	1930	16.95	4.29
10		AR1660 0.25	11/03/11	2205	16.97	4.30
11		AR1254 1.0	11/03/11	2322		
12		AR1660 1.0	11/04/11	1509	16.96	4.30
13	WG100155-BLANK	WG100155-1	11/04/11	1903	16.95	4.29
14	WG100155-LCS	WG100155-2	11/04/11	1929	16.95	4.29
15	WG100155-LCSD	WG100155-3	11/04/11	1955	16.95	4.30
16	DSY-SD-G21-2448MS	WG100155-4	11/04/11	2021	16.95	4.29
17	DSY-SD-G21-2448MSD	WG100155-5	11/04/11	2047	16.95	4.29
18		AR1660 0.25	11/04/11	2139	16.95	4.29
19		AR1660 1.0	11/07/11	2338	16.93	4.28
20		AR1254 1.0	11/08/11	0055		

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-G01-0012	SE6767-1	11/08/11	0121	16.93	4.28
02	DSY-SD-G01-1224	SE6767-2	11/08/11	0147	16.92	4.28
03	DSY-SD-G01-2448	SE6767-3	11/08/11	0213	16.91	4.28
04	DSY-SD-G05-0012	SE6767-4	11/08/11	0239	16.92	4.28
05	DSY-SD-G05-1224	SE6767-5	11/08/11	0305	16.92	4.28
06	DSY-SD-G05-2448	SE6767-6	11/08/11	0331	16.92	4.28
07	DSY-SD-DUP31-101211	SE6767-7	11/08/11	0357	16.92	4.28
08	DSY-SD-G09-0012	SE6767-8	11/08/11	0423	16.92	4.28
09	DSY-SD-G09-1224	SE6767-9	11/08/11	0449	16.92	4.28
10	DSY-SD-G09-2448	SE6767-10	11/08/11	0515	16.92	4.28
11		AR1660 0.25	11/08/11	0607	16.93	4.28
12		AR1254 1.0	11/08/11	0725		
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2765400	0.2500000	3898700.0	0.001	10.62	20.00	2RDR
(2)	0.2684000	0.2500000	6239200.0	0.001	7.36	20.00	2RDR
(3)	0.2450700	0.2500000	9927900.0	0.001	-1.97	20.00	2RDR
(4)	0.2371100	0.2500000	5068700.0	0.001	-5.16	20.00	2RDR
(5)	0.2503700	0.2500000	4878900.0	0.001	0.15	20.00	2RDR
Average %D: 2.2000							
Aroclor-1260	0.2413500	0.2500000	6654100.0	0.001	-3.46	20.00	2RDR
(2)	0.2471100	0.2500000	8024800.0	0.001	-1.16	20.00	2RDR
(3)	0.2527000	0.2500000	5693700.0	0.001	1.08	20.00	2RDR
(4)	0.2524400	0.2500000	5579900.0	0.001	0.98	20.00	2RDR
(5)	0.2513300	0.2500000	5394700.0	0.001	0.53	20.00	2RDR
Average %D: -0.400							
Decachlorobiphenyl	4.72e-003	5.e-003	88981000	0.001	-5.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240130000	0.001	11.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0126000	1.0000000	3533100.0	0.001	1.26	20.00	2RDR
(2)	1.0170000	1.0000000	5832800.0	0.001	1.70	20.00	2RDR
(3)	0.9498100	1.0000000	9839900.0	0.001	-5.02	20.00	2RDR
(4)	0.9208100	1.0000000	5062200.0	0.001	-7.92	20.00	2RDR
(5)	0.9423600	1.0000000	4629200.0	0.001	-5.76	20.00	2RDR
Average %D: -3.150							
Aroclor-1260	0.9328100	1.0000000	6549800.0	0.001	-6.72	20.00	2RDR
(2)	0.9263000	1.0000000	7863200.0	0.001	-7.37	20.00	2RDR
(3)	0.9411500	1.0000000	5587600.0	0.001	-5.88	20.00	2RDR
(4)	0.9666900	1.0000000	5516300.0	0.001	-3.33	20.00	2RDR
(5)	0.9296100	1.0000000	5284900.0	0.001	-7.04	20.00	2RDR
Average %D: -6.070							
Decachlorobiphenyl	1.83e-002	2.e-002	88118000	0.001	-8.50	20.00	2RDR
Tetrachloro-m-xylene	2.08e-002	2.e-002	226400000	0.001	4.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9548400	1.0000000	3866700.0	0.001	-4.52	20.00	2RDR
(2)	0.9774800	1.0000000	6452100.0	0.001	-2.25	20.00	2RDR
(3)	0.9225000	1.0000000	6905100.0	0.001	-7.75	20.00	2RDR
(4)	0.9029400	1.0000000	8501300.0	0.001	-9.71	20.00	2RDR
(5)	0.9607500	1.0000000	5407000.0	0.001	-3.92	20.00	2RDR
Average %D: -5.630							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2304000	0.2500000	3254200.0	0.001	-7.84	20.00	2RDR	
(2)	0.2191900	0.2500000	5107200.0	0.001	-12.32	20.00	2RDR	
(3)	0.2083200	0.2500000	8384600.0	0.001	-16.67	20.00	2RDR	
(4)	0.2008400	0.2500000	4263000.0	0.001	-19.66	20.00	2RDR	
(5)	0.2052900	0.2500000	3990400.0	0.001	-17.88	20.00	2RDR	
Average %D: -14.88								
Aroclor-1260	0.2085400	0.2500000	5726200.0	0.001	-16.58	20.00	2RDR	
(2)	0.2132700	0.2500000	6858200.0	0.001	-14.69	20.00	2RDR	
(3)	0.2220000	0.2500000	4952500.0	0.001	-11.20	20.00	2RDR	
(4)	0.2105200	0.2500000	4612800.0	0.001	-15.79	20.00	2RDR	
(5)	0.2200200	0.2500000	4671100.0	0.001	-11.99	20.00	2RDR	
Average %D: -14.04								
Decachlorobiphenyl	3.8e-003	5.e-003	71218000	0.001	-24.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.55e-003	5.e-003	194740000	0.001	-9.00	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8628200	1.0000000	3493600.0	0.001	-13.72	20.00	2RDR
(2)	0.8810900	1.0000000	5814300.0	0.001	-11.89	20.00	2RDR
(3)	0.8485400	1.0000000	6345400.0	0.001	-15.15	20.00	2RDR
(4)	0.8666500	1.0000000	8151300.0	0.001	-13.34	20.00	2RDR
(5)	0.9313800	1.0000000	5236000.0	0.001	-6.86	20.00	2RDR
Average %D: -12.19							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSV-22

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 1509

Lab File ID: 7EK153 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0773000	1.0000000	3757000.0	0.001	7.73	20.00	2RDR
(2)	1.0874000	1.0000000	6231500.0	0.001	8.74	20.00	2RDR
(3)	0.9931400	1.0000000	10290000	0.001	-0.69	20.00	2RDR
(4)	0.9433000	1.0000000	5187000.0	0.001	-5.67	20.00	2RDR
(5)	0.9742200	1.0000000	4786200.0	0.001	-2.58	20.00	2RDR
Average %D: 1.5100							
Aroclor-1260	1.0097000	1.0000000	7092700.0	0.001	0.97	20.00	2RDR
(2)	0.9703400	1.0000000	8243200.0	0.001	-2.97	20.00	2RDR
(3)	1.0088000	1.0000000	5997900.0	0.001	0.88	20.00	2RDR
(4)	1.0232000	1.0000000	5842700.0	0.001	2.32	20.00	2RDR
(5)	0.9706000	1.0000000	5523800.0	0.001	-2.94	20.00	2RDR
Average %D: -0.350							
Decachlorobiphenyl	1.86e-002	2.e-002	89311000	0.001	-7.00	20.00	2RDR
Tetrachloro-m-xylene	2.24e-002	2.e-002	243580000	0.001	12.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2625300	0.2500000	3702900.0	0.001	5.01	20.00	2RDR
(2)	0.2588500	0.2500000	6019700.0	0.001	3.54	20.00	2RDR
(3)	0.2368200	0.2500000	9581500.0	0.001	-5.27	20.00	2RDR
(4)	0.2285400	0.2500000	4878400.0	0.001	-8.58	20.00	2RDR
(5)	0.2364600	0.2500000	4604800.0	0.001	-5.42	20.00	2RDR
Average %D: -2.160							
Aroclor-1260	0.2437000	0.2500000	6720700.0	0.001	-2.52	20.00	2RDR
(2)	0.2414400	0.2500000	7829200.0	0.001	-3.42	20.00	2RDR
(3)	0.2525200	0.2500000	5689500.0	0.001	1.01	20.00	2RDR
(4)	0.2469500	0.2500000	5453200.0	0.001	-1.22	20.00	2RDR
(5)	0.2457300	0.2500000	5265200.0	0.001	-1.71	20.00	2RDR
Average %D: -1.560							
Decachlorobiphenyl	4.49e-003	5.e-003	84641000	0.001	-10.20	20.00	2RDR
Tetrachloro-m-xylene	5.39e-003	5.e-003	231630000	0.001	7.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9058400	1.0000000	3163500.0	0.001	-9.42	20.00	2RDR
(2)	0.9615300	1.0000000	5518400.0	0.001	-3.85	20.00	2RDR
(3)	0.9165100	1.0000000	9493900.0	0.001	-8.35	20.00	2RDR
(4)	0.8846600	1.0000000	4861600.0	0.001	-11.53	20.00	2RDR
(5)	0.8891400	1.0000000	4367000.0	0.001	-11.09	20.00	2RDR
Average %D: -8.850							
Aroclor-1260	0.8749500	1.0000000	6141100.0	0.001	-12.50	20.00	2RDR
(2)	0.8751100	1.0000000	7421600.0	0.001	-12.49	20.00	2RDR
(3)	0.8894400	1.0000000	5274200.0	0.001	-11.06	20.00	2RDR
(4)	0.8509100	1.0000000	4847900.0	0.001	-14.91	20.00	2RDR
(5)	0.8255200	1.0000000	4678700.0	0.001	-17.45	20.00	2RDR
Average %D: -13.68							
Decachlorobiphenyl	1.67e-002	2.e-002	80222000	0.001	-16.50	20.00	2RDR
Tetrachloro-m-xylene	2.04e-002	2.e-002	221250000	0.001	2.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0083000	1.0000000	4083600.0	0.001	0.83	20.00	2RDR
(2)	1.0245000	1.0000000	6763100.0	0.001	2.45	20.00	2RDR
(3)	1.0096000	1.0000000	7563900.0	0.001	0.96	20.00	2RDR
(4)	0.9815300	1.0000000	9259100.0	0.001	-1.85	20.00	2RDR
(5)	0.9994900	1.0000000	5632500.0	0.001	-0.05	20.00	2RDR
Average %D: 0.4700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSV-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0607

Lab File ID: 7EK283 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3153400	0.2500000	4440200.0	0.001	26.14	20.00	2RDR	<-
(2)	0.3042300	0.2500000	7063000.0	0.001	21.69	20.00	2RDR	<-
(3)	0.2770300	0.2500000	11269000	0.001	10.81	20.00	2RDR	
(4)	0.2685500	0.2500000	5767100.0	0.001	7.42	20.00	2RDR	
(5)	0.2820300	0.2500000	5502600.0	0.001	12.81	20.00	2RDR	
Average %D: 15.760								
Aroclor-1260	0.2737100	0.2500000	7569200.0	0.001	9.48	20.00	2RDR	
(2)	0.2615500	0.2500000	8522700.0	0.001	4.62	20.00	2RDR	
(3)	0.2638200	0.2500000	5962400.0	0.001	5.53	20.00	2RDR	
(4)	0.2792800	0.2500000	6198900.0	0.001	11.71	20.00	2RDR	
(5)	0.2526700	0.2500000	5425600.0	0.001	1.07	20.00	2RDR	
Average %D: 6.4800								
Decachlorobiphenyl	5.5e-003	5.e-003	104070000	0.001	10.00	20.00	2RDR	
Tetrachloro-m-xylene	6.59e-003	5.e-003	283710000	0.001	31.80	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0725

Lab File ID: 7EK286 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1483000	1.0000000	4650600.0	0.001	14.83	20.00	2RDR
(2)	1.1386000	1.0000000	7516700.0	0.001	13.86	20.00	2RDR
(3)	1.0925000	1.0000000	8190700.0	0.001	9.25	20.00	2RDR
(4)	1.0644000	1.0000000	10058000	0.001	6.44	20.00	2RDR
(5)	1.0790000	1.0000000	6095300.0	0.001	7.90	20.00	2RDR
Average %D: 10.450							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.14 TCX: 3.76

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
* 01		AR1660 1.0	11/14/11	1548	13.15	3.77
02		AR1254 1.0	11/14/11	1706		
03	DSY-SD-G13-0012	SE6767-11	11/14/11	1823	13.14	3.77
04	DSY-SD-G13-1224	SE6767-12	11/14/11	1849	13.13	3.76
05	DSY-SD-G13-2448	SE6767-13	11/14/11	1914	13.13	3.76
06	DSY-SD-G17-0012	SE6767-14	11/14/11	1940	13.13	3.76
07	DSY-SD-G17-1224	SE6767-15	11/14/11	2006	13.13	3.76
08	DSY-SD-G17-2448	SE6767-16	11/14/11	2032	13.13	3.76
09	DSY-SD-DUP32-101211	SE6767-17	11/14/11	2057	13.13	3.76
10	DSY-SD-G21-0012	SE6767-18	11/14/11	2123	13.12	3.76
** 11		AR1660 0.25	11/14/11	2214	13.14	3.76
*** 12		AR1254 1.0	11/14/11	2330		
13	DSY-SD-G21-1224	SE6767-19	11/14/11	2356	13.13	3.76
14	DSY-SD-G21-2448	SE6767-20	11/15/11	0021	13.13	3.76
* 15		AR1660 1.0	11/15/11	0320	13.14	3.76
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

* AR-1016 & AR-1660 in CCV 30 > 20%

** AR-1016 in CCV 20 > 20%

*** AR-1254 in CCV 20 > 20%

FORM VIII PCB

Katahdin Analytical Services A0000187

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 1548

Lab File ID: 7EK539 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3912000	1.0000000	44327000	0.001	39.12	20.00	2RDR	<-
(2)	1.4811000	1.0000000	27648000	0.001	48.11	20.00	2RDR	<-
(3)	1.0582000	1.0000000	52265000	0.001	5.82	20.00	2RDR	
(4)	1.2121000	1.0000000	35953000	0.001	21.21	20.00	2RDR	<-
(5)	1.1977000	1.0000000	31902000	0.001	19.77	20.00	2RDR	
Average %D: 26.800								
Aroclor-1260	1.1767000	1.0000000	59877000	0.001	17.67	20.00	2RDR	
(2)	1.0984000	1.0000000	71749000	0.001	9.84	20.00	2RDR	
(3)	1.1272000	1.0000000	53877000	0.001	12.72	20.00	2RDR	
(4)	1.2559000	1.0000000	60269000	0.001	25.59	20.00	2RDR	<-
(5)	1.6540000	1.0000000	52417000	0.001	65.40	20.00	2RDR	<-
Average %D: 26.240								
Decachlorobiphenyl	2.64e-002	2.e-002	799910000	0.001	32.00	20.00	2RDR	<-
Tetrachloro-m-xylene	3.18e-002	2.e-002	1.87e+009	0.001	59.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 1706

Lab File ID: 7EK542 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2202000	1.0000000	50412000	0.001	22.02	20.00	2RDR	<-
(2)	1.1254000	1.0000000	56817000	0.001	12.54	20.00	2RDR	
(3)	1.1309000	1.0000000	37307000	0.001	13.09	20.00	2RDR	
(4)	1.2906000	1.0000000	46704000	0.001	29.06	20.00	2RDR	<-
(5)	1.1546000	1.0000000	42759000	0.001	15.46	20.00	2RDR	
Average %D: 18.440								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 2214

Lab File ID: 7EK554 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3498300	0.2500000	44397000	0.001	39.93	20.00	2RDR	<-
(2)	0.3658700	0.2500000	27202000	0.001	46.35	20.00	2RDR	<-
(3)	0.2641100	0.2500000	46239000	0.001	5.64	20.00	2RDR	
(4)	0.2940200	0.2500000	32745000	0.001	17.61	20.00	2RDR	
(5)	0.2705400	0.2500000	26138000	0.001	8.22	20.00	2RDR	
Average %D: 23.560								
Aroclor-1260	0.2795200	0.2500000	50784000	0.001	11.81	20.00	2RDR	
(2)	0.2698300	0.2500000	60316000	0.001	7.93	20.00	2RDR	
(3)	0.2784300	0.2500000	46256000	0.001	11.37	20.00	2RDR	
(4)	0.2915600	0.2500000	50136000	0.001	16.62	20.00	2RDR	
(5)	0.3717300	0.2500000	44499000	0.001	48.69	20.00	2RDR	<-
Average %D: 19.280								
Decachlorobiphenyl	6.37e-003	5.e-003	720820000	0.001	27.40	20.00	2RDR	<-
Tetrachloro-m-xylene	8.25e-003	5.e-003	1.87e+009	0.001	65.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 2330

Lab File ID: 7EK557 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2836000	1.0000000	53145000	0.001	28.36	20.00	2RDR	<-
(2)	1.1790000	1.0000000	59684000	0.001	17.90	20.00	2RDR	
(3)	1.1646000	1.0000000	38494000	0.001	16.46	20.00	2RDR	
(4)	1.2730000	1.0000000	46038000	0.001	27.30	20.00	2RDR	<-
(5)	1.1504000	1.0000000	42590000	0.001	15.04	20.00	2RDR	
Average %D: 21.010								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/15/11 Time: 0320

Lab File ID: 7EK566 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.6333000	1.0000000	51910000	0.001	63.33	20.00	2RDR	<-
(2)	1.7428000	1.0000000	32436000	0.001	74.28	20.00	2RDR	<-
(3)	1.2873000	1.0000000	64155000	0.001	28.73	20.00	2RDR	<-
(4)	1.4730000	1.0000000	43870000	0.001	47.30	20.00	2RDR	<-
(5)	1.3971000	1.0000000	37416000	0.001	39.71	20.00	2RDR	<-
Average %D: 50.670								
Aroclor-1260	1.3012000	1.0000000	66522000	0.001	30.12	20.00	2RDR	<-
(2)	1.2395000	1.0000000	81318000	0.001	23.95	20.00	2RDR	<-
(3)	1.2900000	1.0000000	62150000	0.001	29.00	20.00	2RDR	<-
(4)	1.3663000	1.0000000	65829000	0.001	36.63	20.00	2RDR	<-
(5)	1.7831000	1.0000000	56712000	0.001	78.31	20.00	2RDR	<-
Average %D: 39.600								
Decachlorobiphenyl	2.85e-002	2.e-002	868460000	0.001	42.50	20.00	2RDR	<-
Tetrachloro-m-xylene	3.83e-002	2.e-002	2.26e+009	0.001	91.50	20.00	2RDR	<-

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.83 TCX: 4.25

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/14/11	1548	16.84	4.25
02		AR1254 1.0	11/14/11	1706		
03	DSY-SD-G13-1224	SE6767-12	11/14/11	1849	16.82	4.25
04	DSY-SD-G13-2448	SE6767-13	11/14/11	1914	16.83	4.25
05	DSY-SD-G17-0012	SE6767-14	11/14/11	1940	16.82	4.25
06	DSY-SD-G17-1224	SE6767-15	11/14/11	2006	16.82	4.24
07	DSY-SD-G17-2448	SE6767-16	11/14/11	2032	16.82	4.25
08	DSY-SD-DUP32-101211	SE6767-17	11/14/11	2057	16.82	4.24
09	DSY-SD-G21-0012	SE6767-18	11/14/11	2123	16.82	4.25
10		AR1660 0.25	11/14/11	2214	16.83	4.25
11		AR1254 1.0	11/14/11	2330		
12	DSY-SD-G21-1224	SE6767-19	11/14/11	2356	16.82	4.25
13	DSY-SD-G21-2448	SE6767-20	11/15/11	0021	16.82	4.25
14		AR1660 1.0	11/15/11	0320	16.84	4.25
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000188

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 1548

Lab File ID: 7EK539 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0852000	1.0000000	3784300.0	0.001	8.52	20.00	2RDR	
(2)	1.0913000	1.0000000	6254000.0	0.001	9.13	20.00	2RDR	
(3)	0.9228900	1.0000000	9560200.0	0.001	-7.71	20.00	2RDR	
(4)	0.9018700	1.0000000	4957200.0	0.001	-9.81	20.00	2RDR	
(5)	0.9924900	1.0000000	4876300.0	0.001	-0.75	20.00	2RDR	
Average %D: -0.120								
Aroclor-1260	0.9992500	1.0000000	7019000.0	0.001	-0.08	20.00	2RDR	
(2)	0.9192500	1.0000000	7802400.0	0.001	-8.08	20.00	2RDR	
(3)	0.9410500	1.0000000	5587000.0	0.001	-5.90	20.00	2RDR	
(4)	1.0508000	1.0000000	6002000.0	0.001	5.08	20.00	2RDR	
(5)	0.8896200	1.0000000	5051900.0	0.001	-11.04	20.00	2RDR	
Average %D: -4.000								
Decachlorobiphenyl	2.12e-002	2.e-002	102000000	0.001	6.00	20.00	2RDR	
Tetrachloro-m-xylene	2.44e-002	2.e-002	265360000	0.001	22.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 1706

Lab File ID: 7EK542 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0038000	1.0000000	4065200.0	0.001	0.38	20.00	2RDR
(2)	1.1271000	1.0000000	7440800.0	0.001	12.71	20.00	2RDR
(3)	0.9397500	1.0000000	7035700.0	0.001	-6.02	20.00	2RDR
(4)	0.8679400	1.0000000	8163700.0	0.001	-13.21	20.00	2RDR
(5)	0.9080300	1.0000000	5100100.0	0.001	-9.20	20.00	2RDR
Average %D: -3.070							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 2214

Lab File ID: 7EK554 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2883300	0.2500000	4063300.0	0.001	15.33	20.00	2RDR	
(2)	0.2863200	0.2500000	6651300.0	0.001	14.53	20.00	2RDR	
(3)	0.2390300	0.2500000	9674300.0	0.001	-4.39	20.00	2RDR	
(4)	0.2367800	0.2500000	5061300.0	0.001	-5.29	20.00	2RDR	
(5)	0.2513400	0.2500000	4898000.0	0.001	0.54	20.00	2RDR	
Average %D: 4.1600								
Aroclor-1260	0.2612800	0.2500000	7217800.0	0.001	4.51	20.00	2RDR	
(2)	0.2421400	0.2500000	7853600.0	0.001	-3.14	20.00	2RDR	
(3)	0.2546600	0.2500000	5741200.0	0.001	1.86	20.00	2RDR	
(4)	0.2751300	0.2500000	6103300.0	0.001	10.05	20.00	2RDR	
(5)	0.2417100	0.2500000	5172300.0	0.001	-3.32	20.00	2RDR	
Average %D: 2.0000								
Decachlorobiphenyl	5.59e-003	5.e-003	105840000	0.001	11.80	20.00	2RDR	
Tetrachloro-m-xylene	6.53e-003	5.e-003	281270000	0.001	30.60	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/14/11 Time: 2330

Lab File ID: 7EK557 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0725000	1.0000000	4343500.0	0.001	7.25	20.00	2RDR
(2)	1.1672000	1.0000000	7705500.0	0.001	16.72	20.00	2RDR
(3)	1.0144000	1.0000000	7600300.0	0.001	1.44	20.00	2RDR
(4)	0.9552300	1.0000000	9005600.0	0.001	-4.48	20.00	2RDR
(5)	0.9937500	1.0000000	5599100.0	0.001	-0.62	20.00	2RDR
Average %D: 4.0600							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Instrument ID: GC07 Calibration Date: 11/15/11 Time: 0320

Lab File ID: 7EK566 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2300000	1.0000000	4285000.0	0.001	23.00	20.00	2RDR	<-
(2)	1.2270000	1.0000000	7020900.0	0.001	22.70	20.00	2RDR	<-
(3)	1.0639000	1.0000000	11024000	0.001	6.39	20.00	2RDR	
(4)	1.0253000	1.0000000	5641900.0	0.001	2.53	20.00	2RDR	
(5)	1.1014000	1.0000000	5412800.0	0.001	10.14	20.00	2RDR	
Average %D: 12.950								
Aroclor-1260	1.1298000	1.0000000	7940600.0	0.001	12.98	20.00	2RDR	
(2)	1.0648000	1.0000000	9058700.0	0.001	6.48	20.00	2RDR	
(3)	1.0827000	1.0000000	6446000.0	0.001	8.27	20.00	2RDR	
(4)	1.1731000	1.0000000	6708200.0	0.001	17.31	20.00	2RDR	
(5)	1.0195000	1.0000000	5809100.0	0.001	1.95	20.00	2RDR	
Average %D: 9.4000								
Decachlorobiphenyl	2.37e-002	2.e-002	113910000	0.001	18.50	20.00	2RDR	
Tetrachloro-m-xylene	2.78e-002	2.e-002	302170000	0.001	39.00	20.00	2RDR	<-

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99856-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Lab Sample ID: WG99856-1 Lab File ID: 7EK101

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 11/03/11 Date Analyzed (2): 11/03/11

Time Analyzed (1): 1300 Time Analyzed (2): 1300

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99856-LCS	WG99856-2	7EK102	11/03/11	11/03/11
02	WG99856-LCSD	WG99856-3	7EK103	11/03/11	11/03/11
03	DSY-SD-G25-0012	SE6767-21	7EK114	11/03/11	11/03/11
04	DSY-SD-G25-1224	SE6767-22	7EK115	11/03/11	11/03/11
05	DSY-SD-G25-2448	SE6767-23	7EK116	11/03/11	11/03/11
06					
07					
08					
09					
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11					
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13					
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16					
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19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99856-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: 7EK101.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		91.6	%					
Decachlorobiphenyl		95.5	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99856-2
LCSD ID: WG99856-3
Project:
SDG: DSY-22
Report Date: 05-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	84.4	50.5*	155.	92.8	ug/Kgdrywt	59*	50	53-123
Aroclor-1260	167.	105.	62.9	151.	90.4	ug/Kgdrywt	36	50	58-120
Tetrachloro-M-Xylene			46.8*		95.2				56-115
Decachlorobiphenyl			79.9		98.5				59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100155-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

Lab Sample ID: WG100155-1 Lab File ID: 7EK162

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/31/11

Date Analyzed (1): 11/04/11 Date Analyzed (2): 11/04/11

Time Analyzed (1): 1903 Time Analyzed (2): 1903

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG100155-LCS	WG100155-2	7EK163	11/04/11	11/04/11
02	WG100155-LCSD	WG100155-3	7EK164	11/04/11	11/04/11
03	DSY-SD-G21-2448MS	WG100155-4	7EK165	11/04/11	11/04/11
04	DSY-SD-G21-2448MSD	WG100155-5	7EK166	11/04/11	11/04/11
05	DSY-SD-G01-0012	SE6767-1	7EK272	11/08/11	11/08/11
06	DSY-SD-G01-1224	SE6767-2	7EK273	11/08/11	11/08/11
07	DSY-SD-G01-2448	SE6767-3	7EK274	11/08/11	11/08/11
08	DSY-SD-G05-0012	SE6767-4	7EK275	11/08/11	11/08/11
09	DSY-SD-G05-1224	SE6767-5	7EK276	11/08/11	11/08/11
10	DSY-SD-G05-2448	SE6767-6	7EK277	11/08/11	11/08/11
11	DSY-SD-DUP31-101211	SE6767-7	7EK278	11/08/11	11/08/11
12	DSY-SD-G09-0012	SE6767-8	7EK279	11/08/11	11/08/11
13	DSY-SD-G09-1224	SE6767-9	7EK280	11/08/11	11/08/11
14	DSY-SD-G09-2448	SE6767-10	7EK281	11/08/11	11/08/11
15	DSY-SD-G13-0012	SE6767-11	7EK545	11/14/11	11/14/11
16	DSY-SD-G13-1224	SE6767-12	7EK546	11/14/11	11/14/11
17	DSY-SD-G13-2448	SE6767-13	7EK547	11/14/11	11/14/11
18	DSY-SD-G17-0012	SE6767-14	7EK548	11/14/11	11/14/11
19	DSY-SD-G17-1224	SE6767-15	7EK549	11/14/11	11/14/11
20	DSY-SD-G17-2448	SE6767-16	7EK550	11/14/11	11/14/11
21	DSY-SD-DUP32-101211	SE6767-17	7EK551	11/14/11	11/14/11
22	DSY-SD-G21-0012	SE6767-18	7EK552	11/14/11	11/14/11
23	DSY-SD-G21-1224	SE6767-19	7EK558	11/14/11	11/14/11
24	DSY-SD-G21-2448	SE6767-20	7EK559	11/15/11	11/15/11

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG100155-1
Client ID: Method Blank Sample
Project:
SDG: DSY-22
Lab File ID: 7EK162.D

Sample Date:
Received Date: 31-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		89.5	%					
Decachlorobiphenyl		81.4	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG100155-2
LCSD ID: WG100155-3
Project:
SDG: DSY-22
Report Date: 05-DEC-11

Received Date: 31-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	138.	82.6	132.	79.0	ug/Kgdrywt	4	50	53-123
Aroclor-1260	167.	142.	85.0	136.	81.4	ug/Kgdrywt	4	50	58-120
Tetrachloro-M-Xylene			69.1		72.4				56-115
Decachlorobiphenyl			62.2		67.9				59-124

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

MS/MSD Recovery Report

MS ID: WG100155-4
MSD ID: WG100155-5
Sample ID: SE6767-20
Client ID: DSY-SD-G21-2448
Project:
SDG: DSY-22

Received Date: 13-OCT-11
Extract Date: 31-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG100155
Report Date: 05-DEC-11

Analysis Date: 04-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	447.	441.	ug/Kgdrywt	U22.	410	420	92.3	95.6	2	30	53-123
Aroclor-1260	447.	441.	ug/Kgdrywt	U22.	460	480	103.	108.	4	30	58-120
Tetrachloro-M-Xylene							46.4*	66.8			56-115
Decachlorobiphenyl							36.2*	52.6*			59-124

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99856-BLANK	WG99856-1	92	91	95	88			0
02	WG99856-LCS	WG99856-2	47*	46*	80	74			2
03	WG99856-LCSD	WG99856-3	95	92	98	88			0
04	DSY-SD-G25-0012	SE6767-21	64	73	50*	64			1
05	DSY-SD-G25-1224	SE6767-22	66	75	54*	80			1
06	DSY-SD-G25-2448	SE6767-23	59	71	53*	89			1
07	WG100155-BLANK	WG100155-1	87	90	68	81			0
08	WG100155-LCS	WG100155-2	67	69	55*	62			1
09	WG100155-LCSD	WG100155-3	72	72	61	68			0
10	DSY-SD-G21-2448MS	WG100155-4	40*	46*	29*	36*			4
11	DSY-SD-G21-2448MSD	WG100155-5	54*	67	39*	52*			3
12	DSY-SD-G01-0012	SE6767-1	63	71	62	58*			1
13	DSY-SD-G01-1224	SE6767-2	58	71	69	68			0
14	DSY-SD-G01-2448	SE6767-3	38*	60	55*	106			2
15	DSY-SD-G05-0012	SE6767-4	72	78	61	63			0
16	DSY-SD-G05-1224	SE6767-5	74	87	87	89			0
17	DSY-SD-G05-2448	SE6767-6	58	70	57*	65			1
18	DSY-SD-DUP31-101211	SE6767-7	78	95	81	92			0
19	DSY-SD-G09-0012	SE6767-8	67	76	55*	57*			2
20	DSY-SD-G09-1224	SE6767-9	67	76	72	74			0
21	DSY-SD-G09-2448	SE6767-10	88	100	90	94			0
22	DSY-SD-G13-0012	SE6767-11	81	84	99	84			0
23	DSY-SD-G13-1224	SE6767-12	73	83	95	85			0
24	DSY-SD-G13-2448	SE6767-13	82	93	100	94			0
25	DSY-SD-G17-0012	SE6767-14	76	80	94	86			0
26	DSY-SD-G17-1224	SE6767-15	76	80	92	86			0
27	DSY-SD-G17-2448	SE6767-16	83	98	100	99			0
28	DSY-SD-DUP32-101211	SE6767-17	92	106	107	106			0

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000130

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-22

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	DSY-SD-G21-0012	SE6767-18	95	104	116	105			0
02	DSY-SD-G21-1224	SE6767-19	82	92	105	91			0
03	DSY-SD-G21-2448	SE6767-20	75	85	89	86			0
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000131

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P31-101211

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-22

Lab Sample ID: SE6767-7 Date(s) Analyzed: 11/08/11 11/08/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.13	6.07	6.21	97.1		
Aroclor-1254	2	6.46	6.40	6.54	173		
	3	6.82	6.76	6.90	217		
COLUMN 1	4	7.65	7.60	7.74	307		
	5	8.12	8.06	8.20	387	236	
	1	6.35	6.29	6.43	166		
	2	7.32	7.25	7.39	150		
	3	7.60	7.53	7.67	162		
COLUMN 2	4	8.42	8.35	8.49	185		
	5	10.10	10.05	10.19	410	215	9.3
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-G05-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-22

Lab Sample ID: SE6767-6 Date(s) Analyzed: 11/08/11 11/08/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.13	6.07	6.21	81.5		
Aroclor-1254	2	6.46	6.40	6.54	135		
	3	6.82	6.76	6.90	158		
COLUMN 1	4	7.65	7.60	7.74	179		
	5	8.12	8.06	8.20	200	150	
	1	6.35	6.29	6.43	142		
	2	7.32	7.25	7.39	145		
	3	7.60	7.53	7.67	122		
COLUMN 2	4	8.42	8.35	8.49	129		
	5	10.10	10.05	10.19	191	146	2.7
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-G13-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-22

Lab Sample ID: SE6767-13 Date(s) Analyzed: 11/14/11 11/14/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.08	6.04	6.18	65.6		
Aroclor-1254	2	6.44	6.37	6.51	115		
	3	6.79	6.74	6.88	134		
COLUMN 1	4	7.62	7.56	7.70	177		
	5	8.09	8.04	8.18	170	132	
	1	6.32	6.25	6.39	69.2		
	2	7.27	7.20	7.34	82.8		
	3	7.56	7.49	7.63	80.9		
COLUMN 2	4	8.37	8.30	8.44	75.6		
	5	10.04	9.98	10.12	132	88.2	39.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10

PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-G25-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-22

Lab Sample ID: SE6767-22 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	90.4		
Aroclor-1254	2	6.48	6.41	6.55	230		
	3	6.83	6.77	6.91	185		
COLUMN 1	4	7.67	7.61	7.75	176		
	5	8.13	8.08	8.22	186	174	
	1	6.37	6.30	6.44	89.0		
	2	7.33	7.26	7.40	112		
	3	7.61	7.55	7.69	99.0		
COLUMN 2	4	8.43	8.37	8.51	105		
	5	10.13	10.07	10.21	162	113	42.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-G25-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-22

Lab Sample ID: SE6767-23 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	111		
Aroclor-1254	2	6.48	6.41	6.55	182		
	3	6.83	6.77	6.91	153		
COLUMN 1	4	7.66	7.61	7.75	189		
	5	8.13	8.08	8.22	227	172	
	1	6.37	6.30	6.44	150		
	2	7.33	7.26	7.40	167		
	3	7.61	7.55	7.69	160		
COLUMN 2	4	8.43	8.37	8.51	222		
	5	10.13	10.07	10.21	230	186	7.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP31-101211	UNITS	DSY-SD-G05-2448	RPD	D
OS	BENZO(A)ANTHRACENE	1000	UG/KG	1000	0.00	0.00
OS	BENZO(B)FLUORANTHENE	940	UG/KG	910 J	3.24	30.00
OS	BENZO(K)FLUORANTHENE	450 J	UG/KG	440 J	2.25	10.00
OS	CHRYSENE	1300	UG/KG	1200	8.00	100.00
OS	FLUORANTHENE	3400	UG/KG	3100	9.23	300.00
OS	PYRENE	3000	UG/KG	2700	10.53	300.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP31-101211	UNITS	DSY-SD-G05-2448	RPD	D
PAH	BENZO(A)PYRENE	470	UG/KG	440	6.59	30.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP31-101211	UNITS	DSY-SD-G05-2448	RPD	D
PCB	AROCLOR-1254	240 J	UG/KG	150 J	46.15	90.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP32-101211	UNITS	DSY-SD-G17-2448	RPD	D
PAH	BENZO(A)PYRENE	360	UG/KG	340	5.71	20.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP32-101211	UNITS	DSY-SD-G17-2448	RPD	D
OS	BENZO(A)ANTHRACENE	750 J	UG/KG	590 J	23.88	160.00
OS	BENZO(B)FLUORANTHENE	600 J	UG/KG	620 J	3.28	20.00
OS	BENZO(K)FLUORANTHENE	330 J	UG/KG	ND	200.00	330.00 N/A<2XR.L.
OS	CHRYSENE	830 J	UG/KG	680 J	19.87	150.00
OS	FLUORANTHENE	1700 J	UG/KG	1600 J	6.06	100.00
OS	PYRENE	1500	UG/KG	1500	0.00	0.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 16, 2012**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – PAH/PCB/COPPER/LEAD/ ZINC/TOTAL ORGANIC CARBON/TOTAL SOLIDS/ASBESTOS**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-23

SAMPLES: 7/Sediment/PAH/PCB/METALS/ASBESTOS

DSY-SD-AA01-0012
DSY-SD-AA01-2448
DSY-SD-AA05-1224
DSY-SD-DUP33-101211
DSY-SD-AA01-1224
DSY-SD-AA05-0012
DSY-SD-AA05-2448

1/Aqueous/

DSY-SD-RB13-101211

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-23 consisted of seven (7) sediment environmental samples and one (1) rinse blank. All samples were analyzed for polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), metals, and asbestos. All samples, except DSY-SD-RB13-101211 were analyzed for total solids. Two sediment samples were analyzed for total organic carbon. One field duplicate pair was included in this sample delivery group (SDG): DSY-SD-AA01-2448 / DSY-SD-DUP33-101211.

The samples were collected by Tetra Tech on October 12, 2011 and analyzed by Katahdin Analytical Services for all fractions except asbestos. EMSL Analytical, Inc. performed the asbestos analyses. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, 8082, 6010C, Standard Method D2216, Lloyd Kahn, and asbestos by methods EPA 600/R-93/116 and EPA AHERA – 40 CFR Part 763 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Instrument Tuning and System Performance
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Results
  • Surrogate Spike Recoveries
* • Internal Standard Areas
* • Matrix Spike Sample/Matrix Spike Duplicate Sample Results
* • Laboratory Control Sample Results
* • ICP Interference Check Sample Results
* • ICP Serial Dilution Results

* • Field Duplicate Precision
* • Laboratory Duplicate Results
* • Detection Limits
* • Analyte Identification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier II validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

SURROGATE SPIKE RECOVERIES

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had percent recoveries (%Rs) on both GC columns below the lower quality control limits in all sediment samples except for DSY-SD-AA01-2448. The positive and non-detected PCB results reported for all samples except for DSY-SD-AA01-2448 were qualified as estimated, (J) and (UJ), respectively.

The %Rs for the PCB surrogate spike compound, tetrachloro-m-xylene were below the lower quality control limits on both GC columns for sample, DSY-SD-AA01-2448 and lower for decachlorobiphenyl on the primary column. The sample was not re-extracted or reanalyzed. The non-detected PCB results for sediment sample DSY-SD-AA01-2448 were qualified as estimated, (UJ).

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl were below the lower quality control limits on both GC columns for sample, DSY-SD-RB13-101211. The sample was not re-extracted or reanalyzed. The non-detected PCB results for sample, DSY-SD-RB13-101211 were qualified as estimated, (UJ).

NOTES

The DFTPP tune analyzed on instrument GCMS-N on 11/15/11 @1604 and associated with all samples had a relative ion abundance of %100.2 for mass to charge ratio 442 compared to mass to charge ratio 198, which should be the base peak. No action was taken on this basis because all associated DFTTP tunes and continuing calibration RRFs met quality control limits.

The following contaminant was detected in the sediment laboratory preparation blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Lead	0.107 mg/kg	0.535 mg/kg

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was taken because all lead results were greater than the action level.

The analytes zinc and iron were detected in several continuing calibration blanks associated with the sediment samples. No action was taken on this basis because all sediment sample results were greater than the blank action levels.

The internal standard area for perylene-d12 was less than the lower quality control limit in the diluted sample DSY-SD-AA05-2448. No action was taken on this basis because only fluoranthene was reported from the diluted sample and perylene-d12 is not used to quantitate fluoranthene.

Sample DSY-SD-RB13-101211 was not spiked for surrogates in the 8270 SIM analysis. The sample was spiked for surrogates in the full scan analysis and had acceptable recoveries. No action was taken on this basis because the full scan analysis had acceptable recoveries.

The PAH SIM laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG99293 had a percent recovery for benzo(a)pyrene less than the quality control limit in the LCSD. No action was taken on this basis because the LCS had an acceptable recovery.

The PCB laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG99288 had a percent recovery for Aroclor-1260 less than the quality control limit in the LCS. No action was taken on this basis because the LCSD had an acceptable recovery.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

All asbestos samples were dried and sieved into three components fine (<2mm), medium (>2mm), and course (<19mm). Each component was then analyzed via polarized light microscopy (PLM). Samples that did not have asbestos detected using PLM were analyzed via Qualitative Transmission Electron Microscopy (TEM).

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). All samples were analyzed by 8270C SIM for benzo(a)pyrene, except for sample DSY-SD-AA05-2448.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: None.

Other Factors Affecting Data Quality: Surrogate noncompliances resulted in qualification of data in the PCB fraction. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082, and 6010C listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		730	U		720	U		300	J	P	720	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		730	U		720	U		720	U		720	U	
BENZO(G,H,I)PERYLENE		730	U		720	U		720	U		720	U	
BENZO(K)FLUORANTHENE		730	U		720	U		720	U		720	U	
CHRYSENE		290	J	P	720	U		400	J	P	280	U	
DIBENZO(A,H)ANTHRACENE		730	U		720	U		720	U		720	U	
FLUORANTHENE		590	J	P	520	J	P	770	J	P	560	J	P
INDENO(1,2,3-CD)PYRENE		730	U		720	U		720	U		720	U	
PYRENE		620	J	P	600	J	P	830	J	P	610	J	P

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-AA05-2448DL			DSY-SD-DUP33-101211		
	LAB_ID	SE6768-6			SE6768-7			SE6768-7DL			SE6768-4		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.9			42.3			42.3			40.0		
	DUP_OF										DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		470	J	P	3000						220	J	P
BENZO(A)PYRENE					1600								
BENZO(B)FLUORANTHENE		530	J	P	2600						610	U	
BENZO(G,H,I)PERYLENE		630	U		570	J	P				610	U	
BENZO(K)FLUORANTHENE		280	J	P	1100						610	U	
CHRYSENE		620	J	P	3200						300	J	P
DIBENZO(A,H)ANTHRACENE		630	U		560	U					610	U	
FLUORANTHENE		1000						9900			710	J	P
INDENO(1,2,3-CD)PYRENE		630	U		680	J	P				610	U	
PYRENE		1000			8900						680	J	P

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: WATER	NSAMPLE	DSY-SD-RB13-101211		
	LAB_ID	SE6768-8		
	SAMP_DATE	10/12/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.5	U	
BENZO(B)FLUORANTHENE		7.5	U	
BENZO(G,H,I)PERYLENE		7.5	U	
BENZO(K)FLUORANTHENE		7.5	U	
CHRYSENE		7.5	U	
DIBENZO(A,H)ANTHRACENE		7.5	U	
FLUORANTHENE		7.5	U	
INDENO(1,2,3-CD)PYRENE		7.5	U	
PYRENE		7.5	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		140			140			230			170		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-6			SE6768-4		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	38.9			40.0		
	DUP_OF				DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		310			160		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-8		
FRACTION: PAH	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1221		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1232		30	UJ	R	29	UJ	R	29	UJ	R	30	UJ	R
AROCLOR-1242		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1248		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1254		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1260		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-6			SE6768-7			SE6768-4		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.9			42.3			40.0		
	DUP_OF							DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1221		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1232		25	UJ	R	22	UJ	R	25	UJ	R
AROCLOR-1242		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1248		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1254		22	UJ	R	170	J	R	21	UJ	R
AROCLOR-1260		22	UJ	R	19	UJ	R	21	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-8		
FRACTION: PCB	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	UJ	R
AROCLOR-1221		0.24	UJ	R
AROCLOR-1232		0.24	UJ	R
AROCLOR-1242		0.24	UJ	R
AROCLOR-1248		0.24	UJ	R
AROCLOR-1254		0.24	UJ	R
AROCLOR-1260		0.24	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-001			SE6768-002			SE6768-003			SE6768-005		
FRACTION: M	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		36.9			41.3			42.5			49.4		
LEAD		45			49.9			62.6			55.7		
ZINC		114			122			138			152		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-006			SE6768-007			SE6768-004		
FRACTION: M	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	38.9			42.3			40.0		
	DUP_OF							DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		60.9			155			36.5		
LEAD		55.2			111			51.8		
ZINC		153			373			114		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-008		
FRACTION: M	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
COPPER		0.76	J	P
LEAD		4	U	
ZINC		1.9	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012									DSY-SD-AA01-0012C		
SDG: DSY-23	LAB_ID	041128162-0001 Fine									041128162-0001 Coars		
FRACTION: MISC	SAMP_DATE	10/12/2011									10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM									NM		
	UNITS	%						MG/KG			%		
	PCT_SOLIDS	0.0			33.3			33.3			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		0.25	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON								53000					
TOTAL SOLIDS					33								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012F			DSY-SD-AA01-0012M			DSY-SD-AA01-1224					
SDG: DSY-23	LAB_ID	041128162-0001 Fine			041128162-0001 Mediu			041128162-0002 Fine					
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%					
	PCT_SOLIDS	0.0			0.0			33.5			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE				0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								34					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-1224C			DSY-SD-AA01-1224F			DSY-SD-AA01-1224M			DSY-SD-AA01-2448		
SDG: DSY-23	LAB_ID	041128162-0002 Coars			041128162-0002 Fine			041128162-0002 Mediu			041128162-0003 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.5			34.5			34.5			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE	0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-2448			DSY-SD-AA01-2448C			DSY-SD-AA01-2448F			DSY-SD-AA01-2448M		
SDG: DSY-23	LAB_ID	041128162-0003 Fine			041128162-0003 Coars			041128162-0003 Fine			041128162-0003 Mediu		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	33.6			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		34											

PROJ_NO: 02747 SDG: DSY-23 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA05-0012						DSY-SD-AA05-0012C			DSY-SD-AA05-0012F		
	LAB_ID	SE6768-5						041128162-0005 Coars			041128162-0005 Fine		
	SAMP_DATE	10/12/2011						10/12/2011			10/12/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	33.6			33.6			38.1			38.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000								
TOTAL SOLIDS		34											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-0012M			DSY-SD-AA05-1224			DSY-SD-AA05-1224C			DSY-SD-AA05-1224F		
SDG: DSY-23	LAB_ID	041128162-0005 Mediu			SE6768-6			041128162-0006 Coars			041128162-0006 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	38.1			38.9			35.8			35.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<					1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<										
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					39								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224M			DSY-SD-AA05-2448			DSY-SD-AA05-2448C			DSY-SD-AA05-2448F		
SDG: DSY-23	LAB_ID	041128162-0006 Mediu			SE6768-7			041128162-0007 Coars			041128162-0007 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	35.8			42.3			40.6			40.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<										
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					42								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-2448M			DSY-SD-DUP33-101211						DSY-SD-DUP33-101211C		
SDG: DSY-23	LAB_ID	041128162-0007 Mediu			041128162-0004 Fine						041128162-0004 Coars		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011						10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%						%		
	PCT_SOLIDS	40.6			33.6			40.0			33.6		
	DUP_OF				DSY-SD-AA01-2448			DSY-SD-AA01-2448			DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	0.25	U	NOT PRESE				1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								40					

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP33-101211F			DSY-SD-DUP33-101211M		
SDG: DSY-23	LAB_ID	041128162-0004 Fine			041128162-0004 Mediu		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	%			%		
	PCT_SOLIDS	33.6			33.6		
	DUP_OF	DSY-SD-AA01-2448			DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE							
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE							
TOTAL ORGANIC CARBON							
TOTAL SOLIDS							

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2627.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	730	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	U	730	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	U	730	ug/Kgdrywt	1	330	980	240	730
Chrysene	J	290	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene	J	590	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene	J	620	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		50.9	%					
2-Fluorobiphenyl		62.9	%					
Terphenyl-d14		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2628.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	270	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	520	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	600	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		53.1	%					
2-Fluorobiphenyl		64.9	%					
Terphenyl-d14		82.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2629.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	300	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	J	400	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	770	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	830	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		37.6	%					
2-Fluorobiphenyl		55.6	%					
Terphenyl-d14		72.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2631.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	280	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	560	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	610	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		32.3	%					
2-Fluorobiphenyl		48.4	%					
Terphenyl-d14		45.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2632.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	470	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	J	530	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	J	280	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	620	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	330	630
Fluoranthene		1000	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene		1000	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		38.5	%					
2-Fluorobiphenyl		59.8	%					
Terphenyl-d14		36.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2633.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3000	ug/Kgdrywt	1	330	750	190	560
Benzo(a)pyrene		1600	ug/Kgdrywt	1	330	750	210	560
Benzo(b)fluoranthene		2600	ug/Kgdrywt	1	330	750	300	560
Benzo(g,h,i)perylene	J	570	ug/Kgdrywt	1	330	750	240	560
Benzo(k)fluoranthene		1100	ug/Kgdrywt	1	330	750	190	560
Chrysene		3200	ug/Kgdrywt	1	330	750	220	560
Dibenzo(a,h)anthracene	U	560	ug/Kgdrywt	1	330	750	290	560
Fluoranthene	E	15000	ug/Kgdrywt	1	330	750	240	560
Indeno(1,2,3-cd)pyrene	J	680	ug/Kgdrywt	1	330	750	280	560
Pyrene		8900	ug/Kgdrywt	1	330	750	230	560
Nitrobenzene-d5		50.0	%					
2-Fluorobiphenyl		70.9	%					
Terphenyl-d14		61.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7DL
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2657.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3000	ug/Kgdrywt	3	330	2200	580	1700
Benzo(a)pyrene	J	1600	ug/Kgdrywt	3	330	2200	630	1700
Benzo(b)fluoranthene		2500	ug/Kgdrywt	3	330	2200	910	1700
Benzo(g,h,i)perylene	U	1700	ug/Kgdrywt	3	330	2200	710	1700
Benzo(k)fluoranthene	J	1100	ug/Kgdrywt	3	330	2200	560	1700
Chrysene		3200	ug/Kgdrywt	3	330	2200	650	1700
Dibenzo(a,h)anthracene	U	1700	ug/Kgdrywt	3	330	2200	870	1700
Fluoranthene		9900	ug/Kgdrywt	3	330	2200	720	1700
Indeno(1,2,3-cd)pyrene	U	1700	ug/Kgdrywt	3	330	2200	830	1700
Pyrene		11000	ug/Kgdrywt	3	330	2200	690	1700
Nitrobenzene-d5		48.9	%					
2-Fluorobiphenyl		73.5	%					
Terphenyl-d14		61.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2630.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	220	ug/Kgdrywt	1	330	820	210	610
Benzo(b)fluoranthene	U	610	ug/Kgdrywt	1	330	820	330	610
Benzo(g,h,i)perylene	U	610	ug/Kgdrywt	1	330	820	260	610
Benzo(k)fluoranthene	U	610	ug/Kgdrywt	1	330	820	200	610
Chrysene	J	300	ug/Kgdrywt	1	330	820	240	610
Dibenzo(a,h)anthracene	U	610	ug/Kgdrywt	1	330	820	320	610
Fluoranthene	J	710	ug/Kgdrywt	1	330	820	260	610
Indeno(1,2,3-cd)pyrene	U	610	ug/Kgdrywt	1	330	820	300	610
Pyrene	J	680	ug/Kgdrywt	1	330	820	250	610
Nitrobenzene-d5		36.2	%					
2-Fluorobiphenyl		56.1	%					
Terphenyl-d14		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2626.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		70.4						
2-Fluorobiphenyl		74.3						
Terphenyl-d14		77.3						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4049.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		45.0	%					
Fluorene-D10		70.6	%					
Pyrene-D10		91.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4050.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		54.9	%					
Fluorene-D10		76.2	%					
Pyrene-D10		101.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4053.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		230	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		38.6	%					
Fluorene-D10		63.2	%					
Pyrene-D10		79.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4055.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		32.6	%					
Fluorene-D10		57.5	%					
Pyrene-D10		68.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4056.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10		50.1	%					
Fluorene-D10		68.8	%					
Pyrene-D10		81.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4054.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	49.	8.2	25.
2-Methylnaphthalene-D10		31.1	%					
Fluorene-D10		55.8	%					
Pyrene-D10		75.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4039.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK175.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	51.	24.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	51.	28.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	51.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	51.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Tetrachloro-M-Xylene	*	26.2	%					
Decachlorobiphenyl	*	31.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK176.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	50.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene	*	24.6	%					
Decachlorobiphenyl	*	31.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK177.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	49.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	49.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	49.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Tetrachloro-M-Xylene	*	34.6	%					
Decachlorobiphenyl		60.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-23
Lab File ID: 7EK179.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	50.	27.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene	*	25.6	%					
Decachlorobiphenyl	*	41.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK180.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	24.	25.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene	*	27.6	%					
Decachlorobiphenyl	*	40.2	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK181.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254		170	ug/Kgdrywt	1	17	38.	11.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Tetrachloro-M-Xylene	*	36.2	%					
Decachlorobiphenyl	*	44.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK178.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene	*	25.9	%					
Decachlorobiphenyl	*	42.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EJ585.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 19-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		68.6	%					
Decachlorobiphenyl	*	24.7	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-0012

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.3
Lab Sample ID: SE6768-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	36.9			P	1	6.5	0.40	2.6
7439-92-1	LEAD, TOTAL	45.0			P	1	1.3	0.23	1.0
7440-66-6	ZINC, TOTAL	114			P	1	6.5	0.44	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-1224

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.5
Lab Sample ID: SE6768-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	41.3			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	49.9			P	1	1.1	0.19	0.89
7440-66-6	ZINC, TOTAL	122			P	1	5.6	0.37	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-2448

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.6
Lab Sample ID: SE6768-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	42.5			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	62.6			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	138			P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-0012
Matrix: SOIL
SDG Name: DSY-23
Percent Solids: 33.6
Lab Sample ID: SE6768-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	49.4			P	1	6.7	0.42	2.7
7439-92-1	LEAD, TOTAL	55.7			P	1	1.3	0.23	1.1
7440-66-6	ZINC, TOTAL	152			P	1	6.7	0.45	2.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-1224

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 38.9
Lab Sample ID: SE6768-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	60.9			P	1	4.9	0.30	1.9
7439-92-1	LEAD, TOTAL	55.2			P	1	0.97	0.17	0.78
7440-66-6	ZINC, TOTAL	153			P	1	4.9	0.33	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-2448

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 42.3
Lab Sample ID: SE6768-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	155			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	111			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	373			P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-DUP33-101211
Matrix: SOIL
SDG Name: DSY-23
Percent Solids: 40.0
Lab Sample ID: SE6768-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	36.5			P	1	3.8	0.23	1.5
7439-92-1	LEAD, TOTAL	51.8			P	1	0.75	0.13	0.60
7440-66-6	ZINC, TOTAL	114			P	1	3.8	0.25	1.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-RB13-101211
Matrix: WATER
SDG Name: DSY-23
Percent Solids: 0.00
Lab Sample ID: SE6768-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	0.76	J		P	1	25	0.63	10
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0
7440-66-6	ZINC, TOTAL	1.9	J		P	1	25	0.72	10

Comments:

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA01-0012 *041128162-0001*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-1224 *041128162-0002*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-2448 *041128162-0003*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-DUP33-101211 *041128162-0004*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA05-0012 *041128162-0005*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-1224 *041128162-0006*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-2448 *041128162-0007*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-0012 *041128162-0008*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-1224 *041128162-0009*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA09-2448 *041128162-0010*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA13-0012 *041128162-0011*	Chrysotile Amosite	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-1224 *041128162-0012*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448 *041128162-0013*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448DUP *041128162-0014*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA17-0013 *041128162-0015*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA17-1224 *041128162-0016*	Amosite	None Detected	<1	None Detected	<1	Not Analyzed	

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EMSL Analytical, Inc.
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Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
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Fax: 207-775-4029
Phone: 207-874-2400

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Project: SE6768

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA17-2448 *041128162-0017*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA21-0012 *041128162-0018*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA21-1224 *041128162-0019*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA21-2448 *041128162-0020*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-DUP34-101311 *041128162-0021*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-0012 *041128162-0022*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-1224 *041128162-0023*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA24-2448 *041128162-0024*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-0012 *041128162-0025*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-1224 *041128162-0026*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA26-2448 *041128162-0027*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA28-0016 *041128162-0028*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	Jar labeled as DSY-SD-AA28-0012
DSY-SD-DUP35-101311 *041128162-0029*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA30-0012 *041128162-0030*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA30-1224 *041128162-0031*	Chrysotile Amosite	None Detected	<1	None Detected	<1	Not Analyzed	Jar received Broken

Note: Revised report issued 11-10-11 for data entry errors on EMSL samples 041128162-0016,041128162-0018, 041128162-0031

Analysts

Garret Vliet
Melissa Klinedinst
Leslie McCluskey
David Poitras
Robyn Denton

Robyn Denton
Approved Lab Signatory

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-1
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	54000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 15:56:34	N/A	N/A	
Toc In Soil(2)	52000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 16:08:39	N/A	N/A	
Toc In Soil(Avg)	53000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	33. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:49	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-2
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:59	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-3
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:09	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00019

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-5
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	56000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 16:20:44	N/A	N/A	
Toc In Soil(2)	48000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 16:35:14	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:34	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00001

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with NELAC
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-6
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	39. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:44	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A0001

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-7
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	42. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:54	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A0001

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-4
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP33-101211	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:19	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00001

APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Navsta Newport
Reference No. _____

See DV Report

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. D5Y-23
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Edward Wallace Company Name TetraTech Phone Number 412-921-8704

Date Validation Started 12/29/11 Date Validation Completed 12/30/11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	____
VOA/SV-III	INITIAL CALIBRATION	____
VOA/SV-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	____
SV-VI	SV SURROGATE SPIKE RECOVERIES	____
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	____
VOA/SV-XV	SEMIVOLATILE CLEANUP	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	____
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	____
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	____
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	____
Pest/PCB-III	INITIAL CALIBRATION	____
Pest/PCB-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	____
Pest/PCB-VII	PESTICIDE CLEANUP	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
Pest/PCB-XII	COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

I certify that all criteria were met for the worksheets checked above.

Signature: Edward Sedlmyer Name: Ed Sedlmyer

Date: 12/30/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Sedlmyer IV

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Sullivan

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received

Validator: Edward Hadley Date: 12/30/11

See DV Report

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler:_____ Company:_____ Contacted: Yes No Date:_____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Edward Podbyra

Date: 12/30/11

EPA-NE - Data Validation Worksheet
VOA/SV-II

See DV Report

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Edward Sadlon

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Edward Sadlyn

Date: 12/30/11

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

Validator: Edward Sedlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:_____

Sampler: _____ Company: _____

Contacted: Yes No Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Edward Hedbon

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: Edward Hedley

Date: 12/30/11

12/96

See DV Report

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Validator: Edward Hedlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Edward Sadlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Edward Ludlam

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: Edward Sullivan

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Edward Ludlow Date: 12/30/01

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Edward Redknap

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Edward Lodbrupp Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Edward Ludlow

Date: 12/30/11

NA

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Edward Deshaye

Date: 12/30/11

NA

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Edward Sedlmyer

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Edward Sullivan Date: 12/30/11

APPENDIX D

SUPPORT DOCUMENTATION

NAVSTA NEWPORT
SEDIMENT DATA
DSY-23

FRACTION	CHEMICAL	DSY-SD-AA01-2448	UNITS	DSY-SD-DUP33-101211	RPD	D
M	COPPER	42.5	MG/KG	36.5	15.19	6.00
M	LEAD	62.6	MG/KG	51.8	18.88	10.80
M	ZINC	138	MG/KG	114	19.05	24.00
OS	BENZO(A)ANTHRACENE	300 J	UG/KG	220 J	30.77	80.00
OS	CHRYSENE	400 J	UG/KG	300 J	28.57	100.00
OS	FLUORANTHENE	770 J	UG/KG	710 J	8.11	60.00
OS	PYRENE	830 J	UG/KG	680 J	19.87	150.00
PAH	BENZO(A)PYRENE	230	UG/KG	160	35.90	70.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Katahdin ANALYTICAL SERVICES
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: SEE PAGE ONE | Contact: SEE ONE PAGE | Phone # ( ) | Fax # ( )

Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE 61, Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #: SE6767 / SE6768

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	PCB	Metals (Pb, Cu, Zn)	TOC	Asbestos					
	DSY-SD-DUP32-101211	10/12/11 / —	SED	2	X	X	X							
	DSY-SD-G21-0012	/ 1345		3	X	X	X	X						
	DSY-SD-G21-1224	/ 1348		2	X	X	X							
	DSY-SD-G21-2448	/ 1351		24	X	X	X							
	DSY-SD-G25-0012	/ 1405		3	X	X	X	X						
	DSY-SD-G25-1224	/ 1408		2	X	X	X							
	DSY-SD-G25-2448	/ 1411		2	X	X	X							
	DSY-SD-AA01-0012	/ 1420		34	X	X	X	X	X ✓					
	DSY-SD-AA01-1224	/ 1423		23	X	X	X		X ✓					
	DSY-SD-AA01-2448	/ 1428		23	X	X	X		X ✓					
	DSY-SD-DUP33-101211	/ —		23	X	X	X		X ✓					
	DSY-SD-AA05-0012	/ 1445		34	X	X	X	X	X ✓					
	DSY-SD-AA05-1224	/ 1448		23	X	X	X		X ✓					
	DSY-SD-AA05-2448	/ 1451	↓	3	X	X	X		X ✓					
	DSY-SD-RB13-101211	/ 1600	AQ	5	X	X	X							
		/												

COMMENTS DSY-SD-G21-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345	Andrew Hall			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				0000 10/12 ANE	

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

12-11

AS-COC1

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-23
SE6768

Sample Receipt

The following samples were received on October 13, 2011 and were logged in under Katahdin Analytical Services work order number SE6768 for a hardcopy due date of November 1, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6768-1	DSY-SD-AA01-0112
SE6768-2	DSY-SD-AA01-1224
SE6768-3	DSY-SD-AA01-2448
SE6768-4	DSY-SD-DUP33-101211
SE6768-5	DSY-SD-AA05-0012
SE6768-6	DSY-SD-AA05-1224
SE6768-7	DSY-SD-AA05-2448
SE6768-8	DSY-SD-RB13-101211

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-23 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6768-8 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

The LCSD WG99293-3 had a low recovery for the compound benzo(a)pyrene, which was outside of the laboratory established acceptance limits. Since the LCS was acceptable, no further action was taken.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6768-7 was manually integrated for the analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6768-7DL had a low response for the internal standard perylene-d12, which was outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the initial analysis had acceptable internal standard responses, the dilution was not reanalyzed.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of

exceedances, no corrective action is taken, as long the LCS is acceptable.
Due to software limitations, the area responses and retention times for the continuing calibration verification standards on the Internal Standard Summary Form could not be generated automatically. This information was manually entered on the form.

8082 Analysis

Surrogate recoveries for all samples and QC, as well as spike recoveries for the laboratory control samples and laboratory control sample duplicates (LCS/LCSDs) were evaluated using laboratory established acceptance limits.

Samples SE6768-1, 2, 6 and 7 were manually integrated for Aroclor 1254 or the surrogate TCX. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6768-1 through 7 had low recoveries for the surrogate TCX on both channels and the surrogate DCB on one or both channels, which were outside the laboratory established acceptance limits. The associated method blank and LCS/LCSD had acceptable surrogate recoveries. This indicates that the sample surrogate deviations are due to a matrix effect. Therefore, these samples were not reextracted.

Sample SE6768-8 had low recoveries for the surrogate DCB on both channels and the associated method blank and LCS/LCSD WG99288-1, 2 and 3 had low recoveries for the surrogate TCX on one or both channels, which were outside the laboratory established acceptance limits. Since the recoveries for DCB were acceptable for the QC samples, no further action was taken.

The closing calibration verification standard (CV) (file 7EK183) had a high response for the surrogate TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG99288-2 had a low recovery for Aroclor 1260 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-23 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6768-(1-7) were digested for ICP analysis on 10/31/11 (QC Batch BJ31ICS1) in accordance with USEPA Method 3050B.

Aqueous-matrix Katahdin Sample Number SE6768-8 was digested for ICP analysis on 10/31/11 (QC Batch BJ31ICW1) in accordance with USEPA Method 3010A.

ICP analyses of SDG DSY-23 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-23 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.06.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Project:	KIMS Entry By: GN	Delivered By: --
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Ha
SDG #:	Cooler: 1 of 13	Date/Time Rec.: 10/13/14 18:00

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9				✓	
				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

AA0S-0012 - no TOC jar in cooler.

Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767 / SE6768	KIMS Review By: DN	Received By: Andrew Hale	
SDG #:	Cooler: 2 of 3	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certair regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project:	KIMS Entry By: GN	Delivered By: --
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Hafen
SDG #:	Cooler: 3 of 13	Date/Time Rec.: 10/13/11 18:03

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 0.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

ARC 17-5-11 8000010

Katahdin ANALYTICAL SERVICES
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8571

Address	City	State	Zip Code
250 ANDOVER ST. SUITE 200	WILMINGTON	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61 Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY

WORK ORDER #: SE6767

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	Metals (Pb, Cu, Zn)	TOC						
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-G01-0012	10/12/11 0920	SED	3	X	X	X	X						
	DSY-SD-G01-1224	/0923		2	X	X	X							
	DSY-SD-G01-2448	/0926		2	X	X	X							
	DSY-SD-G05-0012	/1205		3	X	X	X	X						
	DSY-SD-G05-1224	/1208		2	X	X	X							
	DSY-SD-G05-2448	/1211		2	X	X	X							
	DSY-SD-DUP3-101211	/—		2	X	X	X							
	DSY-SD-G09-0012	/1240		3	X	X	X	X						
	DSY-SD-G09-1224	/1243		2	X	X	X							
	DSY-SD-G09-2448	/1246		2	X	X	X							
	DSY-SD-G13-0012	/1310		3	X	X	X	X						
	DSY-SD-G13-1224	/1313		2	X	X	X							
	DSY-SD-G13-2448	/1316		2	X	X	X							
	DSY-SD-G17-0012	/1325		3	X	X	X	X						
	DSY-SD-G17-1224	/1328		2	X	X	X							
	DSY-SD-G17-2448	/1331		2	X	X	X							

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				00001/01	12-5-11

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

AS-COC1

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U — Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E — Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J — Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 — The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 — Please refer to cover letter or narrative for further information.

MCL — Maximum Contaminant Level

NL — No limit

NFL — No Free Liquid Present

FLP — Free Liquid Present

NOD — No Odor Detected

TON — Threshold Odor Number

H1 — Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 — Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 — Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 — Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-AA01-0012	SE6768-1	62.9		51.1		65.9		0
DSY-SD-AA01-1224	SE6768-2	64.8		53.1		82.1		0
DSY-SD-AA01-2448	SE6768-3	55.6		37.7		72.2		0
DSY-SD-DUP33-101211	SE6768-4	56.2		36.0		65.4		0
DSY-SD-AA05-0012	SE6768-5	48.4		32.2		45.8		0
DSY-SD-AA05-1224	SE6768-6	59.7		38.7		36.6		0
DSY-SD-AA05-2448	SE6768-7	71.1		50.0		61.7		0
DSY-SD-AA05-2448	SE6768-7DL	73.5		48.9		61.4		0
Method Blank Sample	WG99468-1	68.0		62.9		76.0		0
Laboratory Control S	WG99468-2	81.9		73.7		84.6		0
Laboratory Control S	WG99468-3	78.4		65.9		83.8		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB13-101211	SE6768-8	74.3		70.4		77.3		0
Method Blank Sample	WG99289-1	69.7		63.0		70.5		0
Laboratory Control S	WG99289-2	64.3		52.5		69.6		0
Laboratory Control S	WG99289-3	67.3		54.6		76.1		0

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND139 DFTPP Injection Date: 10/13/11

Instrument ID: GCMS-N DFTPP Injection Time: 1102

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.1
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	36.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	11.1 (74.2)2
442	40.0 - 100.0% of mass 198	77.2
443	17.0 - 23.0% of mass 442	15.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1013	N1952	10/13/11	1127
02		SSTD010N1013	N1953	10/13/11	1209
03		SSTD025N1013	N1954	10/13/11	1252
04		SSTD075N1013	N1955	10/13/11	1334
05		SSTD100N1013	N1956	10/13/11	1416
06		SSTD125N1013	N1957	10/13/11	1459
07		8270C IND CHEC	N1958	10/13/11	1541
08					
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20					

Katahdin Analytical Services A0000022

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-23

Instrument ID: GCMS-N Calibration Date(s): 10/13/11 10/13/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1127 1459

LAB FILE ID: RF10: N1953 RF25: N1954 RF50: N1952
RF75: N1955 RF100: N1956 RF125: N1957

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	1.097	0.974	0.928	0.840	0.836	0.729	AVRG		0.90072996	14.211	30.000
Pyrene	1.509	1.565	1.504	1.403	1.311	1.250	AVRG		1.42351937	8.730	15.000
Benzo(a)anthracene	1.063	1.053	1.061	0.984	0.959	0.911	AVRG		1.00509683	6.307	15.000
Chrysene	1.058	1.040	1.003	0.916	0.889	0.830	AVRG		0.95600873	9.536	15.000
Benzo(b)fluoranthene	1.125	1.162	1.116	1.075	1.096	0.983	AVRG		1.09290468	5.620	15.000
Benzo(k)fluoranthene	1.216	1.199	1.184	1.164	1.100	1.025	AVRG		1.14810451	6.322	15.000
Benzo(a)pyrene	1.009	1.037	1.048	0.976	0.964	0.882	AVRG		0.98594835	6.154	30.000
Indeno(1,2,3-cd)pyrene	218300	323180	594600	743080	917840	1117000	LINR	-9.42e-002	1.70884978	0.99692	0.99000
Dibenzo(a,h)anthracene	0.676	0.725	0.702	0.655	0.636	0.636	AVRG		0.67176429	5.419	15.000
Benzo(g,h,i)perylene	0.726	0.746	0.714	0.651	0.634	0.628	AVRG		0.68322461	7.554	15.000
Nitrobenzene-D5	0.331	0.342	0.345	0.322	0.314	0.298	AVRG		0.32524779	5.495	15.000
2-Fluorobiphenyl	1.257	1.212	1.139	1.025	0.960	0.893	AVRG		1.08086780	13.395	15.000
Terphenyl-D14	0.820	0.861	0.860	0.830	0.788	0.750	AVRG		0.81840048	5.285	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND156 DFTPP Injection Date: 10/27/11

Instrument ID: GCMS-N DFTPP Injection Time: 1543

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.3
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	36.0
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	53.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.3
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	12.3 (73.9)2
442	40.0 - 100.0% of mass 198	85.6
443	17.0 - 23.0% of mass 442	16.6 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD3.00N1027	N2205	10/27/11	1608
02	WG99289-BLANK	WG99289-1	N2206	10/27/11	1654
03	WG99289-LCS	WG99289-2	N2207	10/27/11	1736
04	WG99289-LCSD	WG99289-3	N2208	10/27/11	1818
05					
06					
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08					
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20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Instrument ID: GCMS-N Calibration Date: 10/27/11 Time: 1608

Lab File ID: N2205 Init. Calib. Date(s): 10/13/11 10/13/11

Init. Calib. Times: 1127 1459

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	0.9010000	0.9304400	0.9304400	0.01	3.27	20.01	AVRG
Pyrene	1.4240000	1.3005000	1.3005000	0.01	-8.67	20.00	AVRG
Benzo(a)anthracene	1.0050000	0.9809200	0.9809200	0.01	-2.40	20.00	AVRG
Chrysene	0.9560000	0.9210500	0.9210500	0.01	-3.66	20.00	AVRG
Benzo(b)fluoranthene	1.0930000	1.0270000	1.0270000	0.01	-6.04	20.00	AVRG
Benzo(k)fluoranthene	1.1480000	1.0838000	1.0838000	0.01	-5.59	20.00	AVRG
Benzo(a)pyrene	0.9860000	0.9556900	0.9556900	0.01	-3.07	20.01	AVRG
Indeno(1,2,3-cd)pyrene	53.260000	50.000000	0.6674400	0.01	6.52	20.00	LINR
Dibenzo(a,h)anthracene	0.6720000	0.7146200	0.7146200	0.01	6.34	20.00	AVRG
Benzo(g,h,i)perylene	0.6830000	0.6938000	0.6938000	0.01	1.58	20.00	AVRG
Nitrobenzene-D5	0.3250000	0.3359800	0.3359800	0.01	3.38	20.00	AVRG
2-Fluorobiphenyl	1.0810000	1.0665000	1.0665000	0.01	-1.34	20.00	AVRG
Terphenyl-D14	0.8180000	0.7483300	0.7483300	0.01	-8.52	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND180 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP Injection Time: 1604

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4	(73.4)2
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6	(19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08					
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Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : N2556.DN2557.DN2555.D
N2558.DN2559.DN2560.D

SDG: DSY-23
Instrument ID: GCMS-N
Calibration Date(s): 15-NOV-11 16:23
15-NOV-11 20:07

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	10.0000	25.0000	50.0000	75.0000	100.0000	125.0000	New	b	m1	m2	%RSD	%RSD	
Fluoranthene	558752	1422052	2304238	4306477	5111984	6314071	QUA	-0.0081	0.95099	0.20145	0.99971	0.99000	O
Pyrene	1.35704	1.32974	1.16554	1.10244	1.02761	0.98510	AVG		1.16125		13.29001	15.00000	O
Benzo(a)anthracene	0.95816	0.94601	0.87590	0.87144	0.85598	0.84135	AVG		0.89147		5.45799	15.00000	O
Chrysene	0.92893	0.89955	0.78848	0.79504	0.77132	0.76175	AVG		0.82418		8.65987	15.00000	O
Benzo(b)fluoranthene	1.03381	0.99641	1.01878	1.02056	1.00035	1.11500	AVG		1.03082		4.21928	15.00000	O
Benzo(k)fluoranthene	1.01777	1.07940	0.98180	0.92536	0.90933	0.95028	AVG		0.97732		6.49217	15.00000	O
Benzo(a)pyrene	0.87140	0.89980	0.84876	0.84229	0.85409	0.83227	AVG		0.85810		2.82393	30.00000	O
Indeno(1,2,3-cd)pyrene	0.62585	0.69894	0.65196	0.61158	0.65143	0.54298	AVG		0.63046		8.27918	15.00000	O
Dibenzo(a,h)anthracene	0.66592	0.74007	0.69378	0.65089	0.69463	0.59130	AVG		0.67276		7.46543	15.00000	O
Benzo(g,h,i)perylene	0.66159	0.72178	0.66545	0.60243	0.62372	0.53286	AVG		0.63464		10.15921	15.00000	O
Nitrobenzene-D5	0.32744	0.33867	0.30688	0.30398	0.30079	0.28936	AVG		0.31119		5.88091	15.00000	
2-Fluorobiphenyl	1.18443	1.18635	1.04086	0.97163	0.94843	0.88824	AVG		1.03666		12.07191	15.00000	
Terphenyl-D14	0.76913	0.76985	0.68789	0.68306	0.64778	0.63881	AVG		0.69942		8.22861	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND184 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-N DFTPP Injection Time: 0827

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.5
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	35.2
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	54.4
197	Less than 1.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.1
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	9.4 (71.5)2
442	40.0 - 100.0% of mass 198	69.2
443	17.0 - 23.0% of mass 442	13.1 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1119	N2622	11/19/11	0851
02	WG99468-BLANK	WG99468-1	N2623	11/19/11	0934
03	WG99468-LCS	WG99468-2	N2624	11/19/11	1016
04	WG99468-LCSD	WG99468-3	N2625	11/19/11	1058
05	DSY-SD-RB13-101211	SE6768-8	N2626	11/19/11	1140
06	DSY-SD-AA01-0012	SE6768-1	N2627	11/19/11	1223
07	DSY-SD-AA01-1224	SE6768-2	N2628	11/19/11	1305
08	DSY-SD-AA01-2448	SE6768-3	N2629	11/19/11	1347
09	DSY-SD-DUP33-101211	SE6768-4	N2630	11/19/11	1429
10	DSY-SD-AA05-0012	SE6768-5	N2631	11/19/11	1510
11	DSY-SD-AA05-1224	SE6768-6	N2632	11/19/11	1552
12	DSY-SD-AA05-2448	SE6768-7	N2633	11/19/11	1634
13					
14					
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17					
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19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101675-1 **Analytical Date:** 11/19/11 08:51
Lab File ID : N2622.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	52.53090	0.89806	0.010	5.06179	20.01000	Quadratic
128 Pyrene	1.16125	1.28148	1.28148	0.010	10.35391	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.91891	0.91891	0.010	3.07814	20.00000	Averaged
142 Chrysene	0.82418	0.84321	0.84321	0.010	2.30862	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	1.02818	1.02818	0.010	-0.25608	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	1.01300	1.01300	0.010	3.65105	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.88947	0.88947	0.010	3.65578	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.70335	0.70335	0.010	11.56228	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.74058	0.74058	0.010	10.07984	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.75339	0.75339	0.010	18.71122	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.31489	0.31489	0.010	1.19014	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.03966	1.03966	0.010	0.28975	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.74650	0.74650	0.010	6.73055	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND185 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-N DFTPP Injection Time: 0846

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.9
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	33.6
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	40.0 - 60.0% of mass 198	53.3
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.6 (72.6)2
442	40.0 - 100.0% of mass 198	74.7
443	17.0 - 23.0% of mass 442	14.6 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1120	N2643	11/20/11	0904
02	DSY-SD-AA05-2448	SE6768-7DL	N2657	11/20/11	1853
03					
04					
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07					
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19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101676-1 **Analytical Date:** 11/20/11 09:04
Lab File ID : N2643.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	44.18288	0.77643	0.010	-11.63424	20.01000	Quadratic
128 Pyrene	1.16125	1.37317	1.37317	0.010	18.24965	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.90924	0.90924	0.010	1.99271	20.00000	Averaged
142 Chrysene	0.82418	0.85444	0.85444	0.010	3.67155	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	0.97423	0.97423	0.010	-5.48990	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	0.97595	0.97595	0.010	-0.13994	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.86760	0.86760	0.010	1.10721	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.70245	0.70245	0.010	11.41919	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.73287	0.73287	0.010	8.93349	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.73988	0.73988	0.010	16.58342	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.29553	0.29553	0.010	-5.03250	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.03512	1.03512	0.010	-0.14804	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.75797	0.75797	0.010	8.37173	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2206.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : DSY-23
Lab Sample ID : WG99289-1
Date Extracted : 17-OCT-11
Date Analyzed : 27-OCT-11
Time Analyzed : 16:54

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99289-2	N2207.D	10/27/11	17:36
Laboratory Control S	WG99289-3	N2208.D	10/27/11	18:18
DSY-SD-RB13-101211	SE6768-8	N2626.D	11/19/11	11:40

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99289-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: N2206.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 27-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		63.0						
2-Fluorobiphenyl		69.7						
Terphenyl-d14		70.5						

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99289-2
LCSD ID: WG99289-3
Project:
SDG: DSY-23
Report Date: 30-NOV-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 27-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	34.3	68.6	37.2	74.4	ug/L	8	30	66-109
Benzo(a)pyrene	50.0	37.6	75.2	41.7	83.4	ug/L	10	30	63-118
Benzo(b)fluoranthene	50.0	33.9	67.8	38.3	76.6	ug/L	12	30	60-108
Benzo(k)fluoranthene	50.0	35.1	70.2	40.3	80.6	ug/L	14	30	59-125
Benzo(g,h,i)perylene	50.0	37.9	75.8	36.5	73.0	ug/L	4	30	58-115
Chrysene	50.0	37.9	75.8	41.8	83.6	ug/L	10	30	68-114
Dibenzo(a,h)anthracene	50.0	39.5	79.0	37.8	75.6	ug/L	4	30	61-111
Fluoranthene	50.0	42.5	85.0	45.2	90.4	ug/L	6	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	36.6	73.2	35.9	71.8	ug/L	2	30	55-111
Pyrene	50.0	35.4	70.8	40.2	80.4	ug/L	13	30	58-135
Nitrobenzene-d5			52.5		54.6				41-91
2-Fluorobiphenyl			64.3		67.3				43-90
Terphenyl-d14			69.6		76.1				36-156

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2623.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-23
Lab Sample ID : WG99468-1
Date Extracted : 19-OCT-11
Date Analyzed : 19-NOV-11
Time Analyzed : 09:34

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99468-2	N2624.D	11/19/11	10:16
Laboratory Control S	WG99468-3	N2625.D	11/19/11	10:58
DSY-SD-AA01-0012	SE6768-1	N2627.D	11/19/11	12:23
DSY-SD-AA01-1224	SE6768-2	N2628.D	11/19/11	13:05
DSY-SD-AA01-2448	SE6768-3	N2629.D	11/19/11	13:47
DSY-SD-DUP33-101211	SE6768-4	N2630.D	11/19/11	14:29
DSY-SD-AA05-0012	SE6768-5	N2631.D	11/19/11	15:10
DSY-SD-AA05-1224	SE6768-6	N2632.D	11/19/11	15:52
DSY-SD-AA05-2448	SE6768-7	N2633.D	11/19/11	16:34
DSY-SD-AA05-2448	SE6768-7DL	N2657.D	11/20/11	18:53

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99468-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: N2623.D

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		62.9	%					
2-Fluorobiphenyl		68.0	%					
Terphenyl-d14		76.0	%					

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LCS/LCSD Recovery Report

LCS ID: WG99468-2
LCSD ID: WG99468-3
Project:
SDG: DSY-23
Report Date: 06-DEC-11

Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1240	74.2	1230	73.6	ug/Kgdrywt	1	30	40-100
Benzo(a)pyrene	1670	1370	82.0	1340	80.2	ug/Kgdrywt	2	30	40-100
Benzo(b)fluoranthene	1670	1210	72.4	1200	71.8	ug/Kgdrywt	1	30	40-100
Benzo(g,h,i)perylene	1670	1480	88.6	1410	84.4	ug/Kgdrywt	5	30	40-100
Benzo(k)fluoranthene	1670	1330	79.6	1300	77.8	ug/Kgdrywt	2	30	40-100
Chrysene	1670	1350	80.8	1320	79.0	ug/Kgdrywt	2	30	40-100
Dibenzo(a,h)anthracene	1670	1380	82.6	1330	79.6	ug/Kgdrywt	4	30	40-100
Fluoranthene	1670	1470	88.0	1460	87.4	ug/Kgdrywt	1	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1380	82.6	1330	79.6	ug/Kgdrywt	4	30	40-100
Pyrene	1670	1380	82.6	1360	81.4	ug/Kgdrywt	1	30	40-100
Nitrobenzene-d5			73.7		65.9				24-81
2-Fluorobiphenyl			81.9		78.4				29-83
Terphenyl-d14			84.6		83.8				24-136

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Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-23
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	600003		8.76		2389440		11.57		1317918		15.69	
	Upper Limit	1200006		9.26		4778880		12.07		2635836		16.19	
	Lower Limit	300001.5		8.26		1194720		11.07		658959		15.19	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101675-1					2420851		11.54		1347143		15.67	
Method Blank Sample	WG99468-1	614699		8.74		2242017		11.54		1194930		15.67	
Laboratory Control S	WG99468-2	667847		8.74		2462565		11.54		1348361		15.67	
Laboratory Control S	WG99468-3	631393		8.74		2386633		11.54		1317403		15.67	
DSY-SD-RB13-101211	SE6768-8	693084		8.74		2530127		11.54		1408983		15.67	
DSY-SD-AA01-0012	SE6768-1	633690		8.74		2363245		11.54		1369373		15.67	
DSY-SD-AA01-1224	SE6768-2	603723		8.74		2285762		11.54		1308156		15.67	
DSY-SD-AA01-2448	SE6768-3	632542		8.74		2413743		11.54		1401033		15.67	
DSY-SD-DUP33-1012	SE6768-4	594524		8.74		2257459		11.54		1280130		15.67	
DSY-SD-AA05-0012	SE6768-5	636434		8.74		2399973		11.54		1372217		15.67	
DSY-SD-AA05-1224	SE6768-6	623425		8.74		2381338		11.54		1338744		15.67	
DSY-SD-AA05-2448	SE6768-7	605770		8.74		2373442		11.54		1390670		15.67	
Continuing Calibrati	WG101676-1					2521119		11.54		1397409		15.67	
DSY-SD-AA05-2448	SE6768-7DL	603144		8.73		2342095		11.53		1348425		15.66	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-23
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std.	2174245		19.23		1621980		25.55		1257422		28.69	
	Upper Limit	4348490		19.73		3243960		26.05		2514844		29.19	
	Lower Limit	1087122.5		18.73		810990		25.05		628711		28.19	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101675-1	2211669		19.21		1598713		25.53		1207219		28.68	
Method Blank Sample	WG99468-1	1867777		19.19		1522161		25.52		1160976		28.68	
Laboratory Control S	WG99468-2	2240611		19.20		1932664		25.53		1511892		28.68	
Laboratory Control S	WG99468-3	2272892		19.20		1955905		25.53		1487079		28.68	
DSY-SD-RB13-101211	SE6768-8	2252447		19.19		1997988		25.52		1628391		28.68	
DSY-SD-AA01-0012	SE6768-1	2228352		19.19		1472378		25.52		954631		28.68	
DSY-SD-AA01-1224	SE6768-2	2159965		19.19		1389206		25.52		924042		28.68	
DSY-SD-AA01-2448	SE6768-3	2289354		19.20		1410098		25.52		920706		28.68	
DSY-SD-DUP33-1012	SE6768-4	2133656		19.19		1489047		25.52		1055127		28.68	
DSY-SD-AA05-0012	SE6768-5	2265275		19.19		1622601		25.52		1023187		28.68	
DSY-SD-AA05-1224	SE6768-6	2196612		19.20		1583832		25.52		993116		28.68	
DSY-SD-AA05-2448	SE6768-7	2245352		19.21		1413471		25.55		755950		28.69	
Continuing Calibrati	WG101676-1	2105163		19.20		1193705		25.52		945263		28.67	
DSY-SD-AA05-2448	SE6768-7DL	1906540		19.19		955395		25.52		595211	*	28.67	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		473663		8.20		1846906		11.03		1025757		15.13	
UPPER LIMIT		947326		8.70		3693812		11.53		2051514		15.63	
LOWER LIMIT		236832		7.70		923453		10.53		512879		14.63	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD3.00N1027		472174		7.95		1812390		10.79		1012117		14.89	
02	WG99289-BLANK	WG99289-1		541031		7.95		2058891		10.78		1067891		14.89	
03	WG99289-LCS	WG99289-2		493300		7.95		1873866		10.79		990733		14.89	
04	WG99289-LCSD	WG99289-3		481852		7.95		1820678		10.79		975483		14.89	
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		1611574		18.64		1003007		24.93		701766		28.06	
UPPER LIMIT		3223148		19.14		2006014		25.43		1403532		28.56	
LOWER LIMIT		805787		18.14		501504		24.43		350883		27.56	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD3.00N1027		1620489	18.39		1188404	24.66		987311		27.77	
02	WG99289-BLANK	WG99289-1		1690675	18.38		1447383	24.65		1148165		27.77	
03	WG99289-LCS	WG99289-2		1633015	18.38		1348346	24.66		1106652		27.77	
04	WG99289-LCSD	WG99289-3		1657258	18.39		1272777	24.66		940698		27.77	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2MN #	FLO #	PYR #	Total Out
DSY-SD-AA01-0012	SE6768-1	45.0	70.6	91.4	0
DSY-SD-AA01-1224	SE6768-2	54.9	76.2	101.	0
DSY-SD-AA01-2448	SE6768-3	38.6	63.2	79.8	0
DSY-SD-DUP33-101211	SE6768-4	31.1	55.8	75.8	0
DSY-SD-AA05-0012	SE6768-5	32.6	57.5	68.9	0
DSY-SD-AA05-1224	SE6768-6	50.1	68.8	81.2	0
Method Blank Sample	WG101806-1	51.5	56.2	80.2	0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB13-101211	SE6768-8	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG99293-1	65.2		75.4		101.		0
Laboratory Control S	WG99293-2	54.1		66.0		86.5		0
Laboratory Control S	WG99293-3	48.6		59.4		73.0		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
09					
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18					
19					
20					

Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** DSY-23
Project : NAVSTA Newport CTO WE61 Derecktor **Instrument ID:** GCMS-G
Lab File IDs : G4023.DG4022.DG4018.D **Calibration Date(s):** 19-NOV-11 11:47
G4021.DG4020.DG4019.D 19-NOV-11 15:27

	0.200000(Level 1	0.500000(Level 2	1.0000 Level 3	2.0000 Level 4	5.0000 Level 5	8.0000 Level 6	New Crv	b	mI	m2	%RSD	Max %RSD	
Benzo(a)pyrene	1.22562	1.33406	1.37656	1.28456	1.31940	1.36721	AVG		1.31790		4.26039	15.00000	O
2-Methylnaphthalene-D10	0.89364	1.10537	1.15001	1.06192	1.07206	1.10290	AVG		1.06432		8.37362	15.00000	
Fluorene-D10	0.70351	0.89827	0.92806	0.97534	0.99465	1.04100	AVG		0.92347		12.86845	15.00000	
Pyrene-D10	0.96288	1.12542	1.16069	1.02833	1.13105	1.14947	AVG		1.09297		7.24856	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD933 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-G DFTPP Injection Time: 0838

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.9)1
69	Less than 100.0% of mass 198	38.7
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	4.1
441	0.0 - 100.0% of mass 443	12.8 (75.1)2
442	40.0 - 100.0% of mass 198	90.8
443	17.0 - 23.0% of mass 442	17.0 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1120	G4035	11/20/11	0856
02	WG99293-BLANK	WG99293-1	G4036	11/20/11	0940
03	WG99293-LCS	WG99293-2	G4037	11/20/11	1024
04	WG99293-LCSD	WG99293-3	G4038	11/20/11	1108
05	DSY-SD-RB13-101211	SE6768-8	G4039	11/20/11	1152
06	WG101806-BLANK	WG101806-1	G4040	11/20/11	1236
07	DSY-SD-AA01-0012	SE6768-1	G4049	11/20/11	1913
08	DSY-SD-AA01-1224	SE6768-2	G4050	11/20/11	1957
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101410-1 **Analytical Date:** 11/20/11 08:56
Lab File ID : G4035.D **Instrument ID:** GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{\text{RRF}}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.21722	1.21722	0.010	-7.63968	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.04216	1.04216	0.010	-2.08182	20.00000	Averaged
47 Fluorene-D10	0.92347	0.91434	0.91434	0.010	-0.98882	20.00000	Averaged
64 Pyrene-D10	1.09297	1.15073	1.15073	0.010	5.28381	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD934 DFTPP Injection Date: 11/21/11

Instrument ID: GCMS-G DFTPP Injection Time: 0809

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.9
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	40.6
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	57.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	3.7
441	0.0 - 100.0% of mass 443	12.8 (77.3)2
442	40.0 - 100.0% of mass 198	87.1
443	17.0 - 23.0% of mass 442	16.6 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1121	G4051	11/21/11	0829
02	DSY-SD-AA01-2448	SE6768-3	G4053	11/21/11	0959
03	DSY-SD-DUP33-101211	SE6768-4	G4054	11/21/11	1044
04	DSY-SD-AA05-0012	SE6768-5	G4055	11/21/11	1129
05	DSY-SD-AA05-1224	SE6768-6	G4056	11/21/11	1213
06					
07					
08					
09					
10					
11					
12					
13					
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15					
16					
17					
18					
19					
20					

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 **SDG:** DSY-23
Lab ID : WG101699-1 **Analytical Date:** 11/21/11 08:29
Lab File ID : G4051.D **Instrument ID:** GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.12257	1.12257	0.010	-14.82178	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	0.98043	0.98043	0.010	-7.88177	20.00000	Averaged
47 Fluorene-D10	0.92347	0.88800	0.88800	0.010	-3.84120	20.00000	Averaged
64 Pyrene-D10	1.09297	0.99058	0.99058	0.010	-9.36839	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4040.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-23
Lab Sample ID : WG101806-1
Date Extracted : 19-OCT-11
Date Analyzed : 20-NOV-11
Time Analyzed : 12:36

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA01-0012	SE6768-1	G4049.D	11/20/11	19:13
DSY-SD-AA01-1224	SE6768-2	G4050.D	11/20/11	19:57
DSY-SD-AA01-2448	SE6768-3	G4053.D	11/21/11	09:59
DSY-SD-DUP33-101211	SE6768-4	G4054.D	11/21/11	10:44
DSY-SD-AA05-0012	SE6768-5	G4055.D	11/21/11	11:29
DSY-SD-AA05-1224	SE6768-6	G4056.D	11/21/11	12:13

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101806-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: G4040.D

Sample Date:
Received Date: 01-DEC-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		51.5	%					
Fluorene-D10		56.2	%					
Pyrene-D10		80.2	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4036.D
Instrument ID : GCMS-G
Matrix : AQ

SDG : DSY-23
Lab Sample ID : WG99293-1
Date Extracted : 17-OCT-11
Date Analyzed : 20-NOV-11
Time Analyzed : 09:40

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99293-2	G4037.D	11/20/11	10:24
Laboratory Control S	WG99293-3	G4038.D	11/20/11	11:08
DSY-SD-RB13-101211	SE6768-8	G4039.D	11/20/11	11:52

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99293-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: G4036.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		65.2	%					
Fluorene-D10		75.4	%					
Pyrene-D10		101.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99293-2
LCSD ID: WG99293-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.46	73.0	1.23	61.5*	ug/L	17	30	63-98
2-Methylnaphthalene-D10			54.1		48.6				43-92
Fluorene-D10			66.0		59.4				29-101
Pyrene-D10			86.5		73.0				53-166

600 Technology Way
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Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101399-3
Lab File ID : G4018.D

SDG: DSY-23
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	47822		8.34		158215		11.29		80066		15.58	
	Upper Limit	95644		8.84		316430		11.79		160132		16.08	
	Lower Limit	23911		7.84		79107.5		10.79		40033		15.08	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101410-1	51116		8.32		172627		11.27		87317		15.55	
Method Blank Sample	WG99293-1	47181		8.32		170317		11.27		85206		15.55	
Laboratory Control S	WG99293-2	50326		8.32		184491		11.25		93644		15.55	
Laboratory Control S	WG99293-3	51212		8.32		176570		11.27		87902		15.55	
DSY-SD-RB13-101211	SE6768-8	52947		8.32		174846		11.27		90629		15.55	
Method Blank Sample	WG101806-1	50371		8.32		171957		11.27		93963		15.55	
DSY-SD-AA01-0012	SE6768-1	44472		8.32		160685		11.27		83691		15.55	
DSY-SD-AA01-1224	SE6768-2	47002		8.32		162658		11.27		83273		15.55	
Continuing Calibrati	WG101699-1	50986		8.27		172659		11.23		88499		15.51	
DSY-SD-AA01-2448	SE6768-3	50223		8.29		161598		11.23		84144		15.51	
DSY-SD-DUP33-1012	SE6768-4	47584		8.27		157639		11.23		81751		15.51	
DSY-SD-AA05-0012	SE6768-5	49996		8.27		166265		11.23		86143		15.51	
DSY-SD-AA05-1224	SE6768-6	45844		8.27		161673		11.23		84298		15.51	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
SDG: DSY-23
Lab ID : WG101399-3
Analytical Date: 11/19/11 11:47
Lab File ID : G4018.D
Instrument ID: GCMS-G

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	118014	19.19	75564	25.77	53419	29.09
	Upper Limit	236028	19.69	151128	26.27	106838	29.59
	Lower Limit	59007	18.69	37782	25.27	26709.5	28.59
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101410-1	134675	19.15	68400	25.71	41070	29.01
Method Blank Sample	WG99293-1	130557	19.15	60469	25.74	34435	29.03
Laboratory Control S	WG99293-2	141444	19.13	78454	25.71	47837	29.01
Laboratory Control S	WG99293-3	133855	19.15	73937	25.71	47808	29.03
DSY-SD-RB13-101211	SE6768-8	134814	19.15	61884	25.71	39825	29.02
Method Blank Sample	WG101806-1	124869	19.14	62583	25.73	38766	29.03
DSY-SD-AA01-0012	SE6768-1	139858	19.15	56388	25.71	33748	29.03
DSY-SD-AA01-1224	SE6768-2	141124	19.15	51648	25.73	30467	29.03
Continuing Calibrati	WG101699-1	131530	19.10	75311	25.67	49379	28.97
DSY-SD-AA01-2448	SE6768-3	143871	19.10	62639	25.68	34173	28.98
DSY-SD-DUP33-1012	SE6768-4	134014	19.10	62397	25.68	33658	28.98
DSY-SD-AA05-0012	SE6768-5	134725	19.10	70736	25.68	40202	28.98
DSY-SD-AA05-1224	SE6768-6	132541	19.10	70289	25.69	37265	28.99

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99849-BLANK	WG99849-1	94	93	113	102			0
02	WG99849-LCS	WG99849-2	97	96	115	102			0
03	WG99849-LCSD	WG99849-3	87	85	110	95			0
04	DSY-SD-AA01-0012	SE6768-1	23*	26*	31*	32*			4
05	DSY-SD-AA01-1224	SE6768-2	22*	24*	29*	31*			4
06	DSY-SD-AA01-2448	SE6768-3	30*	34*	57*	60			3
07	DSY-SD-DUP33-101211	SE6768-4	22*	26*	40*	42*			4
08	DSY-SD-AA05-0012	SE6768-5	21*	26*	40*	42*			4
09	DSY-SD-AA05-1224	SE6768-6	23*	28*	38*	40*			4
10	DSY-SD-AA05-2448	SE6768-7	28*	36*	34*	44*			4
11									
12									
13									
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25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99288-BLANK	WG99288-1	61*	70	57	58			1
02	WG99288-LCS	WG99288-2	59*	64	58	57			1
03	WG99288-LCSD	WG99288-3	51*	56*	61	59			2
04	DSY-SD-RB13-101211	SE6768-8	62	69	24*	25*			2
05									
06									
07									
08									
09									
10									
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22									
23									
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25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000070

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99288-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Lab Sample ID: WG99288-1 Lab File ID: 7EJ548

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/17/11

Date Analyzed (1): 10/18/11 Date Analyzed (2): 10/18/11

Time Analyzed (1): 1333 Time Analyzed (2): 1333

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99288-LCS	WG99288-2	7EJ549	10/18/11	10/18/11
02	WG99288-LCSD	WG99288-3	7EJ550	10/18/11	10/18/11
03	DSY-SD-RB13-101211	SE6768-8	7EJ585	10/19/11	10/19/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99288-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: 7EJ548.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.025	ug/L	1	.5	0.050	0.015	0.025
Aroclor-1221	U	0.025	ug/L	1	.5	0.050	0.020	0.025
Aroclor-1232	U	0.025	ug/L	1	.5	0.050	0.0089	0.025
Aroclor-1242	U	0.025	ug/L	1	.5	0.050	0.018	0.025
Aroclor-1248	U	0.025	ug/L	1	.5	0.050	0.020	0.025
Aroclor-1254	U	0.025	ug/L	1	.5	0.050	0.0082	0.025
Aroclor-1260	U	0.025	ug/L	1	.5	0.050	0.017	0.025
Tetrachloro-M-Xylene		69.6	%					
Decachlorobiphenyl		58.0	%					

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99288-2
LCSD ID: WG99288-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	0.500	0.337	67.4	0.326	65.2	ug/L	3	30	65-112
Aroclor-1260	0.500	0.302	60.4*	0.320	64.0	ug/L	6	30	62-104
Tetrachloro-M-Xylene			64.2		56.5*				62-111
Decachlorobiphenyl			57.7		61.2				44-135

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99849-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Lab Sample ID: WG99849-1 Lab File ID: 7EJ909

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 10/27/11 Date Analyzed (2): 10/27/11

Time Analyzed (1): 0310 Time Analyzed (2): 0310

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99849-LCS	WG99849-2	7EJ910	10/27/11	10/27/11
02	WG99849-LCSD	WG99849-3	7EJ911	10/27/11	10/27/11
03	DSY-SD-AA01-0012	SE6768-1	7EK175	11/05/11	11/05/11
04	DSY-SD-AA01-1224	SE6768-2	7EK176	11/05/11	11/05/11
05	DSY-SD-AA01-2448	SE6768-3	7EK177	11/05/11	11/05/11
06	DSY-SD-DUP33-101211	SE6768-4	7EK178	11/05/11	11/05/11
07	DSY-SD-AA05-0012	SE6768-5	7EK179	11/05/11	11/05/11
08	DSY-SD-AA05-1224	SE6768-6	7EK180	11/05/11	11/05/11
09	DSY-SD-AA05-2448	SE6768-7	7EK181	11/05/11	11/05/11
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99849-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: 7EJ909.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		93.7	%					
Decachlorobiphenyl		113.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99849-2
LCSD ID: WG99849-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	175.	105.	167.	100.	ug/Kgdrywt	5	50	53-123
Aroclor-1260	167.	175.	105.	168.	100.	ug/Kgdrywt	4	50	58-120
Tetrachloro-M-Xylene			97.3		86.8				56-115
Decachlorobiphenyl			115.		110.				59-124

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FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000105

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/18/11	0646	13.33	3.83
02	WG99288-BLANK	WG99288-1	10/18/11	1333	13.34	3.84
03	WG99288-LCS	WG99288-2	10/18/11	1359	13.33	3.84
04	WG99288-LCSD	WG99288-3	10/18/11	1425	13.33	3.84
05		AR1660 1.0	10/18/11	1819	13.34	3.84
06		AR1660 0.25	10/19/11	0044	13.34	3.83
07	DSY-SD-RB13-101211	SE6768-8	10/19/11	0526	13.33	3.84
08		AR1660 1.0	10/19/11	0710	13.33	3.84
09		AR1660 0.25	10/26/11	2254	13.29	3.82
10	WG99849-BLANK	WG99849-1	10/27/11	0310	13.29	3.82
11	WG99849-LCS	WG99849-2	10/27/11	0336	13.29	3.82
12	WG99849-LCSD	WG99849-3	10/27/11	0402	13.29	3.82
13		AR1660 1.0	10/27/11	0518	13.29	3.82
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/04/11	2139	13.23	3.80
02		AR1254 1.0	11/04/11	2257		
03	DSY-SD-AA01-0012	SE6768-1	11/05/11	0040	13.23	3.80
04	DSY-SD-AA01-1224	SE6768-2	11/05/11	0106	13.23	3.80
05	DSY-SD-AA01-2448	SE6768-3	11/05/11	0132	13.23	3.80
06	DSY-SD-DUP33-101211	SE6768-4	11/05/11	0158	13.23	3.80
07	DSY-SD-AA05-0012	SE6768-5	11/05/11	0224	13.23	3.80
08	DSY-SD-AA05-1224	SE6768-6	11/05/11	0250	13.23	3.80
09	DSY-SD-AA05-2448	SE6768-7	11/05/11	0316	13.22	3.80
10		AR1660 1.0	11/05/11	0408	13.23	3.80
11		AR1254 1.0	11/05/11	0526		
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3368000	1.0000000	42616000	0.001	33.68	20.00	2RDR	<-
(2)	1.2505000	1.0000000	23397000	0.001	25.05	20.00	2RDR	<-
(3)	1.1700000	1.0000000	58060000	0.001	17.00	20.00	2RDR	
(4)	1.0804000	1.0000000	31961000	0.001	8.04	20.00	2RDR	
(5)	0.9378400	1.0000000	24746000	0.001	-6.22	20.00	2RDR	
Average %D: 15.510								
Aroclor-1260	0.9655200	1.0000000	48658000	0.001	-3.45	20.00	2RDR	
(2)	0.9873200	1.0000000	64198000	0.001	-1.27	20.00	2RDR	
(3)	1.0827000	1.0000000	51622000	0.001	8.27	20.00	2RDR	
(4)	0.9683400	1.0000000	45880000	0.001	-3.17	20.00	2RDR	
(5)	1.0657000	1.0000000	33176000	0.001	6.57	20.00	2RDR	
Average %D: 1.3900								
Decachlorobiphenyl	1.86e-002	2.e-002	556320000	0.001	-7.00	20.00	2RDR	
Tetrachloro-m-xylene	2.39e-002	2.e-002	1.39e+009	0.001	19.50	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 1819

Lab File ID: 7EJ559 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0518000	1.0000000	33613000	0.001	5.18	20.00	2RDR
(2)	1.0776000	1.0000000	20191000	0.001	7.76	20.00	2RDR
(3)	0.9003900	1.0000000	44115000	0.001	-9.96	20.00	2RDR
(4)	0.9726000	1.0000000	28698000	0.001	-2.74	20.00	2RDR
(5)	0.9107600	1.0000000	24002000	0.001	-8.92	20.00	2RDR
Average %D: -1.740							
Aroclor-1260	0.8913800	1.0000000	44738000	0.001	-10.86	20.00	2RDR
(2)	0.8848700	1.0000000	57223000	0.001	-11.51	20.00	2RDR
(3)	0.9502600	1.0000000	44940000	0.001	-4.97	20.00	2RDR
(4)	0.9174500	1.0000000	43348000	0.001	-8.26	20.00	2RDR
(5)	1.0712000	1.0000000	33351000	0.001	7.12	20.00	2RDR
Average %D: -5.700							
Decachlorobiphenyl	1.76e-002	2.e-002	524140000	0.001	-12.00	20.00	2RDR
Tetrachloro-m-xylene	2.11e-002	2.e-002	1.23e+009	0.001	5.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0044

Lab File ID: 7EJ574 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2587400	0.2500000	32568000	0.001	3.50	20.00	2RDR
(2)	0.2660700	0.2500000	19591000	0.001	6.43	20.00	2RDR
(3)	0.2199400	0.2500000	37271000	0.001	-12.02	20.00	2RDR
(4)	0.2284800	0.2500000	24835000	0.001	-8.61	20.00	2RDR
(5)	0.2096000	0.2500000	19531000	0.001	-16.16	20.00	2RDR
Average %D: -5.360							
Aroclor-1260	0.2198300	0.2500000	38400000	0.001	-12.07	20.00	2RDR
(2)	0.2254200	0.2500000	48073000	0.001	-9.83	20.00	2RDR
(3)	0.2350600	0.2500000	37753000	0.001	-5.98	20.00	2RDR
(4)	0.2211800	0.2500000	36425000	0.001	-11.53	20.00	2RDR
(5)	0.2590900	0.2500000	30434000	0.001	3.64	20.00	2RDR
Average %D: -7.160							
Decachlorobiphenyl	4.31e-003	5.e-003	470980000	0.001	-13.80	20.00	2RDR
Tetrachloro-m-xylene	5.32e-003	5.e-003	1.19e+009	0.001	6.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0602000	1.0000000	33878000	0.001	6.02	20.00	2RDR
(2)	1.0917000	1.0000000	20453000	0.001	9.17	20.00	2RDR
(3)	0.9251200	1.0000000	45391000	0.001	-7.49	20.00	2RDR
(4)	0.9812400	1.0000000	28959000	0.001	-1.88	20.00	2RDR
(5)	0.9144800	1.0000000	24104000	0.001	-8.55	20.00	2RDR
Average %D: -0.540							
Aroclor-1260	0.9013000	1.0000000	45262000	0.001	-9.87	20.00	2RDR
(2)	0.9066200	1.0000000	58705000	0.001	-9.34	20.00	2RDR
(3)	0.9532600	1.0000000	45092000	0.001	-4.67	20.00	2RDR
(4)	0.9146200	1.0000000	43207000	0.001	-8.54	20.00	2RDR
(5)	1.1244000	1.0000000	35070000	0.001	12.44	20.00	2RDR
Average %D: -4.000							
Decachlorobiphenyl	1.85e-002	2.e-002	553140000	0.001	-7.50	20.00	2RDR
Tetrachloro-m-xylene	2.13e-002	2.e-002	1.24e+009	0.001	6.50	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2896900	0.2500000	36591000	0.001	15.88	20.00	2RDR
(2)	0.2657000	0.2500000	19563000	0.001	6.28	20.00	2RDR
(3)	0.2752800	0.2500000	48510000	0.001	10.11	20.00	2RDR
(4)	0.2673200	0.2500000	29523000	0.001	6.93	20.00	2RDR
(5)	0.2634400	0.2500000	25368000	0.001	5.38	20.00	2RDR
Average %D: 8.9200							
Aroclor-1260	0.2540000	0.2500000	45486000	0.001	1.60	20.00	2RDR
(2)	0.2641200	0.2500000	58742000	0.001	5.65	20.00	2RDR
(3)	0.2707500	0.2500000	44749000	0.001	8.30	20.00	2RDR
(4)	0.2534300	0.2500000	42703000	0.001	1.37	20.00	2RDR
(5)	0.2711600	0.2500000	31938000	0.001	8.46	20.00	2RDR
Average %D: 5.0800							
Decachlorobiphenyl	5.e-003	5.e-003	554440000	0.001	0.00	20.00	2RDR
Tetrachloro-m-xylene	5.73e-003	5.e-003	1.29e+009	0.001	14.60	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0568000	1.0000000	33769000	0.001	5.68	20.00	2RDR
(2)	0.9379300	1.0000000	17587000	0.001	-6.21	20.00	2RDR
(3)	1.0722000	1.0000000	52991000	0.001	7.22	20.00	2RDR
(4)	0.9271100	1.0000000	27320000	0.001	-7.29	20.00	2RDR
(5)	0.8455800	1.0000000	22214000	0.001	-15.44	20.00	2RDR
Average %D: -3.210							
Aroclor-1260	0.8304700	1.0000000	41522000	0.001	-16.95	20.00	2RDR
(2)	0.8770600	1.0000000	56691000	0.001	-12.29	20.00	2RDR
(3)	0.9754000	1.0000000	46206000	0.001	-2.46	20.00	2RDR
(4)	0.8297200	1.0000000	38992000	0.001	-17.03	20.00	2RDR
(5)	1.0154000	1.0000000	31554000	0.001	1.54	20.00	2RDR
Average %D: -9.440							
Decachlorobiphenyl	1.62e-002	2.e-002	481100000	0.001	-19.00	20.00	2RDR
Tetrachloro-m-xylene	1.99e-002	2.e-002	1.15e+009	0.001	-0.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2721100	0.2500000	34307000	0.001	8.84	20.00	2RDR
(2)	0.2791400	0.2500000	20589000	0.001	11.66	20.00	2RDR
(3)	0.2361500	0.2500000	40562000	0.001	-5.54	20.00	2RDR
(4)	0.2453600	0.2500000	26872000	0.001	-1.86	20.00	2RDR
(5)	0.2123500	0.2500000	19830000	0.001	-15.06	20.00	2RDR
Average %D: -0.400							
Aroclor-1260	0.2134400	0.2500000	37075000	0.001	-14.62	20.00	2RDR
(2)	0.2276000	0.2500000	48672000	0.001	-8.96	20.00	2RDR
(3)	0.2395000	0.2500000	38622000	0.001	-4.20	20.00	2RDR
(4)	0.2161300	0.2500000	35443000	0.001	-13.55	20.00	2RDR
(5)	0.2541100	0.2500000	29813000	0.001	1.64	20.00	2RDR
Average %D: -7.920							
Decachlorobiphenyl	4.07e-003	5.e-003	441840000	0.001	-18.60	20.00	2RDR
Tetrachloro-m-xylene	5.82e-003	5.e-003	1.31e+009	0.001	16.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9420600	1.0000000	38474000	0.001	-5.79	20.00	2RDR
(2)	0.9616100	1.0000000	48072000	0.001	-3.84	20.00	2RDR
(3)	0.9609300	1.0000000	31350000	0.001	-3.91	20.00	2RDR
(4)	0.9584900	1.0000000	34212000	0.001	-4.15	20.00	2RDR
(5)	0.9873300	1.0000000	36099000	0.001	-1.27	20.00	2RDR
Average %D: -3.790							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1398000	1.0000000	36400000	0.001	13.98	20.00	2RDR	
(2)	1.1697000	1.0000000	21902000	0.001	16.97	20.00	2RDR	
(3)	0.9541300	1.0000000	46887000	0.001	-4.59	20.00	2RDR	
(4)	1.0249000	1.0000000	30282000	0.001	2.49	20.00	2RDR	
(5)	0.9308100	1.0000000	24553000	0.001	-6.92	20.00	2RDR	
Average %D: 4.3900								
Aroclor-1260	0.8735500	1.0000000	43796000	0.001	-12.64	20.00	2RDR	
(2)	0.9044700	1.0000000	58558000	0.001	-9.55	20.00	2RDR	
(3)	0.9753200	1.0000000	46202000	0.001	-2.47	20.00	2RDR	
(4)	0.9416600	1.0000000	44552000	0.001	-5.83	20.00	2RDR	
(5)	1.1569000	1.0000000	36124000	0.001	15.69	20.00	2RDR	
Average %D: -2.960								
Decachlorobiphenyl	1.79e-002	2.e-002	534070000	0.001	-10.50	20.00	2RDR	
Tetrachloro-m-xylene	2.42e-002	2.e-002	1.41e+009	0.001	21.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9984700	1.0000000	40890000	0.001	-0.15	20.00	2RDR
(2)	1.0254000	1.0000000	51469000	0.001	2.54	20.00	2RDR
(3)	1.0341000	1.0000000	33911000	0.001	3.41	20.00	2RDR
(4)	1.0799000	1.0000000	38770000	0.001	7.99	20.00	2RDR
(5)	1.1094000	1.0000000	40956000	0.001	10.94	20.00	2RDR
Average %D: 4.9500							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000106

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.08 TCX: 4.33

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/18/11	0646	17.08	4.33
02	WG99288-BLANK	WG99288-1	10/18/11	1333	17.08	4.34
03	WG99288-LCS	WG99288-2	10/18/11	1359	17.09	4.33
04	WG99288-LCSD	WG99288-3	10/18/11	1425	17.09	4.34
05		AR1660 1.0	10/18/11	1819	17.09	4.33
06		AR1660 0.25	10/19/11	0044	17.08	4.33
07	DSY-SD-RB13-101211	SE6768-8	10/19/11	0526	17.08	4.33
08		AR1660 1.0	10/19/11	0710	17.08	4.33
09		AR1660 0.25	10/26/11	2254	17.03	4.31
10	WG99849-BLANK	WG99849-1	10/27/11	0310	17.03	4.31
11	WG99849-LCS	WG99849-2	10/27/11	0336	17.03	4.31
12	WG99849-LCSD	WG99849-3	10/27/11	0402	17.03	4.31
13		AR1660 1.0	10/27/11	0518	17.03	4.31
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/04/11	2139	16.95	4.29
02		AR1254 1.0	11/04/11	2257		
03	DSY-SD-AA01-0012	SE6768-1	11/05/11	0040	16.95	4.29
04	DSY-SD-AA01-1224	SE6768-2	11/05/11	0106	16.95	4.29
05	DSY-SD-AA01-2448	SE6768-3	11/05/11	0132	16.95	4.29
06	DSY-SD-DUP33-101211	SE6768-4	11/05/11	0158	16.95	4.29
07	DSY-SD-AA05-0012	SE6768-5	11/05/11	0224	16.95	4.29
08	DSY-SD-AA05-1224	SE6768-6	11/05/11	0250	16.95	4.29
09	DSY-SD-AA05-2448	SE6768-7	11/05/11	0316	16.94	4.29
10		AR1660 1.0	11/05/11	0408	16.95	4.29
11		AR1254 1.0	11/05/11	0526		
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8264500	1.0000000	2888200.0	0.001	-17.36	20.00	2RDR
(2)	1.1661000	1.0000000	6677000.0	0.001	16.61	20.00	2RDR
(3)	1.1096000	1.0000000	11498000	0.001	10.96	20.00	2RDR
(4)	1.0682000	1.0000000	5880300.0	0.001	6.82	20.00	2RDR
(5)	1.0515000	1.0000000	5167200.0	0.001	5.15	20.00	2RDR
Average %D: 4.4400							
Aroclor-1260	1.1030000	1.0000000	7751500.0	0.001	10.30	20.00	2RDR
(2)	1.1154000	1.0000000	9495100.0	0.001	11.54	20.00	2RDR
(3)	1.1417000	1.0000000	6803700.0	0.001	14.17	20.00	2RDR
(4)	1.1010000	1.0000000	6291700.0	0.001	10.10	20.00	2RDR
(5)	1.1315000	1.0000000	6462800.0	0.001	13.15	20.00	2RDR
Average %D: 11.850							
Decachlorobiphenyl	2.08e-002	2.e-002	99996000	0.001	4.00	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	258390000	0.001	19.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 1819

Lab File ID: 7EJ559 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9443100	1.0000000	3296800.0	0.001	-5.57	20.00	2RDR
(2)	0.9414100	1.0000000	5404200.0	0.001	-5.86	20.00	2RDR
(3)	0.8732400	1.0000000	9044100.0	0.001	-12.68	20.00	2RDR
(4)	0.8407100	1.0000000	4617800.0	0.001	-15.93	20.00	2RDR
(5)	0.8710800	1.0000000	4278000.0	0.001	-12.89	20.00	2RDR
Average %D: -10.58							
Aroclor-1260	0.8859700	1.0000000	6218900.0	0.001	-11.40	20.00	2RDR
(2)	0.8697500	1.0000000	7375300.0	0.001	-13.02	20.00	2RDR
(3)	0.9102900	1.0000000	5400600.0	0.001	-8.97	20.00	2RDR
(4)	1.0688000	1.0000000	6105700.0	0.001	6.88	20.00	2RDR
(5)	0.8911000	1.0000000	5060600.0	0.001	-10.89	20.00	2RDR
Average %D: -7.480							
Decachlorobiphenyl	1.79e-002	2.e-002	85899000	0.001	-10.50	20.00	2RDR
Tetrachloro-m-xylene	1.93e-002	2.e-002	209470000	0.001	-3.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0044

Lab File ID: 7EJ574 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2418300	0.2500000	3413800.0	0.001	-3.27	20.00	2RDR
(2)	0.2366500	0.2500000	5509000.0	0.001	-5.34	20.00	2RDR
(3)	0.2195500	0.2500000	8856100.0	0.001	-12.18	20.00	2RDR
(4)	0.2147300	0.2500000	4571700.0	0.001	-14.11	20.00	2RDR
(5)	0.2198500	0.2500000	4277300.0	0.001	-12.06	20.00	2RDR
Average %D: -9.400							
Aroclor-1260	0.2253300	0.2500000	6201000.0	0.001	-9.87	20.00	2RDR
(2)	0.2225800	0.2500000	7179100.0	0.001	-10.97	20.00	2RDR
(3)	0.2349800	0.2500000	5266000.0	0.001	-6.01	20.00	2RDR
(4)	0.2299500	0.2500000	5061100.0	0.001	-8.02	20.00	2RDR
(5)	0.2314500	0.2500000	4935100.0	0.001	-7.42	20.00	2RDR
Average %D: -8.440							
Decachlorobiphenyl	4.57e-003	5.e-003	86150000	0.001	-8.60	20.00	2RDR
Tetrachloro-m-xylene	4.79e-003	5.e-003	205370000	0.001	-4.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845600	1.0000000	3436100.0	0.001	-1.54	20.00	2RDR
(2)	0.9908000	1.0000000	5684400.0	0.001	-0.92	20.00	2RDR
(3)	0.9189900	1.0000000	9519600.0	0.001	-8.10	20.00	2RDR
(4)	0.8800800	1.0000000	4836200.0	0.001	-11.99	20.00	2RDR
(5)	0.9111300	1.0000000	4475300.0	0.001	-8.89	20.00	2RDR
Average %D: -6.290							
Aroclor-1260	0.9209600	1.0000000	6466000.0	0.001	-7.90	20.00	2RDR
(2)	0.9206300	1.0000000	7814300.0	0.001	-7.94	20.00	2RDR
(3)	0.9603500	1.0000000	5703900.0	0.001	-3.96	20.00	2RDR
(4)	0.9609000	1.0000000	5482800.0	0.001	-3.91	20.00	2RDR
(5)	0.9512200	1.0000000	5410800.0	0.001	-4.88	20.00	2RDR
Average %D: -5.720							
Decachlorobiphenyl	1.89e-002	2.e-002	90640000	0.001	-5.50	20.00	2RDR
Tetrachloro-m-xylene	2.e-002	2.e-002	217370000	0.001	0.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2711800	0.2500000	3823700.0	0.001	8.47	20.00	2RDR
(2)	0.2602800	0.2500000	6052700.0	0.001	4.11	20.00	2RDR
(3)	0.2509300	0.2500000	10174000	0.001	0.37	20.00	2RDR
(4)	0.2575200	0.2500000	5522000.0	0.001	3.01	20.00	2RDR
(5)	0.2705500	0.2500000	5276500.0	0.001	8.22	20.00	2RDR
Average %D: 4.8400							
Aroclor-1260	0.2524000	0.2500000	6966600.0	0.001	0.96	20.00	2RDR
(2)	0.2545000	0.2500000	8279500.0	0.001	1.80	20.00	2RDR
(3)	0.2942500	0.2500000	6697100.0	0.001	17.70	20.00	2RDR
(4)	0.2613900	0.2500000	5786300.0	0.001	4.56	20.00	2RDR
(5)	0.2576800	0.2500000	5541600.0	0.001	3.07	20.00	2RDR
Average %D: 5.6000							
Decachlorobiphenyl	4.9e-003	5.e-003	92449000	0.001	-2.00	20.00	2RDR
Tetrachloro-m-xylene	5.34e-003	5.e-003	229140000	0.001	6.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9688000	1.0000000	3381600.0	0.001	-3.12	20.00	2RDR
(2)	0.9852400	1.0000000	5652900.0	0.001	-1.48	20.00	2RDR
(3)	0.9685300	1.0000000	10034000	0.001	-3.15	20.00	2RDR
(4)	0.9472300	1.0000000	5208800.0	0.001	-5.28	20.00	2RDR
(5)	0.9356600	1.0000000	4596200.0	0.001	-6.43	20.00	2RDR
Average %D: -3.890							
Aroclor-1260	0.9532300	1.0000000	6693900.0	0.001	-4.68	20.00	2RDR
(2)	0.9705600	1.0000000	8245100.0	0.001	-2.94	20.00	2RDR
(3)	1.0507000	1.0000000	6251800.0	0.001	5.07	20.00	2RDR
(4)	0.9373600	1.0000000	5347000.0	0.001	-6.26	20.00	2RDR
(5)	0.9893200	1.0000000	5633000.0	0.001	-1.07	20.00	2RDR
Average %D: -1.980							
Decachlorobiphenyl	1.77e-002	2.e-002	85224000	0.001	-11.50	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196580000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2625300	0.2500000	3702900.0	0.001	5.01	20.00	2RDR
(2)	0.2588500	0.2500000	6019700.0	0.001	3.54	20.00	2RDR
(3)	0.2368200	0.2500000	9581500.0	0.001	-5.27	20.00	2RDR
(4)	0.2285400	0.2500000	4878400.0	0.001	-8.58	20.00	2RDR
(5)	0.2364600	0.2500000	4604800.0	0.001	-5.42	20.00	2RDR
Average %D: -2.160							
Aroclor-1260	0.2437000	0.2500000	6720700.0	0.001	-2.52	20.00	2RDR
(2)	0.2414400	0.2500000	7829200.0	0.001	-3.42	20.00	2RDR
(3)	0.2525200	0.2500000	5689500.0	0.001	1.01	20.00	2RDR
(4)	0.2469500	0.2500000	5453200.0	0.001	-1.22	20.00	2RDR
(5)	0.2457300	0.2500000	5265200.0	0.001	-1.71	20.00	2RDR
Average %D: -1.560							
Decachlorobiphenyl	4.49e-003	5.e-003	84641000	0.001	-10.20	20.00	2RDR
Tetrachloro-m-xylene	5.39e-003	5.e-003	231630000	0.001	7.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9587500	1.0000000	3882500.0	0.001	-4.12	20.00	2RDR
(2)	1.0246000	1.0000000	6763400.0	0.001	2.46	20.00	2RDR
(3)	0.9353800	1.0000000	7002600.0	0.001	-6.46	20.00	2RDR
(4)	0.9313500	1.0000000	8775400.0	0.001	-6.86	20.00	2RDR
(5)	1.0111000	1.0000000	5700300.0	0.001	1.11	20.00	2RDR
Average %D: -2.780							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0514000	1.0000000	3667500.0	0.001	5.14	20.00	2RDR
(2)	1.0686000	1.0000000	6125500.0	0.001	6.86	20.00	2RDR
(3)	0.9594500	1.0000000	9940000.0	0.001	-4.06	20.00	2RDR
(4)	0.9068200	1.0000000	4984600.0	0.001	-9.32	20.00	2RDR
(5)	0.9355200	1.0000000	4595500.0	0.001	-6.45	20.00	2RDR
Average %D: -1.560							
Aroclor-1260	0.9979600	1.0000000	7009900.0	0.001	-0.20	20.00	2RDR
(2)	0.9520600	1.0000000	8085500.0	0.001	-4.79	20.00	2RDR
(3)	0.9950900	1.0000000	5914600.0	0.001	-0.49	20.00	2RDR
(4)	1.0133000	1.0000000	5785200.0	0.001	1.33	20.00	2RDR
(5)	0.9766400	1.0000000	5559000.0	0.001	-2.34	20.00	2RDR
Average %D: -1.300							
Decachlorobiphenyl	1.87e-002	2.e-002	89870000	0.001	-6.50	20.00	2RDR
Tetrachloro-m-xylene	2.26e-002	2.e-002	245260000	0.001	13.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0070000	1.0000000	4078200.0	0.001	0.70	20.00	2RDR
(2)	1.1115000	1.0000000	7337700.0	0.001	11.15	20.00	2RDR
(3)	0.9857100	1.0000000	7383400.0	0.001	-1.43	20.00	2RDR
(4)	0.9711300	1.0000000	9158900.0	0.001	-2.89	20.00	2RDR
(5)	1.0638000	1.0000000	6007200.0	0.001	6.38	20.00	2RDR
Average %D: 2.7800							

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
A05-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-23

Lab Sample ID: SE6768-7 Date(s) Analyzed: 11/05/11 11/05/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	85.0		
Aroclor-1254	2	6.47	6.41	6.55	155		
	3	6.83	6.78	6.92	159		
COLUMN 1	4	7.67	7.62	7.76	193		
	5	8.13	8.09	8.23	231	164	
	1	6.36	6.30	6.44	108		
	2	7.32	7.26	7.40	162		
	3	7.61	7.55	7.69	152		
COLUMN 2	4	8.43	8.37	8.51	145		
	5	10.12	10.07	10.21	261	166	1.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICV

File: IBK01A Nov 01, 2011 11:54

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9602.00	96.0
CALCIUM	10000.0	9512.00	95.1
COPPER	400.0	383.10	95.8
IRON	10000.0	9685.00	96.9
LEAD	400.0	392.40	98.1
MAGNESIUM	10000.0	9694.00	96.9
ZINC	400.0	389.40	97.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 12:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12210.00	97.7
CALCIUM	12500.0	12210.00	97.7
COPPER	500.0	478.30	95.7
IRON	12500.0	12250.00	98.0
LEAD	500.0	479.20	95.8
MAGNESIUM	12500.0	12180.00	97.4
ZINC	500.0	478.20	95.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 13:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12590.00	100.7
COPPER	500.0	495.30	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	495.30	99.1
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	493.30	98.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 14:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12080.00	96.6
CALCIUM	12500.0	12140.00	97.1
COPPER	500.0	475.80	95.2
IRON	12500.0	12200.00	97.6
LEAD	500.0	481.30	96.3
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	475.80	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
COPPER	500.0	504.50	100.9
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12850.00	102.8
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12880.00	103.0
COPPER	500.0	509.80	102.0
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.60	100.7
MAGNESIUM	12500.0	12790.00	102.3
ZINC	500.0	501.20	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 16:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12670.00	101.4
COPPER	500.0	502.10	100.4
IRON	12500.0	12780.00	102.2
LEAD	500.0	503.30	100.7
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	498.50	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 17:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	506.70	101.3
IRON	12500.0	12970.00	103.8
LEAD	500.0	509.20	101.8
MAGNESIUM	12500.0	13000.00	104.0
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 18:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
CALCIUM	12500.0	12630.00	101.0
COPPER	500.0	501.20	100.2
IRON	12500.0	12800.00	102.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12940.00	103.5
ZINC	500.0	498.30	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 19:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12760.00	102.1
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	508.30	101.7
IRON	12500.0	12920.00	103.4
LEAD	500.0	505.00	101.0
MAGNESIUM	12500.0	12960.00	103.7
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 20:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12340.00	98.7
CALCIUM	12500.0	12160.00	97.3
COPPER	500.0	495.00	99.0
IRON	12500.0	12550.00	100.4
LEAD	500.0	487.00	97.4
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	476.70	95.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: PQL

File: IBK01A Nov 01, 2011 12:03

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	301.90	100.6
CALCIUM	100.0	101.10	101.1
COPPER	25.0	25.33	101.3
IRON	100.0	98.83	98.8
LEAD	5.0	5.41	108.2
MAGNESIUM	100.0	104.10	104.1
ZINC	20.0	20.26	101.3

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICB

File: IBK01A Nov 01, 2011 11:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.241	J

SAMPLE: CCB

File: IBK01A Nov 01, 2011 12:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	4.030	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 13:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 14:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.041	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 16:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 17:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.925	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 18:41

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB

File: IBK01A Nov 01, 2011 19:34

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 20:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.137	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK01A Nov 01, 2011 12:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465400	93.1
CALCIUM	500000	436100	87.2
COPPER	0	2	
IRON	200000	177400	88.7
LEAD	0	-1	
MAGNESIUM	500000	432700	86.5
ZINC	0	2	

SAMPLE: ICSAB

File: IBK01A Nov 01, 2011 12:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479000	95.8
CALCIUM	500000	435000	87.0
COPPER	500	509	101.8
IRON	200000	171700	85.9
LEAD	50	45	90.0
MAGNESIUM	500000	429400	85.9
ZINC	1000	916	91.6

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.107	J
ZINC	1.0	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.56	98.2	80	120
LEAD	10.00	9.68	96.8	80	120
ZINC	50.00	49.03	98.1	80	120

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

QC Batch ID: BJ31ICW1

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	10	U
LEAD	4.0	U
ZINC	10	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

QC Batch ID: BJ31ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250.00	249.70	99.9	80	120
LEAD	100.00	94.76	94.8	80	120
ZINC	500.00	499.60	99.9	80	120

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name: DSY-23**

Instrument Name THERMO ICAP 6500 **Instrument ID:** 1 **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Katahdin Analytical Services A0000140

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

Method: P **Prep Date:** 10/31/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ31ICS1	LCSOBJ31ICS1	1	0.1	
PBSBJ31ICS1	PBSBJ31ICS1	1	0.1	
DSY-SD-AA01-0012	SE6768-001	1.16	0.1	C
DSY-SD-AA01-1224	SE6768-002	1.34	0.1	B
DSY-SD-AA01-2448	SE6768-003	1.66	0.1	B
DSY-SD-DUP33-101211	SE6768-004	1.66	0.1	B
DSY-SD-AA05-0012	SE6768-005	1.11	0.1	C
DSY-SD-AA05-1224	SE6768-006	1.32	0.1	B
DSY-SD-AA05-2448	SE6768-007	1.32	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

Method: P **Prep Date:** 10/31/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ31ICW1	LCSWBJ31ICW1	0.05	0.05	
PBWBJ31ICW1	PBWBJ31ICW1	0.05	0.05	
DSY-SD-RB13-101211	SE6768-008	0.05	0.05	A

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	11:45 AL	CA	CU FE PB MG	ZN
Std 1		1	11:50 AL	CA	CU FE PB MG	ZN
ICV		1	11:54 AL	CA	CU FE PB MG	ZN
ICB		1	11:59 AL	CA	CU FE PB MG	ZN
PQL		1	12:03 AL	CA	CU FE PB MG	ZN
ICSA		1	12:08 AL	CA	CU FE PB MG	ZN
ICSAB		1	12:12 AL	CA	CU FE PB MG	ZN
CCV		1	12:17 AL	CA	CU FE PB MG	ZN
CCB		1	12:21 AL	CA	CU FE PB MG	ZN
ZZZZZZ		50	12:26			
ZZZZZZ		1	12:30			
ZZZZZZ		1	12:35			
ZZZZZZ		5	12:39			
ZZZZZZ		5	12:44			
ZZZZZZ		1	12:48			
ZZZZZZ		1	12:53			
ZZZZZZ		1	12:57			
ZZZZZZ		1	13:02			
ZZZZZZ		1	13:06			
CCV		1	13:11 AL	CA	CU FE PB MG	ZN
CCB		1	13:15 AL	CA	CU FE PB MG	ZN
ZZZZZZ		5	13:20			
ZZZZZZ		25	13:24			
ZZZZZZ		5	13:29			
ZZZZZZ		5	13:33			
ZZZZZZ		50	13:38			
ZZZZZZ		250	13:42			
ZZZZZZ		50	13:47			
ZZZZZZ		50	13:52			
ZZZZZZ		5	13:56			
ZZZZZZ		50	14:01			
CCV		1	14:05 AL	CA	CU FE PB MG	ZN
CCB		1	14:10 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	14:15			
ZZZZZZ		1	14:19			
ZZZZZZ		1	14:24			
ZZZZZZ		2	14:28			
ZZZZZZ		1	14:33			
ZZZZZZ		5	14:38			
ZZZZZZ		1	14:42			
ZZZZZZ		1	14:47			
ZZZZZZ		1	14:51			
ZZZZZZ		1	14:56			
CCV		1	15:00 AL	CA	CU FE PB MG	ZN
CCB		1	15:04 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:09			
ZZZZZZ		1	15:14			
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		10	15:32				
ZZZZZZ		10	15:36				
ZZZZZZ		10	15:41				
ZZZZZZ		10	15:45				
ZZZZZZ		5	15:50				
CCV		1	15:54 AL	CA	CU FE PB MG		ZN
CCB		1	15:58 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	16:03				
ZZZZZZ		1	16:07				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:17				
ZZZZZZ		1	16:21				
ZZZZZZ		1	16:26				
ZZZZZZ		1	16:30				
ZZZZZZ		1	16:35				
ZZZZZZ		1	16:39				
ZZZZZZ		1	16:44				
CCV		1	16:48 AL	CA	CU FE PB MG		ZN
CCB		1	16:52 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	16:57				
PBSBJ31ICS1		1	17:02		CU PB		ZN
LCSOBJ31ICS1		1	17:06		CU PB		ZN
ZZZZZZ		1	17:11				
ZZZZZZ		1	17:15				
ZZZZZZ		1	17:20				
SE6768-001	DSY-SD-AA01-0012	1	17:24		CU PB		ZN
SE6768-002	DSY-SD-AA01-1224	1	17:29		CU PB		ZN
SE6768-003	DSY-SD-AA01-2448	1	17:33		CU PB		ZN
SE6768-004	DSY-SD-DUP33-101211	1	17:38		CU PB		ZN
CCV		1	17:42 AL	CA	CU FE PB MG		ZN
CCB		1	17:47 AL	CA	CU FE PB MG		ZN
SE6768-005	DSY-SD-AA05-0012	1	17:51		CU PB		ZN
SE6768-006	DSY-SD-AA05-1224	1	17:56		CU PB		ZN
SE6768-007	DSY-SD-AA05-2448	1	18:00		CU PB		ZN
ZZZZZZ		1	18:05				
ZZZZZZ		5	18:10				
ZZZZZZ		1	18:14				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:23				
ZZZZZZ		1	18:27				
ZZZZZZ		1	18:32				
CCV		1	18:36 AL	CA	CU FE PB MG		ZN
CCB		1	18:41 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	18:45				
ZZZZZZ		1	18:50				
ZZZZZZ		1	18:54				
ZZZZZZ		5	18:59				
ZZZZZZ		1	19:03				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:12				
ZZZZZZ		1	19:17				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
PBWBJ31ICW1		1	19:21		CU PB	ZN
LCSWBJ31ICW1		1	19:26		CU PB	ZN
CCV		1	19:30 AL	CA	CU FE PB MG	ZN
CCB		1	19:34 AL	CA	CU FE PB MG	ZN
SE6788-008	DSY-SD-RB13-101211	1	19:39		CU PB	ZN
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:06			
ZZZZZZ		1	20:11			
ZZZZZZ		5	20:15			
ZZZZZZ		1	20:20			
CCV		1	20:24 AL	CA	CU FE PB MG	ZN
CCB		1	20:29 AL	CA	CU FE PB MG	ZN

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99874	ASTM D2216	27-OCT-11	26-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99874-2	LCS	WG99874	27-OCT-11	26-OCT-11	%	90	92.	102	80-120	

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 9, 2011

Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
jObrin@katahdinlab.com

Re: **Narrative 041128162 Modified Draft ASTM Sieve Method with Qualitative TEM analysis**

Dear Jennifer:

The following set of samples was received October 20th 2011 via FedEx. These samples were received under chain of custody from Katahdin Analytical Services, Scarborough, ME for asbestos content analysis. All samples are associated with the project SE6768/SE6841. The samples submitted were saturated with moisture and required additional time to dry. Most of the samples were received in good condition, except for the following samples below:

EMSL Sample Number	Client Sample Number	Condition at Time of Receipt
041128162-0015	DSY-SD-AA17-0012	Jar broken
041128162-0019	DSY-SD-AA21-1224	Jar broken
041128162-0028	DSY-SD-AA28-0016	Jar labeled DSY-SD-AA28-0012
041128162-0031	DSY-SD-AA30-1224	Jar broken

The samples were logged in following normal lab procedures. All analyses were performed in the Cinnaminson, NJ laboratory.

Modified Draft ASTM Sieve method

The samples were first dried prior to being fractioned into 3 sieved components, Coarse (<19 mm), Medium (>2 mm) and Fine (<2 mm). The sieved samples were then analyzed via polarized light microscopy (PLM) using the procedures from the EPA 600/R-93/116 method. Any asbestos found in the fine fraction was analyzed via a 400 point count analysis. All data was reported on a percent asbestos basis. The limit of quantification for this method is <1%.

Samples that did not have asbestos detected were analyzed via Qualitative Transmission Electron Microscopy (TEM). Due to the amount of organic material and calcium fibers in these samples, an aliquot of the sample was treated with dilute hydrochloric acid prior to analysis.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

QC Performed

QC guidelines were not specified by the client. EMSL performed QC in compliance with our Quality Assurance Manual (QAM) and pertinent SOPs. For this analysis, two inter-analyst and four intra-analyst samples were analyzed. Six laboratory blanks were also analyzed. All QC was found to be in concordance.

Stephen Siegel, CIH
Asbestos Lab Manager,
EMSL Westmont, NJ

Robyn Denton
Asbestos Quality Assurance Manager
EMSL Westmont, NJ

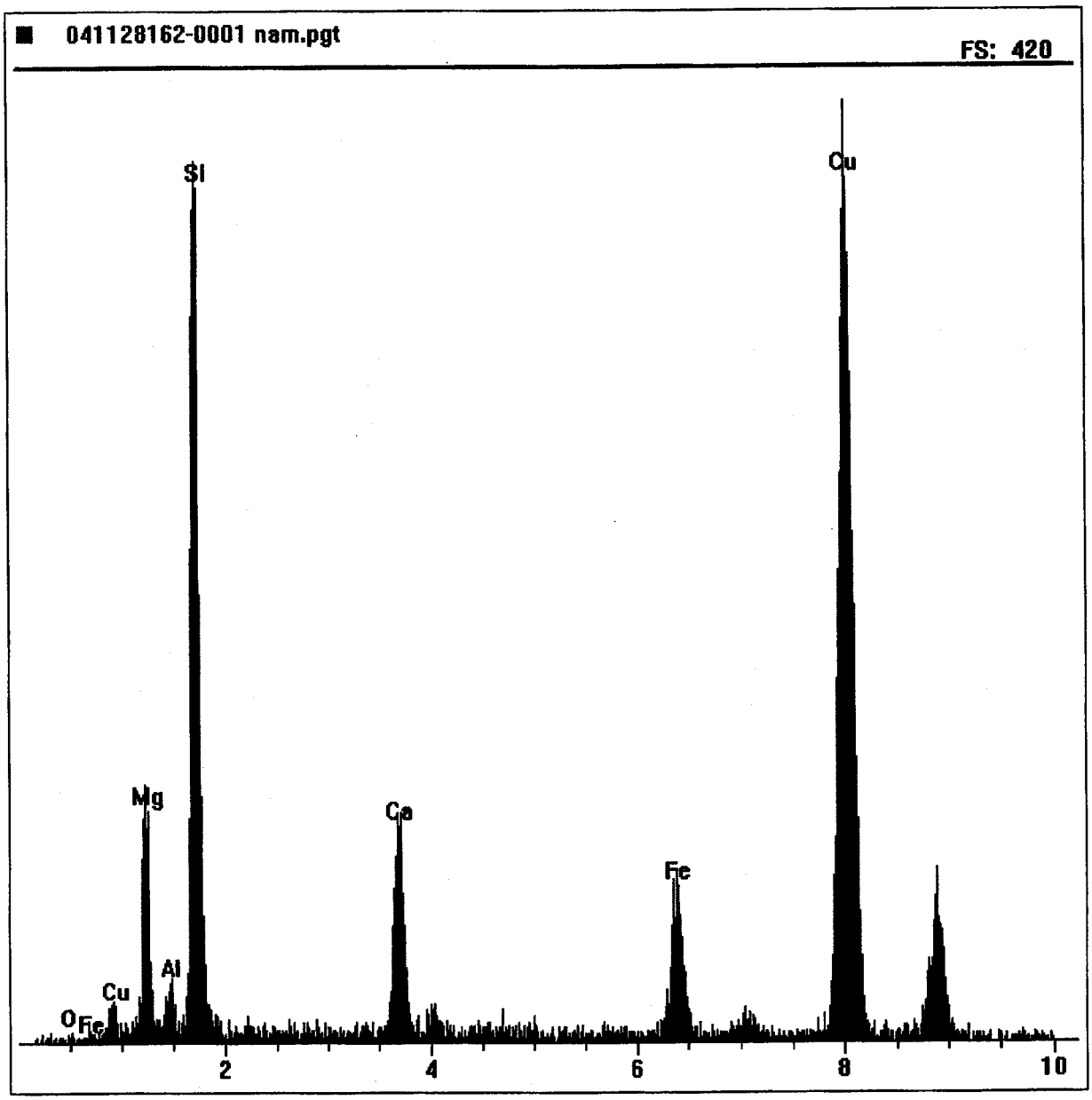
2. Tabulated Sample Results

EMSL ANALYTICAL, INC.

Energy Dispersive X-Ray Analysis
Qualitative Spectrum

File: C:\Program Files\PGT\Data\041128162-0001 nam.pgt
Collected: November 08, 2011 12:41:16

Live Time:	35.49	Count Rate:	974	Dead Time:	19.08 %
Beam Voltage:	20.00	Beam Current:	2.00	Takeoff Angle:	31.00



3. Worksheets/Benchsheets

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:**

Address: | **Date/Time Due:**

Fax:

Project:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Rolled, 7. Fibrils, 8. Modulis, 9. Bundle Shaped, 10. Other; Sign of Elongation (E): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low 0.010, 2. Mod 0.010-0.030, 3. High >0.030, 4. None 0.00 or Isotropic; Fiber Color (FC): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Dispersion (D): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulous
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-01 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C), (T), (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G. Viet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

Date/Time Due:

TAT:

Special Instructions

ASTM

Order Number

041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (4)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Way, 2. Bright, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Rolled, 7. Fibril, 8. Mobile, 9. Basic Shape, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1. Low 0.010, 2. Mid 0.010-0.050, 3. High >0.050, 4. Xtals 0.020 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macroscopic	Treatment	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-04 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	GV
-04 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-04 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-05 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		1 2	<1 <1			20	99		1.551, 1.680 / 1.557, 1.694 / 1,2 / 1 / 2 P / 1,2 B / (FC) 6 / 1 / E	LM
-05 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		1 2	<1 <1			20	99		1.550, 1.694 / 1.535, 1.694 / 1,2 / 1 / 2 P / 1,2 B / (FC) 6 / 1 / E	LM
-05 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-06 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		2	<1	11	2	20	98		1.683 / 1.696 / 2 / 1 / 2 P / 2 B / (FC) 6 / 1 / E	MK
-06 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		2	<1	11	2	20	98		1.680 / 1.696 / 2 / 1 / 2 P / 2 B / (FC) 6 / 1 / E	MK
-06 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G.Vliet L.M. 11/4/11 Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
7 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. 1.557 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
7 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
7 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
8 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
8 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
8 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
9 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.557 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
9 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.549 ⊥ R.I. 1.554 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
9 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC — Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
10 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I.	1.558 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
10 MEDIUM	(C) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
10 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
11 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
11 MEDIUM	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 2										P B	(FC) E
11 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
12 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I.	1.554 ∥ R.I.
	(T) 1										1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
12 MEDIUM	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 2										P B	(FC) E
12 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
QC	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E

ams

1.680 1.696 2 1 22 61

1.682 1.696 2 1 22 61

1.680 1.692 2 1 22 61

QC

Analyst: LM Date: 11.5.11 Computer: Date:

Room Temp (C): 23.7

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon-Like, 5 Tapered Ends, 6 Scaled, 7 Fibril, 8 Mobile, 9 Needle Shape, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low: 0.010, 2 Mid: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
13 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
13 MEDIUM	(C) 2 (T) 2 (H)	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
13 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
15 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.547 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ‖ R.I.; M S; P B (FC) E

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 23.6°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon-Like, 5 Tapered Ends, 6 Scalel, 7 Fluted, 8 Acicular, 9 Exotic Shape, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties ⊥ R.I.	Optical Properties ∥ R.I.	M	S	P	B	(FC)	E
16 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
16 MEDIUM	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
16 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
17 COARSE	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
17 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.678	1.695	2	1	2	2	6	1
17 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
18 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
QC	(C) (T) (H)							20										

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 24.8°

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties: Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Soiled, 7. Fibril, 8. Matrix, 9. Exotic Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
19 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
19 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
19 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
20 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
20 MEDIUM	(C) 2, (T) 1, (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
20 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
21 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.549 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
21 MEDIUM	(C) 2, (T) 1, (H) 2	1		1, 2	<1, <1	11	5	20	95	chrys M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
21 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C), (T), (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.678 1.692 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.5

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: [redacted]

Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
22 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.555 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
22 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.548 ⊥ R.I. 1.553 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
22 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
23 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.547 ⊥ R.I. 1.553 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
23 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
23 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
24 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	2	20	98	M10	1.551 ⊥ R.I. 1.555 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
24 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
24 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

amo 1.681 1.696; 2 1; 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: _____ Date: _____

Room Temp (C): 20.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scalpel, 7. Fibril, 8. Needle, 9. Exists Singly, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.000 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
25 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
25 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.556 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E
25 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
26 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	<1	11	3	20	92	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
26 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
26 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
27 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	2	20	96	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
27 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
27 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E

amo 1.678 1.692 2 1 2 2 61

1.678 1.691 2 1 2 2 61

amo 1.680 1.696 2 1 2 2 61

1.676 1.691 2 1 2 2 61

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.4

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
28 COARSE	(C) 1,4 (T) 2 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.551 / 1.570 ∥ R.I. · 2 M · 1 S · 2 P · 1 B · (FC) a/a/ · 1 E
				amosite	<1						
28 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	5	20	95	M2	1.550 ⊥ R.I. · 1.551 ∥ R.I. · M · S · P · B · (FC)/ · E
2Y FINE	(C) 1 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
29 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 / 1.550 ⊥ R.I. · 1.551 / 1.570 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/a · 1 E
				amosite	<1						
29 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	3	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.576 / 1.585 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/ · 1 E
				amosite	<1						
29 FINE	(C) 1,4 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
30 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 ⊥ R.I. · 1.576 ∥ R.I. · M · S · P · B · (FC) a/ · E
30 MEDIUM	(C) (T) (H)	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
30 FINE	(C) (T) (H)	1		no		11	10	20	90	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
QC 30 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.576 / 1.594 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/a · 1 E
				amosite	<1						

QC

Analyst: David Portnoi Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): 19.4°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (A), Sign of Elongation (E), Pleochroism (F), Birefringence (G), Dispersion Color (DC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (E)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties: ⊥ R.I.	∥ R.I.	M	S	P	B	(FC)	E
31 COARSE	(C) 4	1		mD				20	100									
	(T) 2																	
	(H) 2																	
31 MEDIUM	(C) 1	1		chry	<1	11	5	20	95	mx	1.550 // 1.560	1.544 // 1.556	1	2				
	(T) 1			Amosite	<1										2	2	4/4	1
	(H) 1																	
31 FINE	(C) 1	1		mx		11	10	20	90	mx								
	(T) 1																	
	(H) 1																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
QC 31 COARSE	(C)							20										
	(T)																	
	(H)																	

QC

Analyst: Dwight Pointer Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0001
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
01	D3	ND								FBCM		
	J4	1-2	2							FBCM		Mg, Si, Al, Ca, Fe
	O13	3	1							FBCM		Si
	H12	4	1							FBCM		Si
	I11	5-7	3							FBCM		Mg, Si, Al Ca, Fe; Si
02	F5	ND								FBCM		
	F11	8-9	2							FBCM		Si
	G15	10-11 ~~ND~~	2							FBCM		Si
	M4	ND								FBCM		
	N10	ND								FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
(Total)		11	11									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg, Al, Si, Ca, Fe; Si

Prepped w/ acid

Grid Box # Bulk-0075 Row O Column 1,2

Analyst BD Scope 04:03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0002
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
03	C7	ND								F B C M		
	D5	↓								F B C M		
	F4	↓								F B C M		
	G11	1	1							F B C M		Si
	D13	2-4	3							F B C M		Mg,Al,Si,Ca,Fe
04	A11	ND								F B C M		
	B13	↓								F B C M		
	D12	↓								F B C M		
	F4	↓								F B C M		
	G7	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		4	4				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing

Prepped w/ Acid

Grid Box # BULK.0075 Row O Column 3,4

Analyst RD Scope 04.03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0003
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
05	G5	ND								F B C M		
	H8	ND								F B C M		
	L10	↓								F B C M		
	J9									F B C M		
	D9									F B C M		
06	B5	ND								F B C M		
	H9									F B C M		
	C13									F B C M		
	D11									F B C M		
	M10	1	1							F B C M		Mg, Al, Si, Ca, Fe
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg Al Si Ca Fe

Prepped w/Acid

Grid Box # Bulk-75 Row 0 Column 5,6

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0004
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P1	03	1	1							F B C M		Ca
	H2	ND								F B C M		
	J4	2-3	2							F B C M		Si, Al, Mg
	K7	4	1							F B C M		Si, Al
	D5	ND								F B C M		
P2	C11	↓								F B C M		
	D14	↓								F B C M		
	K10	↓								F B C M		
	H4	5	1							F B C M		Si
	J2									F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		5	3									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Si, Al, Mg, Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 1,2

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0014
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P3	C7	ND								F B C M		
	D9	〃								F B C M		
	G5	〃								F B C M		
	H11	〃								F B C M		
	D15	〃								F B C M		
P4	A8	1	1							F B C M		Ca
	C10	ND								F B C M		
	D15	〃								F B C M		
	K11	〃								F B C M		
	D13	〃								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1				-	-				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☒ (5) Fibers Containing Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 3,4

Analyst RD Scope CH03 Date 11.08.11
RD 11/08/11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0018
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
U1	A4	ND								F B C M		
	B6	|	1							F B C M		Ca
	B8	|								F B C M		
	D6	|								F B C M		
	F8	|	1							F B C M		Si
U2	O14	|								F B C M		
	L15	|	1							F B C M		Mg, Ca Si, Al
	K11	|								F B C M		
	F14	|								F B C M		
	E4	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		—										

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Ca, Si, Mg, Al

Prepped w/ Acid

Grid Box # Bulk-0075 Row U Column 1,2

Analyst RD Scope 04.03 Date 11.10.11

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
1	041128162-0001	DSY-SD-AA01-0012	10/12/2011	109.64	93.13	14.97	1.86	Y
2	041128162-0002	DSY-SD-AA01-1224	10/12/2011	110.96	96.93	12.76	1.65	Y
3	041128162-0003	DSY-SD-AA01-2448	10/12/2011	75.26	61.02	12.87	1.63	Y
4	041128162-0004	DSY-SD-DUP33-101211	10/12/2011	86.24	67.77	16.16	2.7	Y
5	041128162-0005	DSY-SD-AA05-0012	10/12/2011	119.53	98.32	19.09	2.53	Y
6	041128162-0006	DSY-SD-AA05-1224	10/12/2011	100.08	84.64	13.18	2.48	Y
7	041128162-0007	DSY-SD-AA05-2448	10/12/2011	124.57	93.44	25.08	6.31	Y
8	041128162-0008	DSY-SD-AA09-0012	10/13/2011	65.56	49.83	13.68	2.34	Y
9	041128162-0009	DSY-SD-AA09-1224	10/13/2011	100.73	70.26	24.89	5.91	Y
10	041128162-0010	DSY-SD-AA09-2448	10/13/2011	125.05	96.76	22.17	6.49	Y
11	041128162-0011	DSY-SD-AA13-0012	10/13/2011	65.37	49.82	13.41	2.33	Y
12	041128162-0012	DSY-SD-AA13-1224	10/13/2011	113.34	89.41	19.39	4.78	Y
13	041128162-0013	DSY-SD-AA13-2448	10/13/2011	98.20	82.65	13.39	2.57	Y
14	041128162-0014	DSY-SD-AA13-2448DUP	10/13/2011	77.32	63.36	11.73	2.82	Y
15	041128162-0015	DSY-SD-AA17-0013	10/13/2011	96.54	81.39	12.88	2.48	Y
16	041128162-0016	DSY-SD-AA17-1224	10/13/2011	95.61	78.01	14.97	3.04	Y
17	041128162-0017	DSY-SD-AA17-2448	10/13/2011	113.68	89.28	20.83	3.99	Y
18	041128162-0018	DSY-SD-AA21-0012	10/13/2011	63.55	53.08	9.49	1.4	Y
19	041128162-0019	DSY-SD-AA21-1224	10/13/2011	74.76	63.49	9.78	1.83	Y
20	041128162-0020	DSY-SD-AA21-2448	10/13/2011	88.76	78.89	8.24	1.67	Y
21	041128162-0021	DSY-SD-DUP34-101311	10/13/2011	105.22	82.26	19.23	4.02	Y
22	041128162-0022	DSY-SD-AA24-0012	10/13/2011	104.98	83.43	19.38	2.53	Y

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
23	041128162-0023	DSY-SD-AA24-1224	10/13/2011	75.39	60.20	13.51	1.96	Y
24	041128162-0024	DSY-SD-AA24-2448	10/13/2011	105.00	75.29	25.04	4.95	Y
25	041128162-0025	DSY-SD-AA26-0012	10/13/2011	108.33	76.40	29.73	2.71	Y
26	041128162-0026	DSY-SD-AA26-1224	10/13/2011	140.83	93.00	39.86	8.39	Y
27	041128162-0027	DSY-SD-AA26-2448	10/13/2011	121.13	79.09	31.17	11.03	Y
28	041128162-0028	DSY-SD-AA28-0016	10/13/2011	125.92	43.07	67.23	15.61	Y
29	041128162-0029	DSY-SD-DUP35-101311	10/13/2011	123.34	46.17	64.05	13.37	Y
30	041128162-0030	DSY-SD-AA30-0012	10/13/2011	292.02	11.36	263.61	17.26	Y
31	041128162-0031	DSY-SD-AA30-1224	10/13/2011	285.69	4.03	262.76	17.17	Y

4. QC Data Reports/Logs

Monthly PLM Bulk QC Summary

Laboratory: Cinnaminson, NJ **Report #** 1 **Month/Year:** Nov-11

				Original		QC		Variance		
	Date	Reference #	Sample #	Analyst	Result	Analyst	Result	Original	QC	Conclusion
1	11/4/11	041128162-0003	DSY-SD-AA01-2448	GV	0	TY	0	0.00	0.00	Pass
2	11/4/11	041128162-0006	DSY-SD-AA05-1224	GV	0	FD	0	0.00	0.00	Pass
3	11/7/11	041128162-0025C	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
4	11/7/11	041128162-0025M	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
5	11/7/11	041128162-0025F	DSY-SD-AA26-0012	LM	0	LM	0	0.00	N/A	Pass
6	11/7/11	041128162-0030	DSY-SD-AA30-0012	DP	0.5	DP	0.5	0.00	N/A	Pass

EMSL PLM ANALYST ACCURACY

Analyst: Leslie McCluskey

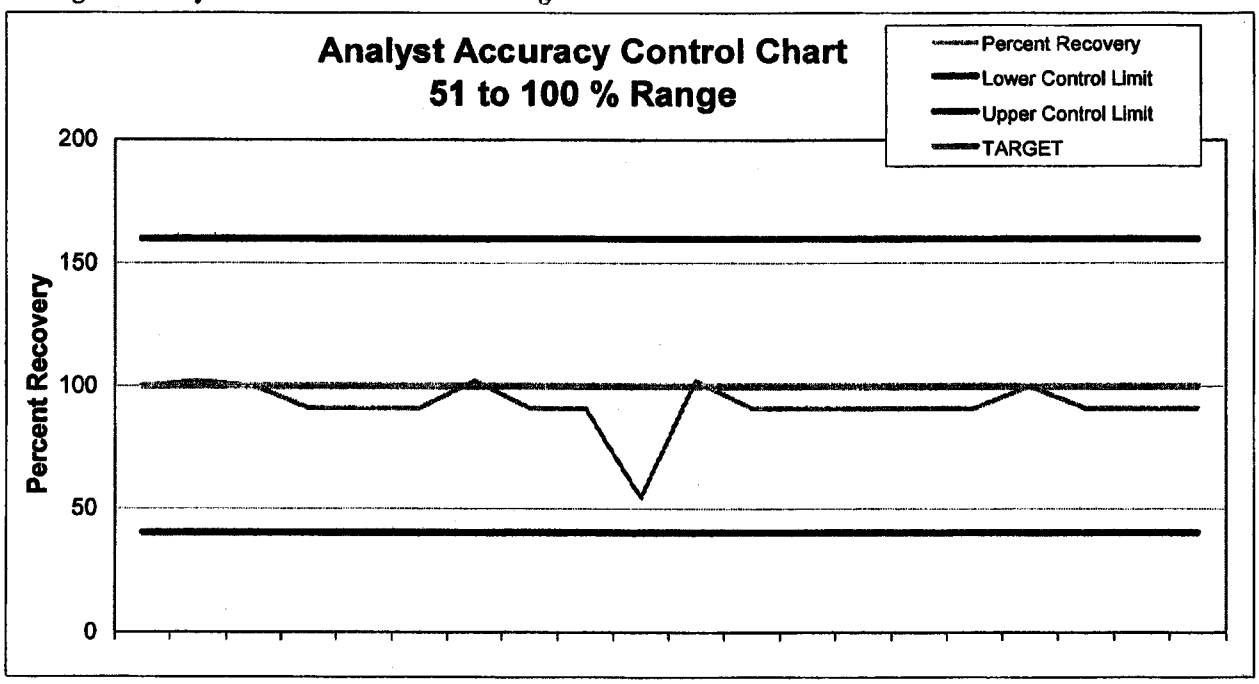
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
1/5/11	6	Chrysotile	55.00	Chrysotile	55.00	IN	100	0	IN
1/6/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
1/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
1/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
2/8/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
3/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	30.00	IN	55	45	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
5/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
6/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
10/21/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **8.5** *Target = 0*



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EMSL PLM ANALYST ACCURACY

Analyst: Melissa Klinedinst

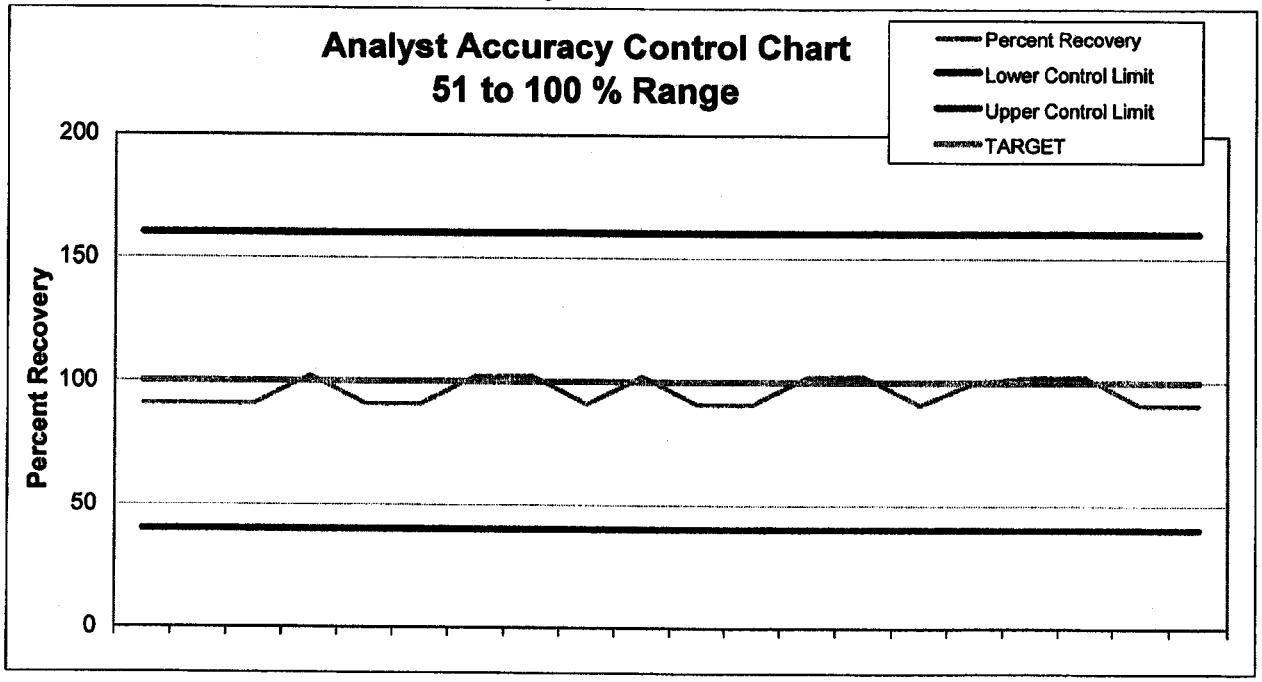
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
6/29/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/11/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/21/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/24/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
9/29/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/3/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/9/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
11/2/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/3/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/6/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **5.8** ***Target = 0***



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EMSL PLM ANALYST ACCURACY

Analyst: Dave Poitras

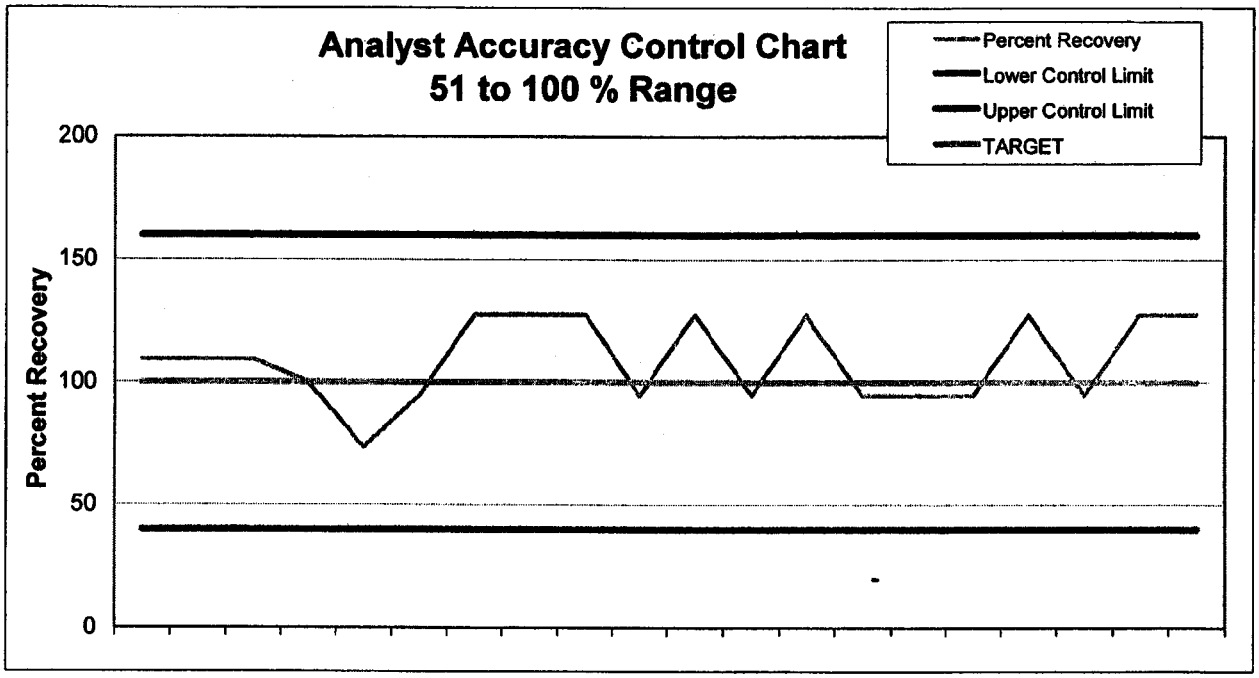
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
3/28/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/12/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
5/3/11	3	Chrysotile	95.00	Chrysotile	70.00	IN	74	26	IN
6/28/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
6/29/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/12/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
7/26/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/2/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/20/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/8/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN

Average Accuracy Coeficent = **15.4** ***Target = 0***



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EMSL PLM ANALYST ACCURACY

Analyst: Garret Vliet

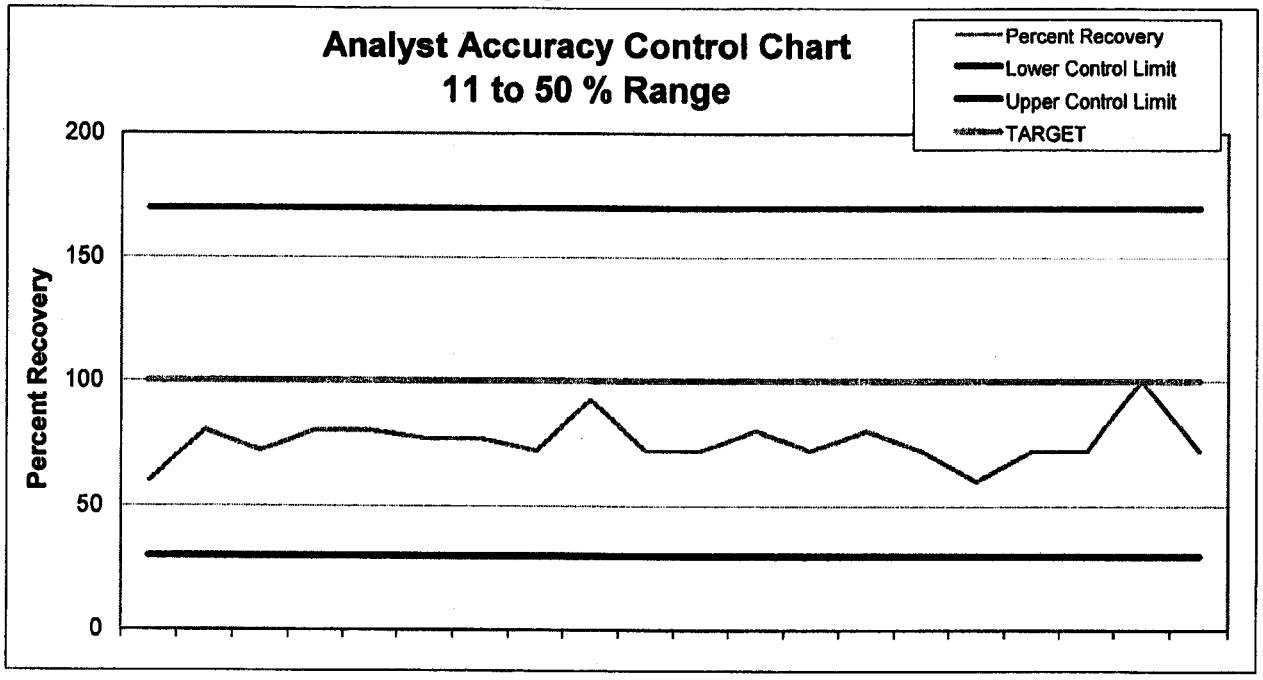
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/24/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	12.00	IN	92	8	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
9/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN

Average Accuracy Coeficent = **24.3** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Frank DiCrescenzo

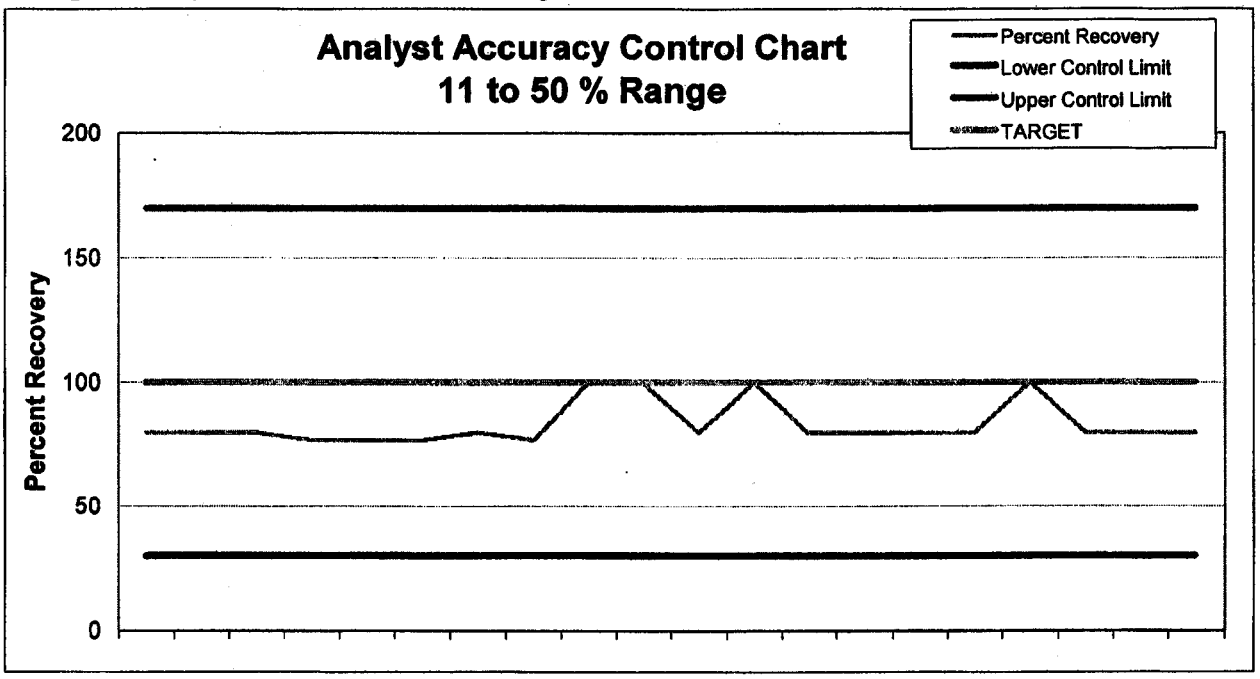
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/18/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/9/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN

Average Accuracy Coeficent = 16.6 *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Ted Young

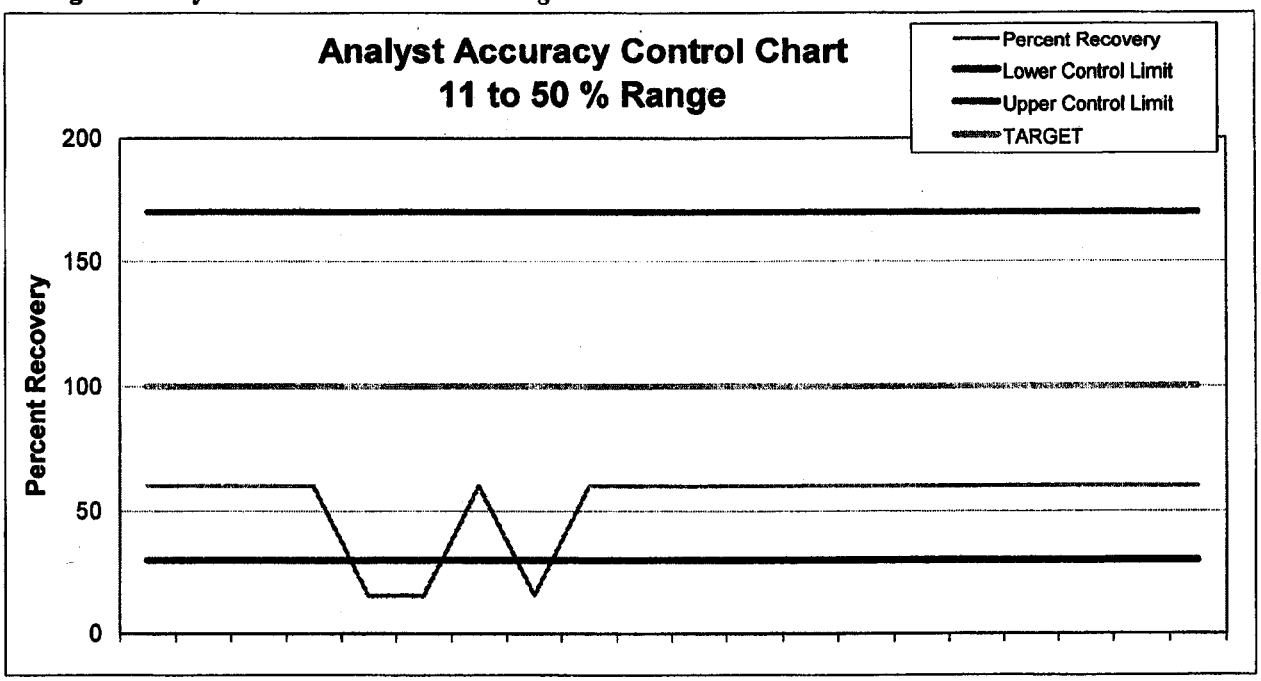
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/20/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
7/1/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/16/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN

Average Accuracy Coeficent = **46.7** ***Target = 0***



Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10.5 6 20.3	(C)			1	50			20			1.551 ⊥ R.I. 1.558 ∥ R.I.
	(T)										M S
	(H)										2 P 1 B (FC) 6 1 E
11.7 6 20.3	(C)			1	50			20			1.550 ⊥ R.I. 1.557 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 P 1 B (FC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: Computer: Date:

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
11/2/11 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/3 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/6 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/7 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E

21.6°

21.6°

21.3°

21.6°

Analyst: MK Date: Nov 11 Computer: Date:

Room Temp (C):

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
1/1 8	(C)			act/tre	3			20	97		⊥ R.I.	∥ R.I.	21.1°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/5 6	(C)			chry	70			20	30		⊥ R.I.	∥ R.I.	25.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/7 6	(C)			chry	70			20	30		⊥ R.I.	∥ R.I.	19.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/8 1	(C)			act/tre	<1			20	100		⊥ R.I.	∥ R.I.	20°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/9 10	(C)			antho	5			20	95		⊥ R.I.	∥ R.I.	22.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			

Analyst: David Poitras Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (E)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc. (C)	(T)	(H)	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11/1 (8)		W	2			5	2			20	98		1.605 ⊥ R.I. 1.618 ∥ R.I. 2 M 1 S 2P 2 B (FC) 1 E
11/2 (3)			4			1	65			20	35		1.557 ⊥ R.I. 1.558 ∥ R.I. M S 2P B (FC) E
11/3 (3)			A			1	75			20	25		1.552 ⊥ R.I. 1.557 ∥ R.I. M S 2P B (FC) E
11/4 (9)			A			1	18			20	82		1.552 ⊥ R.I. 1.557 ∥ R.I. M S 2P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E

Analyst: G. Uliet Date: 11/1/11 Computer: _____ Date: _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Special Instructions | Order Number

Fax:

Project: Ref Slides

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (S)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
8	(C)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I.
10/31	(T)										M / S
	(H)										P / B / (FC) / E
8	(C)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I.
11/1	(T)										M / S
	(H)										P / B / (FC) / E
3	(C)			1	60	~	~	20	40		⊥ R.I. / ∥ R.I.
11/2	(T)										M / S
	(H)										P / B / (FC) / E
3	(C)			1	60	~	~	20	40		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/3	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
9	(C)			1	20	~	~	20	80		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/4	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
6	(C)			1	50	~	~	20	50		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/5	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

FD FD FD FD FD

Analyst: FD Date: 11-5-11 Computer: _____ Date: _____

Room Temp (C): _____

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11-1-11 8-1.605	(C)			4/5	2			20	98		1.613 ⊥ R.I. 1.635 ∥ R.I.
	(T)										2 M 1 S
	(H)										2P 2B (FC) 6 3 E
11-2-11 3-1.550	(C)			1	60			20	40		1.548 ⊥ R.I. 1.574 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (FC) 6 1 E
11-3-11 3-1.550	(C)			1	60			20	40		1.549 ⊥ R.I. 1.576 ∥ R.I.
	(T)										1 M 1 S
	(H)										2P 1 B (FC) 6 1 E
11-4-11 9-1.550	(C)			1	15			20	85		1.550 ⊥ R.I. 1.577 ∥ R.I.
	(T)										1 M 1 S
	(H)										2P 1 B (FC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: Tai Young Date: Nov. 2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM sieve

Order Number: 041128162

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scalel, 7. Fibril, 8. Needle, 9. Blade Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
BLANK 1 MED.	(C) 3	1		NP	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 2 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 3 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 1 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 2 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 3 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3 °C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:** QC

Address: | **Date/Time Due:**

Special Instructions: ASTM

Order Number: 28162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Beaded, 7. Fibril, 8. Mesh-like, 9. Exotic Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low: 0.010, 2 Mod 0.010-0.050, 3 High: 0.050, 4 None: 0.001 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
intra QC 25 C	(C) 2			1	<1	[illegible]		20	98	M10	1.551 ⊥ R.I. 1.551 ∥ R.I.
	(T) 1					11	2				1 M 1 S
	(H) 2										2 P 1 B (FC) 6 1 E
M	(C) 2			1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.
	(T) 1										1 M 1 S
	(H) 2										2 P 1 B (FC) 6 1 E
F	(C) 2			ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.
	(T) 1										M S
	(H) 1										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample		Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-2 COARSE	(C) 2	1/2/3		ND		—	—	20	100	NF	⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

FD

Analyst: FD Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:** QC

Address: | **Date/Time Due:**

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-3 COARSE	(C) 2	2,3,5		NID				20	100		⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

Analyst: Tw Kong Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

5. Client and EMSL Internal Chains of Custody

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page 1 of 1

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
SE6841	

LAB USE ONLY WORK ORDER #: SE6768 ~~SE6841~~

KATAHDIN PROJECT NUMBER

REMARKS: To EMSL

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
					ANALYSIS AND CONTAINER TYPE / PRESERVATIVES										
•	DSY-SD-AA01-0012	10-12-11/14:20	SL	1	✓		SDG: DSY-23								
•	-AA01-1224	/14:23		1	✓										
•	-AA01-2448	/14:28		1	✓										
•	-DUP33-101211	/00:00		1	✓										
•	-AA05-0012	/14:45		1	✓										
•	-AA05-1224	/14:48		1	✓										
•	-AA05-2448	/14:51		1	✓										
		/													
•	DSY-SD-AA09-0012	10-13-11/11:55	SL	1	✓		SDG: DSY-24								
•	-AA09-1224	/11:58		1	✓										
•	-AA09-2448	/12:01		1	✓										
•	-AA13-0012	/12:20		1	✓										
•	-AA13-1224	/12:23		1	✓										
•	-AA13-2448	/12:26		2	✓	MS/MSD									
•	-AA17-0012	/12:45		1	✓										
•	-AA17-1224	/12:48		1	✓										

COMMENTS DOD QSM 4.1 ND to LOD QC Level IV Tetra Tech ADAPTEDD

Due ~~12~~ 11-1-11 (31)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11/15:15	10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin
ANALYTICAL SERVICES

600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

D4112816 2

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:

LAB USE ONLY WORK ORDER #: SE6841

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: Asbestos (Filt. ☐Y ☐N)	
1	DSY-SD-AA17-2448	10-13-11 / 12:51	SL	1	✓	
2	-AA21-0012	/ 13:05				SDG: DSY-24
3	-AA21-1224	/ 13:08				
4	-AA21-2448	/ 13:11				
5	-Dup34-101311	/ 00:00				
6	-AA24-0012	/ 13:25				
7	-AA24-1224	/ 13:28				
8	-AA24-2448	/ 13:31				
9	-AA26-0012	/ 14:00				
10	-AA26-1224	/ 14:03				
11	-AA26-2448	/ 14:06				
12	-AA28-0016	/ 14:30				Jar marked 0012
13	-Dup35-101311	/ 00:00				
14	-AA30-0012	/ 14:45				
15	-AA30-1224	/ 14:48				Jar rec'd broken
		/				

COMMENTS See Page 1 called client/left message for Teste TAT JK

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-13-11 / 15:15	C LaLena 10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

REPORT TO INSTRUCTIONS

- ☐ Send Receipt Confirmation Emails
- ☐ Email Report Only-Do not send hard copy
- ☐ No electronic signatures
- ☐ Project ID required
- ☐ Cust. COC ID required
- ☐ Miscellaneous account

Sales Rep and Comment: ssteinmetz

Instructions
Received 2 day extention on due date

BILL TO INSTRUCTIONS

- ☐ Exempt from prep charge
- ☐ Exempt from off hour min charges
- ☐ Exempt from layer/aliquot charges
- ☐ Email Invoice Only- Do not send hard copy.
- ☐ Credit Card on File
- ☐ P.O. Required

Billing Frequency: With Report -- Print and send an invoice for each Order ID

Use Billing Contact:
Accounting Terms: N30
Payment Directions: With Report

Instructions

Internal Comment

Test: PLM ASTM Sieve Quantitative **Matrix** Soils **TAT:** 2 Week **Qty:** 31

- ☐ Lab Opening Exempt For Test
- ☐ Prep Charge Exempt For Test
- ☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011

Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments
weights are estimated using a blank sample jar as tare weight. Sludge could not be completely removed.

Prepped: DS **Date** 11/3/11
Analyzed: G.Vliet/MM MC **Date** 11/4/11 115, 117
Data Entry AD **Date** 11.8.11
Screened: **Date**
Mailed: KB **Date** 11/10/11

Special Test Instructions

11/5/11

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		~~11/3/2011~~ 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0005	DSY-SD-AA05-0012		11/3/2011 2:00:00 PM
041128162-0006	DSY-SD-AA05-1224		11/3/2011 2:00:00 PM
041128162-0007	DSY-SD-AA05-2448		11/3/2011 2:00:00 PM
041128162-0008	DSY-SD-AA09-0012		11/3/2011 2:00:00 PM
041128162-0009	DSY-SD-AA09-1224		11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400

Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

041128162-0010	DSY-SD-AA09-2448	11/3/2011 2:00:00 PM
041128162-0011	DSY-SD-AA13-0012	11/3/2011 2:00:00 PM
041128162-0012	DSY-SD-AA13-1224	11/3/2011 2:00:00 PM
041128162-0013	DSY-SD-AA13-2448	11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP	11/3/2011 2:00:00 PM
041128162-0015	DSY-SD-AA17-0012	11/3/2011 2:00:00 PM
041128162-0016	DSY-SD-AA17-1224	11/3/2011 2:00:00 PM
041128162-0017	DSY-SD-AA17-2448	11/3/2011 2:00:00 PM
041128162-0018	DSY-SD-AA21-0012	11/3/2011 2:00:00 PM
041128162-0019	DSY-SD-AA21-1224	11/3/2011 2:00:00 PM
041128162-0020	DSY-SD-AA21-2448	11/3/2011 2:00:00 PM
041128162-0021	DSY-SD-DUP34-101311	11/3/2011 2:00:00 PM
041128162-0022	DSY-SD-AA24-0012	11/3/2011 2:00:00 PM
041128162-0023	DSY-SD-AA24-1224	11/3/2011 2:00:00 PM
041128162-0024	DSY-SD-AA24-2448	11/3/2011 2:00:00 PM
041128162-0025	DSY-SD-AA26-0012	11/3/2011 2:00:00 PM
041128162-0026	DSY-SD-AA26-1224	11/3/2011 2:00:00 PM
041128162-0027	DSY-SD-AA26-2448	11/3/2011 2:00:00 PM
041128162-0028	DSY-SD-AA28-0016	11/3/2011 2:00:00 PM
041128162-0029	DSY-SD-DUP35-101311	11/3/2011 2:00:00 PM
041128162-0030	DSY-SD-AA30-0012	11/3/2011 2:00:00 PM
041128162-0031	DSY-SD-AA30-1224	11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *11/8/2011 11:23:35 AM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

Test: **TEM ASTM Sieve Qualitative** **Matrix** Soils **TAT:** 2 Week **Qty:** 5

☐ Lab Opening Exempt For Test
☐ Prep Charge Exempt For Test
☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments

Prepped: DS **Date:** 11/8/11
Analyzed: RD **Date:** 11.8.11
Data Entry ↓ **Date:** 11.8.11
Screened: **Date:**
Mailed: KB **Date:** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		11/3/2011 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP		11/3/2011 2:00:00 PM

0411 Bulk 0076 E

Reprep w/acid

0411 Bulk 0075 O

6. Equipment Performance Checks

PLM Calibration & Contamination Record

Lab: Cinnaminson Month / Year: November / 2011

PLM Scope #: 02

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	C.H.	✓	✓	✓	✓	✓	✓	420	589
11/2/11	C.H.	✓	✓	✓	✓	✓	✓		
11/3/11	C.H.	✓	✓	✓	✓	✓	✓		
11/4/11	C.H.	✓	✓	✓	✓	✓	✓		
11/5/11	LM	✓	✓	✓	✓	✓	✓		
11/7/11	LM/C.H	✓	✓	✓	✓	✓	✓		
11/8/11	C.H	✓	✓	✓	✓	✓	✓		
11/9/11									
11/10/11									
11/11/11									
11/									
11/									
11/									
11/									
11/									
11/									

26.1°C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Conn Month / Year: Nov 2011

PLM Scope #: 10

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/2/11	MK	✓	✓	✓	✓	✓	✓	460	620
11/3	MK	✓	✓	✓	✓	✓	✓		
11/6	MK	✓	✓	✓	✓	✓	✓		
11/7	MK	✓	✓	✓	✓	✓	✓		
11/9	MK	✓	✓	✓	✓	✓	✓		

21.6 °C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinn. N.J. Month / Year: November 2011

PLM Scope #: 5

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/2011	DP	✓	center	✓	align	✓	✓	460	620
11/2/2011	DP	✓	center	✓	✓	✓	✓		
11/5/2011	DP	✓	center	✓	✓	✓	✓		
11/7/2011	DP		center	✓	✓	✓	✓		
11/8/2011	DP	✓	center	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson 04 Month / Year: Nov. 2011

PLM Scope #: 01

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	G.V.	/	/	/	/	/	//	460	600
11/2/11	G.V.	/	/	/	/	/	//		
11/3/11	G.V.	/	/	/	/	/	//		
11/4/11	G.V.	/	/	/	/	/	//		
11/7/11	G.V.	/	/	/	/	/	//		
11/9/11	G.V.	/	/	/	/	/	//		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson-Asbestos Month / Year: 11/11

PLM Scope #: 06

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11-1-11	FD	✓	✓	✓	✓	✓	✓	460	620
11-2-11	FD	✓	✓	✓	✓	✓	✓		
11-3-11	FD	✓	✓	✓	✓	✓	✓		
11-4-11	FD	✓	✓	✓	✓	✓	✓		
11-5-11	FD	✓	✓	✓	✓	✓	✓		
11-8-11	FD	✓	✓	✓	✓	✓	✓		
11-9-11	FD	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Livermore Month / Year: Nov / 2011

PLM Scope #: 4 Tai Yun

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1	TY	✓	✓	✓	✓	✓	✓	4.55	5.30
11/2	TY	✓	✓	✓	✓	✓	✓		
11/3	TY	✓	✓	✓	✓	✓	✓		
11/4	TY	✓	✓	✓	✓	✓	✓		
11/7	TY	✓	✓	✓	✓	✓	✓		
11/8	TY	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

Daily TEM Calibration Sheet

Month: November Year: 2011 Scope: 04-03

Day (1-31)	Analyst Initials	Scope Align.	LN Dewar Filled	Al Peak Actual	Al Peak Accepted Limit	Cu Peak Actual	Cu Peak Accepted Limit	Pass/Fail* (circle)
1	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
2	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
3	CG	✓	FL	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
4	CG	✓	CG	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
5			FL		1.47-1.49		8.03-8.05	Pass/Fail
6					1.47-1.49		8.03-8.05	Pass/Fail
7			FL		1.47-1.49		8.03-8.05	Pass/Fail
8	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
9			FL		1.47-1.49		8.03-8.05	Pass/Fail
10	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
11					1.47-1.49		8.03-8.05	Pass/Fail
12					1.47-1.49		8.03-8.05	Pass/Fail
13					1.47-1.49		8.03-8.05	Pass/Fail
14					1.47-1.49		8.03-8.05	Pass/Fail
15					1.47-1.49		8.03-8.05	Pass/Fail
16					1.47-1.49		8.03-8.05	Pass/Fail
17					1.47-1.49		8.03-8.05	Pass/Fail
18					1.47-1.49		8.03-8.05	Pass/Fail
19					1.47-1.49		8.03-8.05	Pass/Fail
20					1.47-1.49		8.03-8.05	Pass/Fail
21					1.47-1.49		8.03-8.05	Pass/Fail
22					1.47-1.49		8.03-8.05	Pass/Fail
23					1.47-1.49		8.03-8.05	Pass/Fail
24					1.47-1.49		8.03-8.05	Pass/Fail
25					1.47-1.49		8.03-8.05	Pass/Fail
26					1.47-1.49		8.03-8.05	Pass/Fail
27					1.47-1.49		8.03-8.05	Pass/Fail
28					1.47-1.49		8.03-8.05	Pass/Fail
29					1.47-1.49		8.03-8.05	Pass/Fail
30					1.47-1.49		8.03-8.05	Pass/Fail
31					1.47-1.49		8.03-8.05	Pass/Fail

*** Any failing results need immediate corrective action**

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Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Chrysotile Beam Dose Sensitivity

(Quarterly)

Date	Initials	Negative Numbers		At least 90% of patterns >15 seconds ?
		SAED	Morphology	
1/27/2009	JRB	03070	03071	PASS
5/7/2009	KLB	03125	03124	PASS
8/5/2009	KLB	03_247	03_246	PASS
11/3/2009	KLB	03-356	03-357	PASS
2/8/2010	DY	03_372	03_373	PASS
5/18/2010	DY	03373	03374	PASS
8/16/2010	DY	03030	03031	PASS
11/5/2010	CG	11-5-10CG6	11-5-10CG5	PASS
2/18/2011	CG	03125	03126	PASS
5/20/2011	CG	03155	03154	PASS
8/18/2011	CG	03227	03228	PASS
11/4/2011	CG	03316	03317	PASS

Comments:

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

		Negative (Camera)			
Date	Initials	Negative Number	Camera Length	Camera Constant	Is 2 Standard Dev. < 5% Mean?
2/25/2010	CJG	03-37216	100	516.02	PASS
3/17/2010	CJG	03-6[4]	100	514.61	PASS
5/18/2010	DY	03006	100	501.47	PASS
6/18/2010	DY	03024	100	510.82	PASS
7/28/2010	DY	03027	100	521.57	PASS
9/3/2010	CG	03030	100	517.31	PASS
10/4/2010	CG	03035	100	521.76	PASS
11/5/2010	CG	11-5-10-CG1	100	526.44	PASS
12/16/2010	CG	03-278	100	527.61	PASS
1/13/2011	CG	1-13-10 CG1	100	523.21	PASS
2/17/2011	CG	03122	100	529.45	PASS
3/18/2011	CG	03139	100	523.70	PASS
4/15/2011	CG	03144	100	510.25	PASS
5/20/2011	CG	03156	100	522.70	PASS
6/13/2011	CG	03163	100	522.09	PASS
7/12/2011	CG	03169	100	533.34	PASS
8/11/2011	CG	03219	100	529.18	PASS
9/15/2011	CG	03258	100	532.16	PASS
10/12/2011	CG	03289	100	524.71	PASS
11/4/2011	CG	03318	100	532.69	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03
Detector: PGT Avalon

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

On Screen					
Date	Initials	Camera Length	Aperture #	Aperture Diameter	Is 2 Standard Dev. < 5% Mean?
7/28/2010	DY	24	1	1.12	PASS
9/3/2010	CG	24	1	1.18	PASS
10/4/2010	CG	24	1	1.18	PASS
11/5/2010	CG	24	1	1.18	PASS
12/16/2010	CG	24	1	1.18	PASS
2/17/2011	CG	24	1	1.18	PASS
2/18/2011	CG	24	1	1.18	PASS
2/22/2011	CG	24	1	1.18	PASS
3/3/2011	CG	24	1	1.18	PASS
3/7/2011	CG	24	1	1.18	PASS
3/8/2011	CG	24	1	1.18	PASS
3/18/2011	CG	24	1	1.18	PASS
4/15/2011	CG	24	1	1.18	PASS
5/20/2011	CG	24	1	1.18	PASS
6/13/2011	CG	24	1	1.18	PASS
7/12/2011	CG	24	1	1.20	PASS
8/11/2011	CG	24	1	1.20	PASS
9/15/2011	CG	24	1	1.18	PASS
10/12/2011	CG	24	1	1.18	PASS
11/4/2011	CG	24	1	1.18	PASS

The above aperture diameter represents the on screen diameter in reciprocal space. Multiply this number times the number of layer lines seen to get layer line spacing.

Comments:

Plasma Asher Calibration

(Quarterly)

Time To Ash 5% of Collapsed MCE Filter			
Date	Initials	Min	Sec
10/28/2009	SNS	3	18
2/2/2010	SNS	6	49
5/12/2010	DY	7	28
8/20/2010	DS	9	32
9/13/2010	WP	4	15

Comments: This is Asher is no longer in use as off Dec 2010. The 2 ashers currently in use for prep are on Scope 1 and Scope 2's calibration report.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Magnification Calibrations
(Monthly)

20,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	20963	20925	PASS
6/18/2010	DY	20963	21060	PASS
7/28/2010	DY	20963	21060	PASS
9/3/2010	CG	20963	20250	PASS
10/4/2010	CG	20963	21330	PASS
11/5/2010	CG	20963	21060	PASS
12/17/2010	CG	20963	21060	PASS
1/13/2011	CG	20963	21060	PASS
2/17/2011	CG	20963	21330	PASS
3/18/2011	CG	20963	21330	PASS
4/15/2011	CG	20963	21330	PASS
5/20/2011	CG	20963	20790	PASS
6/13/2011	CG	20963	20304	PASS
7/12/2011	CG	20963	20790	PASS
8/11/2011	CG	20963	21276	PASS
9/15/2011	CG	20963	20385	PASS
10/12/2011	CG	20963	20925	PASS
11/4/2011	CG	20963	21060	PASS

Comments:

20,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DY	14474	14644	PASS
3/18/2010	DY	14474	14400	PASS
5/18/2010	DY	14474	14582	PASS
6/18/2010	DY	14474	14400	PASS
7/28/2010	DY	14474	14400	PASS
9/3/2010	CG	14474	14164	PASS
10/3/2010	CG	14474	14521	PASS
11/5/2010	CG	14474	14644	PASS
12/17/2010	CG	14474	14400	PASS
1/13/2011	CG	14474	14400	PASS
2/17/2011	CG	14474	14521	PASS
3/18/2011	CG	14474	14644	PASS
4/15/2011	CG	14474	14644	PASS
5/20/2011	CG	14474	14400	PASS
6/13/2011	CG	14474	14521	PASS
7/12/2011	CG	14474	14400	PASS
8/11/2011	CG	14474	14521	PASS
9/15/2011	CG	14474	14521	PASS
10/11/2011	CG	14474	14281	PASS
11/4/2011	CG	14474	14400	PASS

Comments:

10,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	10641	10800	PASS
6/18/2010	DY	10641	10962	PASS
7/28/2010	DY	10641	10800	PASS
9/3/2010	CG	10641	10908	PASS
10/4/2010	CG	10641	10584	PASS
11/5/2010	CG	10641	10692	PASS
12/17/2010	CG	10641	10757	PASS
1/13/2011	CG	10641	10757	PASS
2/17/2011	CG	10641	10584	PASS
3/18/2011	CG	10641	10843	PASS
4/15/2011	CG	10641	10692	PASS
5/20/2011	CG	10641	10584	PASS
6/13/2011	CG	10641	10303	PASS
7/12/2011	CG	10641	10368	PASS
8/11/2011	CG	10641	10627	PASS
9/15/2011	CG	10641	10152	PASS
10/12/2011	CG	10641	10584	PASS
11/4/2011	CG	10641	10541	PASS

Comments:

10,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DLY	7293	7448	PASS
3/18/2010	DLY	7293	7353	PASS
5/18/2010	DY	7293	7353	PASS
6/18/2010	DY	7293	7353	PASS
7/28/2010	DY	7293	7353	PASS
9/3/2010	CG	7293	7082	PASS
10/4/2010	CG	7293	7140	PASS
11/5/2010	CG	7293	7385	PASS
12/16/2010	CG	7293	7200	PASS
1/13/2011	CG	7293	7140	PASS
2/17/2011	CG	7293	7261	PASS
3/18/2011	CG	7293	7448	PASS
4/15/2011	CG	7293	7448	PASS
5/20/2011	CG	7293	7291	PASS
6/13/2011	CG	7293	7353	PASS
7/12/2011	CG	7293	7291	PASS
8/11/2011	CG	7293	7322	PASS
9/15/2011	CG	7293	7200	PASS
10/11/2011	CG	7293	7140	PASS
11/4/2011	CG	7293	7140	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03
Detector: PGT Avalon

Calibration of On Screen 0.5 and 5µm

Measuring Aids at EPA AHERA Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DY	0.55	5.46
3/18/2010	DY	0.56	5.56
5/18/2010	DY	0.55	5.49
6/18/2010	DY	0.56	5.56
7/28/2010	DY	0.56	5.56
9/3/2010	CG	0.56	5.65
10/3/2010	CG	0.55	5.51
11/5/2010	CG	0.55	5.46
12/17/2010	CG	0.56	5.56
1/13/2011	CG	0.56	5.56
2/17/2011	CG	0.55	5.51
3/18/2011	CG	0.55	5.46
4/15/2011	CG	0.55	5.46
5/20/2011	CG	0.56	5.56
6/13/2011	CG	0.55	5.51
7/12/2011	CG	0.56	5.56
8/11/2011	CG	0.55	5.51
9/15/2011	CG	0.55	5.51
10/11/2011	CG	0.56	5.60
11/4/2011	CG	0.56	5.56

Comments:

Calibration of On Screen 1.0 and 10µm

Measuring Aids at EPA 100.2 Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DLY	1.07	10.74
3/18/2010	DLY	1.09	10.88
5/18/2010	DY	1.09	10.88
6/18/2010	DY	1.09	10.88
7/28/2010	DY	1.09	10.88
9/3/2010	CG	1.13	11.30
10/4/2010	CG	1.12	11.20
11/5/2010	CG	1.08	10.83
12/16/2010	CG	1.11	11.11
1/13/2011	CG	1.12	11.20
2/17/2011	CG	1.10	11.02
3/18/2011	CG	1.07	10.74
4/15/2011	CG	1.07	10.74
5/20/2011	CG	1.10	10.97
6/13/2011	CG	1.09	10.88
7/12/2011	CG	1.10	10.97
8/11/2011	CG	1.09	10.93
9/15/2011	CG	1.11	11.11
10/11/2011	CG	1.12	11.20
11/4/2011	CG	1.12	11.20

Comments:

Spot Size Measurements

(Quarterly)

Date	Initials	Actual Spot	Target Spot Size	FAIL ≤250nm =	Is 2 SD <25% of
5/18/2010	DY	203.11	≤ 250 nm	PASS	PASS
8/16/2010	DY	213.68	≤ 250 nm	PASS	PASS
11/5/2010	CG	216.38	≤ 250 nm	PASS	PASS
12/17/2010	CG	206.76	≤ 250 nm	PASS	PASS
2/17/2011	CG	192.34	≤ 250 nm	PASS	PASS
2/18/2011	CG	216.38	≤ 250 nm	PASS	PASS
2/22/2011	CG	201.95	≤ 250 nm	PASS	PASS
3/3/2011	CG	221.19	≤ 250 nm	PASS	PASS
3/7/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/8/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/18/2011	CG	192.34	≤ 250 nm	PASS	PASS
4/15/2011	CG	201.95	≤ 250 nm	PASS	PASS
5/20/2011	CG	240.42	≤ 250 nm	PASS	PASS
6/13/2011	CG	231.48	≤ 250 nm	PASS	PASS
7/12/2011	CG	216.45	≤ 250 nm	PASS	PASS
8/11/2011	CG	197.41	≤ 250 nm	PASS	PASS
9/15/2011	CG	245.28	≤ 250 nm	PASS	PASS
10/12/2011	CG	215.05	≤ 250 nm	PASS	PASS
11/4/2011	CG	223.17	≤ 250 nm	PASS	PASS
			≤ 250 nm		

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

K Factors

(Semi-Annually)

Test Dates	Initials	Mean K Factor	Pass Criteria	Actual	PASS FAIL	Acceptance Criteria	PASS/FAIL
5/19/2011	CG	Mg:Si	1.0 - 2.0	1.63	PASS	2SD < 10% Mean	PASS
5/19/2011	CG	Ca:Si	1.0 - 1.75	1.11	PASS	2SD < 10% Mean	PASS
----		Fe:Si	1.0 - 2.0	1.46	PASS	2SD < 10% Mean	PASS
----		Mg:Fe	1.5 or less	1.11	PASS	N/A	N/A
12/16/2010	CG	Na:Si	1.0 - 4.0	3.02	PASS	2SD < 20% Mean	PASS
5/20/2011	CG	Al:Si	1.0 - 1.75	1.19	PASS	2SD < 10% Mean	PASS

Comments:

Detector Resolution

(Semi-Annually / Quarterly when necessary to meet TNI Standard)

Date	@Mn Kα Peak Initials	Resolution	<175?	Resolution + 2(s) <180?
10/25/2007	GPA	130.5	Pass	Pass
5/1/2008	GPA	134.8	Pass	Pass
10/29/2008	JRB	115.9	Pass	Pass
5/6/2009	JB	128.9	Pass	Pass
11/3/2009	KLB	141.0	Pass	Pass
4/28/2010	DY	131.0	Pass	Pass
11/4/2010	CG	120.0	Pass	Pass
5/20/2011	CG	135.0	Pass	Pass
8/18/2011	CG	125.0	Pass	Pass
11/4/2011	CG	135.0	Pass	Pass

Comments:

Significant Na and Resolvable Mg-Si Peaks

(Quarterly)

Date	Initials	Significant Na		Date	Initials	Resolvable Mg	Resolvable Si
8/5/2009	KLB	Pass		8/5/09	KLB	Yes	Yes
11/3/2009	KLB	Pass		11/3/09	KLB	Yes	Yes
2/5/2010	DY	Pass		2/5/10	DY	Yes	Yes
4/28/2010	DY	Pass		4/28/10	DY	Yes	Yes
7/28/2010	DY	Pass		7/28/10	DY	Yes	Yes
11/5/2010	CG	Pass		11/4/10	CG	Yes	Yes
2/18/2011	CG	Pass		2/18/11	CG	Yes	Yes
5/20/2011	CG	Pass		5/20/11	CG	Yes	Yes
8/18/2011	CG	Pass		8/18/11	CG	Yes	Yes
11/4/2011	CG	Pass		11/4/11	CG	Yes	Yes

Comments:

7. NVLAP/AIHA Certifications

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.

Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
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Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

AIHA
Laboratory Accreditation Programs, LLC

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Laboratory ID: 100194

has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC thereby conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA-LAP, LLC in the following:

LABORATORY ACCREDITATION PROGRAMS

√	INDUSTRIAL HYGIENE	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL LEAD	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: July 01, 2012
☐	FOOD	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current scope of accreditation.

Dave Sandusky

Dave Sandusky, CIH
Chairperson, Analytical Accreditation Board

Date Issued: 07/01/2010

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
107 Haddon Avenue, Westmont, NJ 08108

Laboratory ID: 100194
Issue Date: 07/01/2010

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or revocation. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Gas Chromatography	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1400	
		NIOSH 1500	
		NIOSH 1550	
		NIOSH 1603	
		NIOSH 2000	
		NIOSH 2551	
		NIOSH 5502	
		NIOSH 5503	
		NIOSH 5510	
		OSHA 1010	
	GC (Diffusive Samplers)	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1501	
	GC/MS	EPA TO-15	
	HPLC	NIOSH 2016	
		NIOSH 5506	
		OSHA 47	
		OSHA 58	
	AA	NIOSH 6009	
		NIOSH 7105	
		OSHA ID-140	
		OSHA ID-145	
	ICP	NIOSH 7300	
	XRD	NIOSH 7500	
	Ion Chromatography	NIOSH 6004	
		NIOSH 6011	
		NIOSH 7903	

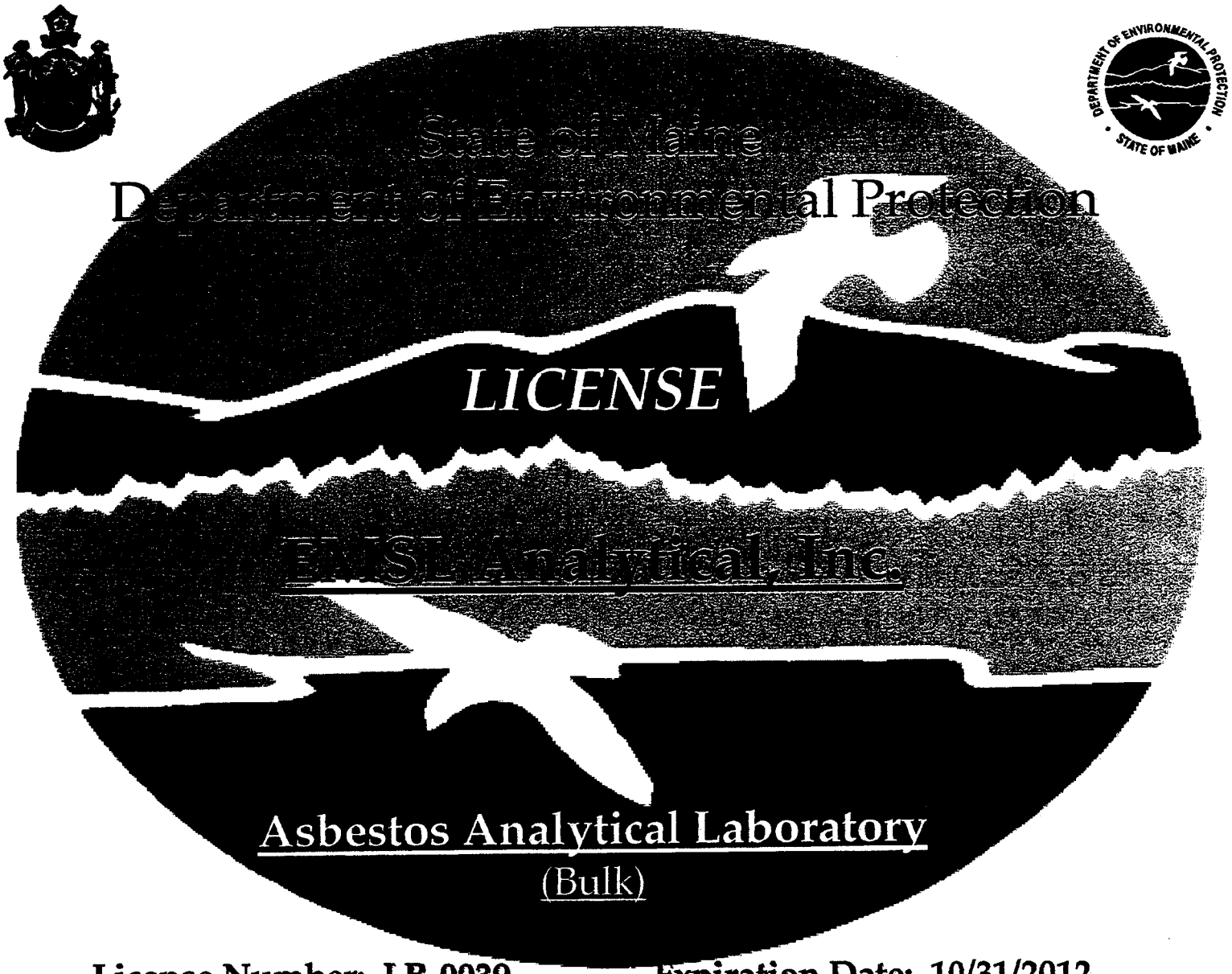
AIHA Laboratory Accreditation Programs, LLC

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Ion Chromatography	OSHA ID-214	
		OSHA ID-215	
	Gravimetric	NIOSH 0500	
		NIOSH 0600	
	UV/VIS (Colorimetric)	NIOSH 6010	
	Thermal Optical Analyzer	NIOSH 5040	
	Polarized Light Microscopy (PLM)	EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)	NIOSH 7400	
	Transmission Electron Microscopy (TEM)	EPA AHERA - 40 CFR Part 763	
		NIOSH 7402	

The laboratory participates in the following AIHA-LAP, LLC-approved proficiency testing programs:

- ✓ Metals*
- ✓ Silica*
- ✓ Asbestos*
- ☐ Bulk Asbestos*
- ✓ Beryllium
- ☐ WASP[1] (Thermal Desorption Tubes)
- ☐ Pharmaceutical Round Robin
- ☐ Compressed/Breathing Air Round Robin
- ☐ NVLAP (determined at the time of site assessment)
- ✓ Organic Solvents*
- ✓ Diffusive Sampler (3M)*
- ☐ Diffusive Sampler (SKC)*
- ☐ Diffusive Sampler (AT)
- ✓ WASP[1] (Formaldehyde)

[1] Workplace Analytical Scheme for Proficiency



License Number: LB-0039 **Expiration Date: 10/31/2012**

8. Shipping Documentation

From:
WILLARD WARREN
KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY

SCARBOROUGH, ME 04074
(207) 874-2400

Ship Date: 18OCT11
ActWgt: 36.6 LB
CAD: 683287/CAFE2472

TO SAMPLE RECEIVING
EMSL
3 COOPER STREET

WESTMONT, NJ 08108 (US)

FedEx Ground

Ref:
INV:
PO: Dept:

1 of 1

(9612019) 8146969 60046520

Part # 150148-434 RIT2 04/11 ••

GND Prepaid

Katahdin Analytical Services

Date: 10-18-11 Signature

ENVIRONMEN
ULTRA CL

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 16, 2012**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – PAH/PCB/COPPER/LEAD/ ZINC/TOTAL ORGANIC CARBON/TOTAL SOLIDS/ASBESTOS**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-24

SAMPLES: 24/Sediment/PAH/PCB/METALS/ASBESTOS

DSY-SD-AA09-0012
DSY-SD-AA09-2448
DSY-SD-AA13-1224
DSY-SD-AA17-0012
DSY-SD-AA17-2448
DSY-SD-AA21-1224
DSY-SD-AA24-0012
DSY-SD-AA24-2448
DSY-SD-AA26-1224
DSY-SD-AA28-0016
DSY-SD-AA30-1224
DSY-SD-DUP35-101311
DSY-SD-AA09-1224
DSY-SD-AA13-0012
DSY-SD-AA13-2448
DSY-SD-AA17-1224
DSY-SD-AA21-0012
DSY-SD-AA21-2448
DSY-SD-AA24-1224
DSY-SD-AA26-0012
DSY-SD-AA26-2448
DSY-SD-AA30-0012
DSY-SD-DUP34-101311
DSY-SD-G30-0018

1/Aqueous/

DSY-SD-RB14-101311

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-24 consisted of twenty-four (24) sediment environmental samples and one (1) rinse blank. All samples were analyzed for polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), metals, and asbestos. All samples, except DSY-SD-RB14-101311 were analyzed for total solids. Ten sediment samples were analyzed for total organic carbon. Two field duplicate pairs were included in this sample delivery group (SDG): DSY-SD-AA21-2448 / DSY-SD-DUP34-101311 and DSY-SD-AA28-0016 / DSY-SD-DUP35-101311.

The samples were collected by Tetra Tech on October 13, 2011 and analyzed by Katahdin Analytical Services for all fractions except asbestos. EMSL Analytical, Inc. performed the asbestos analyses. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, 8082, 6010C, Standard Method D2216, Lloyd Kahn, and asbestos by methods EPA 600/R-93/116 and EPA AHERA – 40 CFR Part 763 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times

*	•	GC/MS Instrument Tuning and System Performance
	•	Initial and Continuing Calibrations
	•	Laboratory Method Blank Results
	•	Surrogate Spike Recoveries
	•	Internal Standard Areas
	•	Matrix Spike Sample/Matrix Spike Duplicate Sample Results
	•	Laboratory Control Sample Results
*	•	ICP Interference Check Sample Results
*	•	ICP Serial Dilution Results
	•	Field Duplicate Precision
*	•	Laboratory Duplicate Results
*	•	Detection Limits
	•	Analyte Identification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier II validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

INITIAL AND CONTINUING CALIBRATION

The PAH CCV performed on instrument GCMS-N on 11/21/11 @ 07:50 had a %D greater than 20% for pyrene. Samples DSY-SD-RB14-101311, DSY-SD-AA09-0012, DSY-SD-AA09-1224, DSY-SD-AA09-2448, DSY-SD-AA13-0012, DSY-SD-AA13-1224, DSY-SD-AA13-2448, DSY-SD-AA17-0012, DSY-SD-AA17-1224, and DSY-SD-AA21-0012 were affected. The positive and non-detected results reported for pyrene, in the affected samples, were qualified as estimated (J) and (UJ), respectively.

The PAH CCV performed on instrument GCMS-N on 11/22/11 @ 08:46 had a %D greater than 20% for indeno(1,2,3-cd)pyrene. Samples DSY-SD-AA21-1224, DSY-SD-AA21-2448, DSY-SD-AA24-0012, DSY-SD-AA24-1224, DSY-SD-AA24-2448, and DSY-SD-AA26-0012 were affected. Only non-detected results were reported for indeno(1,2,3-cd)pyrene, in the affected samples, and these results were qualified as estimated (UJ).

The PCB CCV performed on instrument GC07 on 11/03/11 @2205 had a %D greater than 20% for Aroclor-1260 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-G30-0018 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @1131 had a %D greater than 20% for Aroclor-1254 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-AA17-0012 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @1826 had a %D greater than 20% for Aroclor-1254 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-AA17-0012 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @2238 had a %D greater than 20% for Aroclor-1260 on the primary column. The positive Aroclor-1254 results reported from the primary column for samples DSY-SD-AA21-2448, DSY-SD-DUP34-101311, DSY-SD-AA24-2448, and DSY-SD-AA26-0012 were qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in sample DSY-SD-AA28-0016, DSY-SD-DUP35-101311, DSY-SD-AA30-0012, DSY-SD-AA30-1224, and DSY-SD-AA26-2448. No validation action was taken because the surrogates met acceptance limits on column 2 and all results were reported from column 2.

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in sample DSY-SD-G30-0018. Surrogate recoveries reported from column 2 met acceptance limits. The positive result reported from column 1 was qualified as estimated, (J).

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl, were below the lower quality control limits on both GC columns for samples, DSY-SD-AA24-0012 and DSY-SD-RB14-101311. The samples were not re-extracted or reanalyzed. The non-detected PCB results for the aforementioned samples were qualified as estimated, (UJ).

INTERNAL STANDARD RESULTS

The internal standard area for perylene-d12 was less than the lower quality control limit in samples DSY-SD-AA26-1224, DSY-SD-AA26-2448, DSY-SD-AA30-0012, and DSY-SD-G30-0018 were affected. The positive and non-detected results reported for the target PAH compounds associated with perylene-d12 in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The internal standard area for perylene-d12 was less than the lower quality control limit in sample DSY-SD-RB14-101311. The non-detected benzo(a)pyrene result reported for DSY-SD-RB14-101311 was qualified as estimated, (UJ).

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RESULTS

The zinc MS/MSD %R for sample DSY-SD-AA13-2448 was greater than the upper quality control limit. All positive zinc results were qualified as estimated (J).

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE

The PCB LCS / LCSD associated with batch WG99856 had %Rs of Aroclor-1016 less than the lower quality control limit in the LCS/LCSD. Samples DSY-SD-AA28-0016, DSY-SD-DUP35-101311, DSY-SD-AA30-0012, DSY-SD-AA30-1224, and DSY-SD-G30-0018 were affected. Only nondetected results were reported in the affected samples and these results were qualified as estimated, (UJ).

RELATIVE PERCENT DIFFERENCE (RPD) BETWEEN COLUMNS

The RPD between columns in the PCB analysis was greater than 40% in the following samples. Positive results were qualified as estimated (J).

Sample	Analyte	RPD	Qualification
DSY-SD-AA17-0012	Aroclor-1254	48.1	J
DSY-SD-AA30-0012	Aroclor-1260	56.4	J

FIELD DUPLICATE RESULTS

Field duplicate imprecision (RPD > 50%) was noted for benzo(a)pyrene for sample pair DSY-SD-AA21-2448 / DSY-SD-DUP34-101311. The positive results reported for benzo(a)pyrene in the duplicate pair were qualified as estimated, (J).

PERCENT SOLIDS

The percent solids for sample DSY-SD-AA09-0012 was less than 30%. The positive and nondetected results for all analytical fractions have been qualified as estimated (J) and (UJ), respectively.

NOTES

The following contaminant was detected in the aqueous laboratory preparation blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Zinc	1.775 ug/L	8.875 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was warranted because the associated sample was a rinse blank and rinse blanks are not qualified due to blank contamination.

The analytes zinc and iron were detected in several continuing calibration blanks associated with the sediment samples. No action was taken on this basis because all sediment sample results were greater than the blank action levels.

The PAH continuing calibration verification (CCV) performed on instrument GCMS-N on 10/22/11 @ 09:28 had a percent difference (%D) greater than 20% for pyrene The method blank, LCS, and LCSD for batch WG99502 were affected. No action was taken on this basis because QC samples are not qualified.

The PCB CCV performed on instrument GC07 on 11/11/11 @1353 had %Ds greater than 20% for Aroclor-1016 and Aroclor-1260 on the primary column. No action was taken on this basis because only laboratory QC samples were associated with this calibration and QC samples are not qualified.

The PCB CCV performed on instrument GC07 on 11/12/11 @0254 had a %D greater than 20% for Aroclor-1016 on the primary column. No action was taken on this basis because Aroclor-1016 was not detected in the associated samples.

The PCB CCV performed on instrument GC07 on 11/12/11 @0410 had a %D greater than 20% for Aroclor-1254 on the primary column. No action was taken on this basis because the positive result for Aroclor-1254 was reported from the secondary column.

The surrogate 2-fluorobiphenyl had a percent recovery (%R) greater than the quality control limit for sample DSY-SD-DUP34-101311. The sample was not re-extracted or re-analyzed. No action was taken on this basis because only one surrogate per fraction was outside of quality control limits.

The surrogate 2-fluorobiphenyl had a %R less than the quality control limit for sample DSY-SD-AA28-0016. The sample was not re-extracted or re-analyzed. No action was taken on this basis because only one surrogate per fraction was outside of quality control limits.

Sample DSY-SD-RB14-101311 was not spiked for surrogates in the 8270 SIM analysis. The sample was spiked for surrogates in the full scan analysis and had acceptable recoveries. No action was taken on this basis because the full scan analysis had acceptable recoveries.

The PCB surrogate recoveries of decachlorobiphenyl were less than the lower quality control limit but greater than 10% on column 1 in samples DSY-SD-DUP34-101311 and DSY-SD-AA26-1224. No action was taken on this basis because all other surrogate recoveries were acceptable.

The PAH matrix spike/matrix spike duplicate (MS/MSD) %R for pyrene was greater than the upper quality control limit in the MSD. No action was taken on the pyrene result because the MS had an acceptable recovery.

The PAH SIM laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG101687 was not spiked for benzo(a)pyrene at the SIM levels. The samples associated with batch WG101687 had acceptable %Rs of benzo(a)pyrene in the full scan LCS/LCSDs. No action was taken on this basis.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

All asbestos samples were dried and sieved into three components fine (<2mm), medium (>2mm), and course (<19mm). Each component was then analyzed via polarized light microscopy (PLM). Samples that did not have asbestos detected using PLM were analyzed via Qualitative Transmission Electron Microscopy (TEM).

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). All samples were analyzed by 8270C SIM for benzo(a)pyrene, except for sample DSY-SD-G30-0018.

Samples DSY-SD-AA17-0013, DSY-SD-AA21-1224, and DSY-SD-AA30-1224 to be analyzed for asbestos were received broken at the EMSL laboratory. No action was taken because the laboratory was still able to analyze the samples.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: Continuing calibration %D noncompliances resulted in qualification of data in the PAH and PCB fraction. PCB LCS/LCSD %R noncompliances resulted in the qualification of data.

Other Factors Affecting Data Quality: Surrogate noncompliances resulted in qualification of data in the PCB fraction. Internal standard areas were noncompliant in several PAH fraction samples resulting qualification of data. A zinc MS noncompliance resulted in qualification of the data. RPDs between columns noncompliance resulted in the qualification of PCB data. Field duplicate imprecision resulted in qualification of benzo(a)pyrene results. Percent solid for one sample was less than 30%. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082, and 6010C listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

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Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-24 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		840	UJ	Y	280	J	P	1100			800	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		840	UJ	Y	690	U		870			800	U	
BENZO(G,H,I)PERYLENE		840	UJ	Y	690	U		620	U		800	U	
BENZO(K)FLUORANTHENE		840	UJ	Y	690	U		440	J	P	800	U	
CHRYSENE		840	UJ	Y	380	J	P	1200			800	U	
DIBENZO(A,H)ANTHRACENE		840	UJ	Y	690	U		620	U		800	U	
FLUORANTHENE		840	UJ	Y	470	J	P	2700			800	U	
INDENO(1,2,3-CD)PYRENE		840	UJ	Y	690	U		620	U		800	U	
PYRENE		420	J	CPY	550	J	CP	2800	J	C	800	UJ	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		760	U		530	J	C	730	U		270	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		760	U		560	J	P	730	U		760	U	
BENZO(G,H,I)PERYLENE		760	U		710	U		730	U		760	U	
BENZO(K)FLUORANTHENE		760	U		260	J	P	730	U		760	U	
CHRYSENE		760	U		640	J	P	730	U		310	J	P
DIBENZO(A,H)ANTHRACENE		760	U		710	U		730	U		760	U	
FLUORANTHENE		390	J	P	930	J	P	730	U		630	J	P
INDENO(1,2,3-CD)PYRENE		760	U		710	U		730	U		760	U	
PYRENE		450	J	CP	1100	J	C	440	J	CP	750	J	CP

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
SDG: DSY-24	LAB_ID	SE6841-9			SE6841-10			SE6841-11			SE6841-12		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1400			800	U		720	U		540	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		1200			800	U		720	U		480	J	P
BENZO(G,H,I)PERYLENE		370	J	P	800	U		720	U		700	U	
BENZO(K)FLUORANTHENE		620	J	P	800	U		720	U		280	J	P
CHRYSENE		1600			800	U		720	U		780	J	P
DIBENZO(A,H)ANTHRACENE		720	U		800	U		720	U		700	U	
FLUORANTHENE		2700			800	U		720	U		1500		
INDENO(1,2,3-CD)PYRENE		400	J	P	800	U		720	UJ	C	700	UJ	C
PYRENE		3000			800	UJ	C	320	J	P	1500		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		580	U		720	U		540	J	P	320	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		580	U		720	U		640	J	P	330	J	P
BENZO(G,H,I)PERYLENE		580	U		720	U		690	U		480	U	
BENZO(K)FLUORANTHENE		580	U		720	U		300	J	P	180	J	P
CHRYSENE		580	U		720	U		760	J	P	380	J	P
DIBENZO(A,H)ANTHRACENE		580	U		720	U		690	U		480	U	
FLUORANTHENE		580	U		720	U		1100			670		
INDENO(1,2,3-CD)PYRENE		580	UJ	C	720	UJ	C	690	UJ	C	480	UJ	C
PYRENE		580	U		720	U		1800			770		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
	LAB_ID	SE6841-18			SE6841-19			SE6841-20			SE6841-22		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		880			370	J	P	330	J	P	360	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		880	J	N	470	UJ	N	400	J	P	570	J	N
BENZO(G,H,I)PERYLENE		230	J	NP	470	UJ	N	390	U		170	J	NP
BENZO(K)FLUORANTHENE		370	J	NP	470	UJ	N	170	J	P	260	J	NP
CHRYSENE		1000			520	J	P	400	J	P	440		
DIBENZO(A,H)ANTHRACENE		500	UJ	N	470	UJ	N	390	U		320	UJ	N
FLUORANTHENE		2200			800			600			660		
INDENO(1,2,3-CD)PYRENE		260	J	NP	470	UJ	N	390	U		170	J	NP
PYRENE		3500			1500			1100			2300		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
SDG: DSY-24	LAB_ID	SE6841-23			SE6841-13			SE6841-21			SE6841-24		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		280	J	P	570	J	P	420	J	P	1600		
BENZO(A)PYRENE											1600	J	N
BENZO(B)FLUORANTHENE		410	J	P	520	J	P	520	J	P	2700	J	N
BENZO(G,H,I)PERYLENE		160	J	P	690	U		430	U		650	J	N
BENZO(K)FLUORANTHENE		200	J	P	270	J	P	220	J	P	1200	J	N
CHRYSENE		310	J	P	650	J	P	500	J	P	2200		
DIBENZO(A,H)ANTHRACENE		310	U		690	U		430	U		480	UJ	N
FLUORANTHENE		370	J	P	1200			510	J	P	2000		
INDENO(1,2,3-CD)PYRENE		160	J	P	690	U		430	U		780	J	N
PYRENE		1300			1300			1300			4600		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		120	J	Y	180			580			71		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		150			320			120			160		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
	LAB_ID	SE6841-9DL			SE6841-10			SE6841-11			SE6841-12		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		820			73			100			310	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		54			80			280			170		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
	LAB_ID	SE6841-18DL			SE6841-19			SE6841-20			SE6841-22		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		420			200			240			290		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311		
	LAB_ID	SE6841-23			SE6841-13			SE6841-21		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		200			56	J	G	360		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1221		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1232		32	UJ	Y	27	U		25	U		33	U	
AROCLOR-1242		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1248		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1254		27	UJ	Y	23	U		1300			28	U	
AROCLOR-1260		27	UJ	Y	23	U		21	U		28	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		24	U		23	U		22	U	
AROCLOR-1221		24	U		24	U		23	U		22	U	
AROCLOR-1232		28	U		28	U		28	U		26	U	
AROCLOR-1242		24	U		24	U		23	U		22	U	
AROCLOR-1248		24	U		24	U		23	U		22	U	
AROCLOR-1254		24	U		24	U		240	J	CPU	22	U	
AROCLOR-1260		24	U		24	U		330			22	U	

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
	LAB_ID	SE6841-9			SE6841-10			SE6841-11			SE6841-12		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		26	U		25	U		24	U	
AROCLOR-1221		24	U		26	U		25	U		24	U	
AROCLOR-1232		28	U		31	U		30	U		28	U	
AROCLOR-1242		24	U		26	U		25	U		24	U	
AROCLOR-1248		24	U		26	U		25	U		24	U	
AROCLOR-1254		24	U		26	U		25	U		220	J	C
AROCLOR-1260		24	U		26	U		25	U		24	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1221		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1232		22	UJ	R	29	U		27	U		19	U	
AROCLOR-1242		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1248		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1254		19	UJ	R	25	U		190	J	C	97	J	C
AROCLOR-1260		19	UJ	R	25	U		23	U		16	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	SE6841-18			SE6841-19			SE6841-20			SE6841-22		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		17	U		16	U		13	UJ	E	10	UJ	E
AROCLOR-1221		17	U		16	U		13	U		10	U	
AROCLOR-1232		20	U		18	U		15	U		12	U	
AROCLOR-1242		17	U		16	U		13	U		10	U	
AROCLOR-1248		17	U		16	U		13	U		10	U	
AROCLOR-1254		960			730			350			1100		
AROCLOR-1260		320			540			240			780	J	PU

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
	LAB_ID	SE6841-23			SE6841-13			SE6841-21			SE6841-24		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.2	UJ	E	24	U		14	UJ	E	17	UJ	E
AROCLOR-1221		9.2	U		24	U		14	U		17	U	
AROCLOR-1232		11	U		28	U		16	U		20	U	
AROCLOR-1242		9.2	U		24	U		14	U		17	U	
AROCLOR-1248		9.2	U		24	U		14	U		17	U	
AROCLOR-1254		160			220	J	C	470			260	J	CR
AROCLOR-1260		9.2	U		24	U		210			220		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-001			SE6841-002			SE6841-003			SE6841-004		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		63	J	Y	116			123			62		
LEAD		66.3	J	Y	96			111			58.5		
ZINC		156	J	DY	210	J	D	275	J	D	162	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-005			SE6841-006			SE6841-007			SE6841-008		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		89.7			126			77.8			90.5		
LEAD		80.7			115			76.8			74.8		
ZINC		242	J	D	289	J	D	397	J	D	237	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
SDG: DSY-24	LAB_ID	SE6841-009			SE6841-010			SE6841-011			SE6841-012		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		226			61.3			75.1			170		
LEAD		138			57.4			67.4			162		
ZINC		309	J	D	167	J	D	155	J	D	375	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-014			SE6841-015			SE6841-016			SE6841-017		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		24.5			93.5			87.8			48.8		
LEAD		25.2			70.6			81			44.9		
ZINC		66.8	J	D	229	J	D	197	J	D	158	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	SE6841-018			SE6841-019			SE6841-020			SE6841-022		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		154			183			82.2			37.5		
LEAD		180			148			90.1			59.8		
ZINC		583	J	D	570	J	D	216	J	D	206	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
SDG: DSY-24	LAB_ID	SE6841-023			SE6841-013			SE6841-021			SE6841-024		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		32.4			132			62.9			107		
LEAD		48.9			116			73.8			98.2		
ZINC		129	J	D	286	J	D	243	J	D	243	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012						DSY-SD-AA09-0012C			DSY-SD-AA09-0012F		
SDG: DSY-24	LAB_ID	SE6841-1						041128162-0008 Coars			041128162-0008 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	29.6			29.6			29.0			29.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000	J	Y						
TOTAL SOLIDS		30											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012M			DSY-SD-AA09-1224			DSY-SD-AA09-1224C			DSY-SD-AA09-1224F		
SDG: DSY-24	LAB_ID	041128162-0008 Mediu			SE6841-2			041128162-0009 Coars			041128162-0009 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	29.0			35.5			31.9			31.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					35								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-1224M			DSY-SD-AA09-2448			DSY-SD-AA09-2448C			DSY-SD-AA09-2448F		
SDG: DSY-24	LAB_ID	041128162-0009 Mediu			SE6841-3			041128162-0010 Coars			041128162-0010 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	31.9			39.6			37.9			37.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					40								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-2448M			DSY-SD-AA13-0012						DSY-SD-AA13-0012C		
SDG: DSY-24	LAB_ID	041128162-0010 Mediu			SE6841-4						041128162-0011 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011						10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	37.9			30.4			30.4			27.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<								1	<	
ASBESTOS													
CHRYSOTILE		1	<								1	<	
TOTAL ORGANIC CARBON								49000					
TOTAL SOLIDS					30								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-0012F			DSY-SD-AA13-0012M			DSY-SD-AA13-1224			DSY-SD-AA13-1224C		
SDG: DSY-24	LAB_ID	041128162-0011 Fine			041128162-0011 Mediu			SE6841-5			041128162-0012 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	27.7			27.7			32.2			32.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								32					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224F			DSY-SD-AA13-1224M			DSY-SD-AA13-2448			DSY-SD-AA13-2448C		
SDG: DSY-24	LAB_ID	041128162-0012 Fine			041128162-0012 Mediu			SE6841-6			041128162-0013 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.2			32.2			34.1			34.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								34					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-2448F			DSY-SD-AA13-2448M			DSY-SD-AA17-0012					
SDG: DSY-24	LAB_ID	041128162-0013 Fine			041128162-0013 Mediu			SE6841-7					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	34.1			34.1			32.7			32.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE													
TOTAL ORGANIC CARBON											48000		
TOTAL SOLIDS								33					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-0013C			DSY-SD-AA17-0013F			DSY-SD-AA17-0013M			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	041128162-0015 Coars			041128162-0015 Fine			041128162-0015 Mediu			SE6841-8		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.7			32.7			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE						
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											32		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-1224C			DSY-SD-AA17-1224F			DSY-SD-AA17-1224M			DSY-SD-AA17-2448		
SDG: DSY-24	LAB_ID	041128162-0016 Coars			041128162-0016 Fine			041128162-0016 Mediu			SE6841-9		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.5			32.5			32.5			34.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											34		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448C			DSY-SD-AA17-2448F			DSY-SD-AA17-2448M			DSY-SD-AA21-0012		
SDG: DSY-24	LAB_ID	041128162-0017 Coars			041128162-0017 Fine			041128162-0017 Mediu			041128162-0018 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.0			34.0			34.0			31.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<					1	<				
ASBESTOS					1	U	NOT PRESE				0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											31		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-0012			DSY-SD-AA21-0012C			DSY-SD-AA21-0012F			DSY-SD-AA21-0012M		
SDG: DSY-24	LAB_ID	041128162-0018 Fine			041128162-0018 Coars			041128162-0018 Fine			041128162-0018 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	31.0			31.0			31.0			31.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON		48000											
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-1224			DSY-SD-AA21-1224C			DSY-SD-AA21-1224F			DSY-SD-AA21-1224M		
SDG: DSY-24	LAB_ID	SE6841-11			041128162-0019 Coars			041128162-0019 Fine			041128162-0019 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	33.5			33.5			33.5			33.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE			
CHRYSOTILE					1	<					1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		33											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-2448			DSY-SD-AA21-2448C			DSY-SD-AA21-2448F			DSY-SD-AA21-2448M		
SDG: DSY-24	LAB_ID	SE6841-12			041128162-0020 Coars			041128162-0020 Fine			041128162-0020 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.8			34.0			34.0			34.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		35											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012						DSY-SD-AA24-0012C			DSY-SD-AA24-0012F		
SDG: DSY-24	LAB_ID	SE6841-14						041128162-0022 Coars			041128162-0022 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	42.2			42.2			39.0			39.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000								
TOTAL SOLIDS		42											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012M			DSY-SD-AA24-1224			DSY-SD-AA24-1224C			DSY-SD-AA24-1224F		
SDG: DSY-24	LAB_ID	041128162-0022 Mediu			SE6841-15			041128162-0023 Coars			041128162-0023 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	39.0			34.2			31.4			31.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					34								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-1224M			DSY-SD-AA24-2448			DSY-SD-AA24-2448C			DSY-SD-AA24-2448F		
SDG: DSY-24	LAB_ID	041128162-0023 Mediu			SE6841-16			041128162-0024 Coars			041128162-0024 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	31.4			36.0			32.7			32.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS		1	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					36								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-2448M			DSY-SD-AA26-0012						DSY-SD-AA26-0012C		
SDG: DSY-24	LAB_ID	041128162-0024 Mediu			SE6841-17						041128162-0025 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011						10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	32.7			51.7			51.7			45.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS													
CHRYSOTILE		1	<								1	<	
TOTAL ORGANIC CARBON								49000					
TOTAL SOLIDS					52								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-0012F			DSY-SD-AA26-0012M			DSY-SD-AA26-1224			DSY-SD-AA26-1224C		
SDG: DSY-24	LAB_ID	041128162-0025 Fine			041128162-0025 Mediu			SE6841-18			041128162-0026 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	45.3			45.3			48.9			44.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<					2		
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								49					

PROJ_NO: 02747 SDG: DSY-24 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224F			DSY-SD-AA26-1224M			DSY-SD-AA26-2448			DSY-SD-AA26-2448C		
	LAB_ID	041128162-0026 Fine			041128162-0026 Mediu			SE6841-19			041128162-0027 Coars		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	44.8			44.8			52.2			44.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<					2		
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								52					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-2448F			DSY-SD-AA26-2448M			DSY-SD-AA28-0016					
SDG: DSY-24	LAB_ID	041128162-0027 Fine			041128162-0027 Mediu			SE6841-20					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	44.4			44.4			61.5			61.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE					1	<							
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON											28000		
TOTAL SOLIDS								61					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA28-0016C			DSY-SD-AA28-0016F			DSY-SD-AA28-0016M			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	041128162-0028 Coars			041128162-0028 Fine			041128162-0028 Mediu			SE6841-22		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	56.9			56.9			56.9			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<										
ASBESTOS					1	U	NOT PRESE						
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											74		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-0012			DSY-SD-AA30-0012C			DSY-SD-AA30-0012F			DSY-SD-AA30-0012M		
SDG: DSY-24	LAB_ID	SE6841-22			041128162-0030 Coars			041128162-0030 Fine			041128162-0030 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	74.3			72.2			72.2			72.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON		17000											
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-AA30-1224C			DSY-SD-AA30-1224F			DSY-SD-AA30-1224M		
SDG: DSY-24	LAB_ID	SE6841-23			041128162-0031 Coars			041128162-0031 Fine			041128162-0031 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	78.6			78.6			78.6			78.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE			
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		79											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP34-101311			DSY-SD-DUP34-101311C			DSY-SD-DUP34-101311F			DSY-SD-DUP34-101311M		
SDG: DSY-24	LAB_ID	SE6841-13			041128162-0021 Coars			041128162-0021 Fine			041128162-0021 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	35.6			34.1			34.1			34.1		
	DUP_OF	DSY-SD-AA21-2448			DSY-SD-AA21-2448			DSY-SD-AA21-2448			DSY-SD-AA21-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS								1	U	NOT PRESE			
CHRYSOTILE					1	<					1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		36											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP35-101311						DSY-SD-DUP35-101311C			DSY-SD-DUP35-101311F		
SDG: DSY-24	LAB_ID	SE6841-21						041128162-0029 Coars			041128162-0029 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	58.1			58.1			57.0			57.0		
	DUP_OF	DSY-SD-AA28-0016			DSY-SD-AA28-0016			DSY-SD-AA28-0016			DSY-SD-AA28-0016		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					33000								
TOTAL SOLIDS		58											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP35-101311M			DSY-SD-G30-0018					
SDG: DSY-24	LAB_ID	041128162-0029 Mediu			SE6841-24					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM					
	UNITS	%			%			MG/KG		
	PCT_SOLIDS	57.0			48.2			48.2		
	DUP_OF	DSY-SD-AA28-0016								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<							
ASBESTOS										
CHRYSOTILE		1	<							
TOTAL ORGANIC CARBON								44000		
TOTAL SOLIDS					48					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2664.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	840	ug/Kgdrywt	1	330	1100	290	840
Benzo(b)fluoranthene	U	840	ug/Kgdrywt	1	330	1100	450	840
Benzo(g,h,i)perylene	U	840	ug/Kgdrywt	1	330	1100	350	840
Benzo(k)fluoranthene	U	840	ug/Kgdrywt	1	330	1100	280	840
Chrysene	U	840	ug/Kgdrywt	1	330	1100	320	840
Dibenzo(a,h)anthracene	U	840	ug/Kgdrywt	1	330	1100	430	840
Fluoranthene	U	840	ug/Kgdrywt	1	330	1100	360	840
Indeno(1,2,3-cd)pyrene	U	840	ug/Kgdrywt	1	330	1100	410	840
Pyrene	J	420	ug/Kgdrywt	1	330	1100	340	840
Nitrobenzene-d5		66.3	%					
2-Fluorobiphenyl		64.5	%					
Terphenyl-d14		69.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2665.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	280	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	U	690	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	U	690	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	380	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	350	690
Fluoranthene	J	470	ug/Kgdrywt	1	330	920	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene	J	550	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		58.6	%					
2-Fluorobiphenyl		61.7	%					
Terphenyl-d14		71.0	%					

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2666.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1100	ug/Kgdrywt	1	330	830	220	620
Benzo(b)fluoranthene		870	ug/Kgdrywt	1	330	830	340	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	830	260	620
Benzo(k)fluoranthene	J	440	ug/Kgdrywt	1	330	830	210	620
Chrysene		1200	ug/Kgdrywt	1	330	830	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	830	320	620
Fluoranthene		2700	ug/Kgdrywt	1	330	830	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	830	310	620
Pyrene		2800	ug/Kgdrywt	1	330	830	250	620
Nitrobenzene-d5		58.1	%					
2-Fluorobiphenyl		61.2	%					
Terphenyl-d14		77.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2667.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	800	ug/Kgdrywt	1	330	1100	280	800
Benzo(b)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	430	800
Benzo(g,h,i)perylene	U	800	ug/Kgdrywt	1	330	1100	340	800
Benzo(k)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	270	800
Chrysene	U	800	ug/Kgdrywt	1	330	1100	310	800
Dibenzo(a,h)anthracene	U	800	ug/Kgdrywt	1	330	1100	410	800
Fluoranthene	U	800	ug/Kgdrywt	1	330	1100	340	800
Indeno(1,2,3-cd)pyrene	U	800	ug/Kgdrywt	1	330	1100	400	800
Pyrene	U	800	ug/Kgdrywt	1	330	1100	330	800
Nitrobenzene-d5		64.2	%					
2-Fluorobiphenyl		55.9	%					
Terphenyl-d14		78.0	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2668.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	760	ug/Kgdrywt	1	330	1000	260	760
Benzo(b)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	410	760
Benzo(g,h,i)perylene	U	760	ug/Kgdrywt	1	330	1000	320	760
Benzo(k)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	260	760
Chrysene	U	760	ug/Kgdrywt	1	330	1000	290	760
Dibenzo(a,h)anthracene	U	760	ug/Kgdrywt	1	330	1000	400	760
Fluoranthene	J	390	ug/Kgdrywt	1	330	1000	330	760
Indeno(1,2,3-cd)pyrene	U	760	ug/Kgdrywt	1	330	1000	380	760
Pyrene	J	450	ug/Kgdrywt	1	330	1000	310	760
Nitrobenzene-d5		51.8	%					
2-Fluorobiphenyl		39.1	%					
Terphenyl-d14		49.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WEt
SDG: DSY-24
Lab File ID: N2669.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	530	ug/Kgdrywt	1	330	940	240	710
Benzo(b)fluoranthene	J	560	ug/Kgdrywt	1	330	940	380	710
Benzo(g,h,i)perylene	U	710	ug/Kgdrywt	1	330	940	300	710
Benzo(k)fluoranthene	J	260	ug/Kgdrywt	1	330	940	240	710
Chrysene	J	640	ug/Kgdrywt	1	330	940	270	710
Dibenzo(a,h)anthracene	U	710	ug/Kgdrywt	1	330	940	360	710
Fluoranthene	J	930	ug/Kgdrywt	1	330	940	300	710
Indeno(1,2,3-cd)pyrene	U	710	ug/Kgdrywt	1	330	940	350	710
Pyrene		1100	ug/Kgdrywt	1	330	940	290	710
Nitrobenzene-d5		55.5	%					
2-Fluorobiphenyl		51.7	%					
Terphenyl-d14		67.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2672.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	730	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	U	730	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	U	730	ug/Kgdrywt	1	330	980	240	730
Chrysene	U	730	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene	U	730	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene	J	440	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		61.5	%					
2-Fluorobiphenyl		46.2	%					
Terphenyl-d14		62.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2673.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	270	ug/Kgdrywt	1	330	1000	260	760
Benzo(b)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	410	760
Benzo(g,h,i)perylene	U	760	ug/Kgdrywt	1	330	1000	320	760
Benzo(k)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	250	760
Chrysene	J	310	ug/Kgdrywt	1	330	1000	290	760
Dibenzo(a,h)anthracene	U	760	ug/Kgdrywt	1	330	1000	390	760
Fluoranthene	J	630	ug/Kgdrywt	1	330	1000	320	760
Indeno(1,2,3-cd)pyrene	U	760	ug/Kgdrywt	1	330	1000	370	760
Pyrene	J	750	ug/Kgdrywt	1	330	1000	310	760
Nitrobenzene-d5		58.7	%					
2-Fluorobiphenyl		49.0	%					
Terphenyl-d14		69.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2700.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1400	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene		1200	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	J	370	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	J	620	ug/Kgdrywt	1	330	960	240	720
Chrysene		1600	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene		2700	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	J	400	ug/Kgdrywt	1	330	960	350	720
Pyrene		3000	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		50.2	%					
2-Fluorobiphenyl		44.0	%					
Terphenyl-d14		58.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2675.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 31.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	800	ug/Kgdrywt	1	330	1100	280	800
Benzo(b)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	430	800
Benzo(g,h,i)perylene	U	800	ug/Kgdrywt	1	330	1100	330	800
Benzo(k)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	270	800
Chrysene	U	800	ug/Kgdrywt	1	330	1100	300	800
Dibenzo(a,h)anthracene	U	800	ug/Kgdrywt	1	330	1100	410	800
Fluoranthene	U	800	ug/Kgdrywt	1	330	1100	340	800
Indeno(1,2,3-cd)pyrene	U	800	ug/Kgdrywt	1	330	1100	390	800
Pyrene	U	800	ug/Kgdrywt	1	330	1100	320	800
Nitrobenzene-d5		57.5	%					
2-Fluorobiphenyl		58.2	%					
Terphenyl-d14		71.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2690.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	U	720	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	360	720
Pyrene	J	320	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		57.3	%					
2-Fluorobiphenyl		54.0	%					
Terphenyl-d14		63.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2691.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	540	ug/Kgdrywt	1	330	930	240	700
Benzo(b)fluoranthene	J	480	ug/Kgdrywt	1	330	930	380	700
Benzo(g,h,i)perylene	U	700	ug/Kgdrywt	1	330	930	290	700
Benzo(k)fluoranthene	J	280	ug/Kgdrywt	1	330	930	230	700
Chrysene	J	780	ug/Kgdrywt	1	330	930	270	700
Dibenzo(a,h)anthracene	U	700	ug/Kgdrywt	1	330	930	360	700
Fluoranthene		1500	ug/Kgdrywt	1	330	930	300	700
Indeno(1,2,3-cd)pyrene	U	700	ug/Kgdrywt	1	330	930	340	700
Pyrene		1500	ug/Kgdrywt	1	330	930	280	700
Nitrobenzene-d5		50.1	%					
2-Fluorobiphenyl		35.4	%					
Terphenyl-d14		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2692.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	580	ug/Kgdrywt	1	330	780	200	580
Benzo(b)fluoranthene	U	580	ug/Kgdrywt	1	330	780	320	580
Benzo(g,h,i)perylene	U	580	ug/Kgdrywt	1	330	780	240	580
Benzo(k)fluoranthene	U	580	ug/Kgdrywt	1	330	780	200	580
Chrysene	U	580	ug/Kgdrywt	1	330	780	220	580
Dibenzo(a,h)anthracene	U	580	ug/Kgdrywt	1	330	780	300	580
Fluoranthene	U	580	ug/Kgdrywt	1	330	780	250	580
Indeno(1,2,3-cd)pyrene	U	580	ug/Kgdrywt	1	330	780	290	580
Pyrene	U	580	ug/Kgdrywt	1	330	780	240	580
Nitrobenzene-d5		47.1	%					
2-Fluorobiphenyl		30.0	%					
Terphenyl-d14		63.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2693.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	U	720	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	U	720	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		47.4	%					
2-Fluorobiphenyl		29.2	%					
Terphenyl-d14		66.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2694.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	540	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	J	640	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	J	300	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	760	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	360	690
Fluoranthene		1100	ug/Kgdrywt	1	330	920	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene		1800	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		39.3	%					
2-Fluorobiphenyl		31.1	%					
Terphenyl-d14		67.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2695.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 52.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	320	ug/Kgdrywt	1	330	630	160	480
Benzo(b)fluoranthene	J	330	ug/Kgdrywt	1	330	630	260	480
Benzo(g,h,i)perylene	U	480	ug/Kgdrywt	1	330	630	200	480
Benzo(k)fluoranthene	J	180	ug/Kgdrywt	1	330	630	160	480
Chrysene	J	380	ug/Kgdrywt	1	330	630	180	480
Dibenzo(a,h)anthracene	U	480	ug/Kgdrywt	1	330	630	240	480
Fluoranthene		670	ug/Kgdrywt	1	330	630	200	480
Indeno(1,2,3-cd)pyrene	U	480	ug/Kgdrywt	1	330	630	230	480
Pyrene		770	ug/Kgdrywt	1	330	630	190	480
Nitrobenzene-d5		40.9	%					
2-Fluorobiphenyl		29.8	%					
Terphenyl-d14		70.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2702.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 49.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		880	ug/Kgdrywt	1	330	660	170	500
Benzo(b)fluoranthene		880	ug/Kgdrywt	1	330	660	270	500
Benzo(g,h,i)perylene	J	230	ug/Kgdrywt	1	330	660	210	500
Benzo(k)fluoranthene	J	370	ug/Kgdrywt	1	330	660	170	500
Chrysene		1000	ug/Kgdrywt	1	330	660	190	500
Dibenzo(a,h)anthracene	U	500	ug/Kgdrywt	1	330	660	260	500
Fluoranthene		2200	ug/Kgdrywt	1	330	660	210	500
Indeno(1,2,3-cd)pyrene	J	260	ug/Kgdrywt	1	330	660	250	500
Pyrene		3500	ug/Kgdrywt	1	330	660	200	500
Nitrobenzene-d5		43.4	%					
2-Fluorobiphenyl		42.3	%					
Terphenyl-d14		65.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2703.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 52.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	370	ug/Kgdrywt	1	330	620	160	470
Benzo(b)fluoranthene	U	470	ug/Kgdrywt	1	330	620	250	470
Benzo(g,h,i)perylene	U	470	ug/Kgdrywt	1	330	620	200	470
Benzo(k)fluoranthene	U	470	ug/Kgdrywt	1	330	620	160	470
Chrysene	J	520	ug/Kgdrywt	1	330	620	180	470
Dibenzo(a,h)anthracene	U	470	ug/Kgdrywt	1	330	620	240	470
Fluoranthene		800	ug/Kgdrywt	1	330	620	200	470
Indeno(1,2,3-cd)pyrene	U	470	ug/Kgdrywt	1	330	620	230	470
Pyrene		1500	ug/Kgdrywt	1	330	620	190	470
Nitrobenzene-d5		46.8	%					
2-Fluorobiphenyl		46.5	%					
Terphenyl-d14		74.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2704.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 61.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	330	ug/Kgdrywt	1	330	520	140	390
Benzo(b)fluoranthene	J	400	ug/Kgdrywt	1	330	520	210	390
Benzo(g,h,i)perylene	U	390	ug/Kgdrywt	1	330	520	160	390
Benzo(k)fluoranthene	J	170	ug/Kgdrywt	1	330	520	130	390
Chrysene	J	400	ug/Kgdrywt	1	330	520	150	390
Dibenzo(a,h)anthracene	U	390	ug/Kgdrywt	1	330	520	200	390
Fluoranthene		600	ug/Kgdrywt	1	330	520	170	390
Indeno(1,2,3-cd)pyrene	U	390	ug/Kgdrywt	1	330	520	190	390
Pyrene		1100	ug/Kgdrywt	1	330	520	160	390
Nitrobenzene-d5		25.8	%					
2-Fluorobiphenyl	*	25.7	%					
Terphenyl-d14		47.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2706.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	360	ug/Kgdrywt	1	330	430	110	320
Benzo(b)fluoranthene		570	ug/Kgdrywt	1	330	430	180	320
Benzo(g,h,i)perylene	J	170	ug/Kgdrywt	1	330	430	140	320
Benzo(k)fluoranthene	J	260	ug/Kgdrywt	1	330	430	110	320
Chrysene		440	ug/Kgdrywt	1	330	430	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	430	170	320
Fluoranthene		660	ug/Kgdrywt	1	330	430	140	320
Indeno(1,2,3-cd)pyrene	J	170	ug/Kgdrywt	1	330	430	160	320
Pyrene		2300	ug/Kgdrywt	1	330	430	130	320
Nitrobenzene-d5		38.0	%					
2-Fluorobiphenyl		55.0	%					
Terphenyl-d14		61.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2707.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 79.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	280	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	J	410	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	J	160	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	J	200	ug/Kgdrywt	1	330	420	100	310
Chrysene	J	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	J	370	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	J	160	ug/Kgdrywt	1	330	420	150	310
Pyrene		1300	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		33.2	%					
2-Fluorobiphenyl		52.1	%					
Terphenyl-d14		64.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2701.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	570	ug/Kgdrywt	1	330	910	240	690
Benzo(b)fluoranthene	J	520	ug/Kgdrywt	1	330	910	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	910	290	690
Benzo(k)fluoranthene	J	270	ug/Kgdrywt	1	330	910	230	690
Chrysene	J	650	ug/Kgdrywt	1	330	910	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	910	350	690
Fluoranthene		1200	ug/Kgdrywt	1	330	910	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	910	340	690
Pyrene		1300	ug/Kgdrywt	1	330	910	280	690
Nitrobenzene-d5		36.6	%					
2-Fluorobiphenyl	*	160.	%					
Terphenyl-d14		45.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2705.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 58.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	420	ug/Kgdrywt	1	330	570	150	430
Benzo(b)fluoranthene	J	520	ug/Kgdrywt	1	330	570	230	430
Benzo(g,h,i)perylene	U	430	ug/Kgdrywt	1	330	570	180	430
Benzo(k)fluoranthene	J	220	ug/Kgdrywt	1	330	570	140	430
Chrysene	J	500	ug/Kgdrywt	1	330	570	160	430
Dibenzo(a,h)anthracene	U	430	ug/Kgdrywt	1	330	570	220	430
Fluoranthene	J	510	ug/Kgdrywt	1	330	570	180	430
Indeno(1,2,3-cd)pyrene	U	430	ug/Kgdrywt	1	330	570	210	430
Pyrene		1300	ug/Kgdrywt	1	330	570	170	430
Nitrobenzene-d5		47.4	%					
2-Fluorobiphenyl		51.6	%					
Terphenyl-d14		64.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-24
Client ID: DSY-SD-G30-0018
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2708.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 48.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1600	ug/Kgdrywt	1	330	640	170	480
Benzo(a)pyrene		1600	ug/Kgdrywt	1	330	640	180	480
Benzo(b)fluoranthene		2700	ug/Kgdrywt	1	330	640	260	480
Benzo(g,h,i)perylene		650	ug/Kgdrywt	1	330	640	200	480
Benzo(k)fluoranthene		1200	ug/Kgdrywt	1	330	640	160	480
Chrysene		2200	ug/Kgdrywt	1	330	640	180	480
Dibenzo(a,h)anthracene	U	480	ug/Kgdrywt	1	330	640	250	480
Fluoranthene		2000	ug/Kgdrywt	1	330	640	200	480
Indeno(1,2,3-cd)pyrene		780	ug/Kgdrywt	1	330	640	240	480
Pyrene		4600	ug/Kgdrywt	1	330	640	200	480
Nitrobenzene-d5		40.6	%					
2-Fluorobiphenyl		57.9	%					
Terphenyl-d14		54.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2663.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		61.8						
2-Fluorobiphenyl		68.3						
Terphenyl-d14		99.2						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4130.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	68.	11.	34.
2-Methylnaphthalene-D10		69.8	%					
Fluorene-D10		74.2	%					
Pyrene-D10		74.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4131.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	55.	9.2	28.
2-Methylnaphthalene-D10		56.2	%					
Fluorene-D10		64.3	%					
Pyrene-D10		66.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4132.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		580	ug/Kgdrywt	1	20	50.	8.3	25.
2-Methylnaphthalene-D10		54.9	%					
Fluorene-D10		60.5	%					
Pyrene-D10		62.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4133.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		71.	ug/Kgdrywt	1	20	65.	11.	32.
2-Methylnaphthalene-D10		42.4	%					
Fluorene-D10		51.8	%					
Pyrene-D10		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4134.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		150	ug/Kgdrywt	1	20	62.	10.	31.
2-Methylnaphthalene-D10		37.0	%					
Fluorene-D10		43.0	%					
Pyrene-D10		52.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4135.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		320	ug/Kgdrywt	1	20	57.	9.4	28.
2-Methylnaphthalene-D10		34.3	%					
Fluorene-D10		47.9	%					
Pyrene-D10		58.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4136.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		39.1	%					
Fluorene-D10		52.3	%					
Pyrene-D10		58.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4137.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	61.	10.	30.
2-Methylnaphthalene-D10		29.6	%					
Fluorene-D10		42.0	%					
Pyrene-D10		57.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9DL
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4157.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		820	ug/Kgdrywt	2	20	120	19.	58.
2-Methylnaphthalene-D10		34.5	%					
Fluorene-D10		46.5	%					
Pyrene-D10		55.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WEt
SDG: DSY-24
Lab File ID: G4139.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 31.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		73.	ug/Kgdrywt	1	20	64.	11.	32.
2-Methylnaphthalene-D10		53.7	%					
Fluorene-D10		60.7	%					
Pyrene-D10		65.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4140.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		100	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		53.8	%					
Fluorene-D10		57.9	%					
Pyrene-D10		61.0	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4141.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	56.	9.3	28.
2-Methylnaphthalene-D10		22.1	%					
Fluorene-D10		34.7	%					
Pyrene-D10		53.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4160.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 42.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		54.	ug/Kgdrywt	1	20	47.	7.8	24.
2-Methylnaphthalene-D10		20.4	%					
Fluorene-D10		33.2	%					
Pyrene-D10		47.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: G4161.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		80.	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		19.6	%					
Fluorene-D10		29.3	%					
Pyrene-D10		43.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4162.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		280	ug/Kgdrywt	1	20	56.	9.2	28.
2-Methylnaphthalene-D10		18.8	%					
Fluorene-D10		29.4	%					
Pyrene-D10		49.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4163.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 52.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	38.	6.3	19.
2-Methylnaphthalene-D10		20.3	%					
Fluorene-D10		35.2	%					
Pyrene-D10		53.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18DL
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4158.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 49.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		420	ug/Kgdrywt	2	20	81.	13.	40.
2-Methylnaphthalene-D10		27.7	%					
Fluorene-D10		36.0	%					
Pyrene-D10		83.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4164.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 52.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	38.	6.2	19.
2-Methylnaphthalene-D10		41.8	%					
Fluorene-D10		69.4	%					
Pyrene-D10		69.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4186.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 61.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	32.	5.2	16.
2-Methylnaphthalene-D10		14.4	%					
Fluorene-D10		25.3	%					
Pyrene-D10		38.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4187.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		290	ug/Kgdrywt	1	20	26.	4.3	13.
2-Methylnaphthalene-D10		29.6	%					
Fluorene-D10		49.5	%					
Pyrene-D10		64.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4188.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 79.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10		28.2	%					
Fluorene-D10		45.9	%					
Pyrene-D10		51.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4159.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		56.	ug/Kgdrywt	1	20	55.	9.1	28.
2-Methylnaphthalene-D10		50.6	%					
Fluorene-D10		55.1	%					
Pyrene-D10		55.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4128.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 58.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		360	ug/Kgdrywt	1	20	34.	5.7	17.
2-Methylnaphthalene-D10		42.1	%					
Fluorene-D10		41.5	%					
Pyrene-D10		52.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4127.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK229.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1221	U	27.	ug/Kgdrywt	1	17	54.	25.	27.
Aroclor-1232	U	32.	ug/Kgdrywt	1	17	54.	30.	32.
Aroclor-1242	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1248	U	27.	ug/Kgdrywt	1	17	54.	20.	27.
Aroclor-1254	U	27.	ug/Kgdrywt	1	17	54.	15.	27.
Aroclor-1260	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Tetrachloro-M-Xylene		64.3	%					
Decachlorobiphenyl		61.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK230.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	21.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	46.	12.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		68.9	%					
Decachlorobiphenyl		71.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK231.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254		1300	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene		79.9	%					
Decachlorobiphenyl		86.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK246.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Aroclor-1221	U	28.	ug/Kgdrywt	1	17	55.	26.	28.
Aroclor-1232	U	33.	ug/Kgdrywt	1	17	55.	30.	33.
Aroclor-1242	U	28.	ug/Kgdrywt	1	17	55.	19.	28.
Aroclor-1248	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Aroclor-1254	U	28.	ug/Kgdrywt	1	17	55.	15.	28.
Aroclor-1260	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Tetrachloro-M-Xylene		83.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK247.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		83.4	%					
Decachlorobiphenyl		97.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK248.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		82.8	%					
Decachlorobiphenyl		89.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK249.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	47.	22.	23.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	47.	17.	23.
Aroclor-1254	J	240	ug/Kgdrywt	1	17	47.	13.	23.
Aroclor-1260		330	ug/Kgdrywt	1	17	47.	16.	23.
Tetrachloro-M-Xylene		96.1	%					
Decachlorobiphenyl		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK250.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Tetrachloro-M-Xylene		64.0	%					
Decachlorobiphenyl		72.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK251.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		70.9	%					
Decachlorobiphenyl		77.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: 7EK257.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 31.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	53.	24.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	53.	29.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	53.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	53.	15.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Tetrachloro-M-Xylene		85.0	%					
Decachlorobiphenyl		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK258.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	50.	28.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene		98.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK259.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254		220	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		76.3	%					
Decachlorobiphenyl		72.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK261.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254	U	19.	ug/Kgdrywt	1	17	38.	10.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Tetrachloro-M-Xylene		81.8	%					
Decachlorobiphenyl	*	40.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK457.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	49.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	49.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	49.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Tetrachloro-M-Xylene		86.9	%					
Decachlorobiphenyl		71.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	47.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	47.	26.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	47.	17.	23.
Aroclor-1254		190	ug/Kgdrywt	1	17	47.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Tetrachloro-M-Xylene		87.0	%					
Decachlorobiphenyl		86.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK264.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 52.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	32.	18.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	12.	16.
Aroclor-1254		97.	ug/Kgdrywt	1	17	32.	8.9	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		89.4	%					
Decachlorobiphenyl		76.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 12-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 49.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	19.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		960	ug/Kgdrywt	1	17	34.	9.5	17.
Aroclor-1260		320	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		78.5	%					
Decachlorobiphenyl		87.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK266.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 52.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	18.	ug/Kgdrywt	1	17	32.	17.	18.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1254		730	ug/Kgdrywt	1	17	32.	8.7	16.
Aroclor-1260		540	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		71.7	%					
Decachlorobiphenyl		82.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK117.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 61.
Report Date: 07-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	26.	9.2	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	26.	12.	13.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	26.	14.	15.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	26.	8.9	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	26.	9.4	13.
Aroclor-1254		350	ug/Kgdrywt	1	17	26.	7.2	13.
Aroclor-1260		240	ug/Kgdrywt	1	17	26.	9.2	13.
Tetrachloro-M-Xylene		70.5	%					
Decachlorobiphenyl		70.5	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254		1100	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	J	780	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		71.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK120.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 79.
Report Date: 07-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254		160	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		67.6	%					
Decachlorobiphenyl		70.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-24
Client ID: DSY-SD-G30-0018
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 48.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	19.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		260	ug/Kgdrywt	1	17	34.	9.5	17.
Aroclor-1260		220	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		70.7	%					
Decachlorobiphenyl		77.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK260.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254		220	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		85.6	%					
Decachlorobiphenyl		66.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 58.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	27.	13.	14.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	27.	9.3	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	27.	9.8	14.
Aroclor-1254		470	ug/Kgdrywt	1	17	27.	7.6	14.
Aroclor-1260		210	ug/Kgdrywt	1	17	27.	9.6	14.
Tetrachloro-M-Xylene		73.4	%					
Decachlorobiphenyl		67.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EJ803.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		73.5	%					
Decachlorobiphenyl	*	22.9	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA09-0012

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 29.6 **Lab Sample ID:** SE6841-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	63.0			P	1	6.4	0.40	2.6
7439-92-1	LEAD, TOTAL	66.3			P	1	1.3	0.22	1.0
7440-66-6	ZINC, TOTAL	156			P	1	6.4	0.43	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA09-1224
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 35.5
Lab Sample ID: SE6841-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	116			P	1	5.0	0.31	2.0
7439-92-1	LEAD, TOTAL	96.0			P	1	1.0	0.18	0.80
7440-66-6	ZINC, TOTAL	210			P	1	5.0	0.34	2.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA09-2448
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 39.6
Lab Sample ID: SE6841-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	123			P	1	3.1	0.19	1.2
7439-92-1	LEAD, TOTAL	111			P	1	0.61	0.11	0.49
7440-66-6	ZINC, TOTAL	275			P	1	3.1	0.21	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 30.4
Lab Sample ID: SE6841-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	62.0			P	1	7.9	0.49	3.2
7439-92-1	LEAD, TOTAL	58.5			P	1	1.6	0.28	1.3
7440-66-6	ZINC, TOTAL	162			P	1	7.9	0.53	3.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-1224

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 32.2
Lab Sample ID: SE6841-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	89.7			P	1	4.2	0.26	1.7
7439-92-1	LEAD, TOTAL	80.7			P	1	0.84	0.15	0.67
7440-66-6	ZINC, TOTAL	242			P	1	4.2	0.28	1.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	126			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	115			P	1	1.1	0.19	0.90
7440-66-6	ZINC, TOTAL	289		N	P	1	5.6	0.38	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA17-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 32.7
Lab Sample ID: SE6841-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	77.8			P	1	7.1	0.44	2.8
7439-92-1	LEAD, TOTAL	76.8			P	1	1.4	0.25	1.1
7440-66-6	ZINC, TOTAL	397		N	P	1	7.1	0.48	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA17-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 32.4 **Lab Sample ID:** SE6841-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	90.5			P	1	5.7	0.36	2.3
7439-92-1	LEAD, TOTAL	74.8			P	1	1.1	0.20	0.92
7440-66-6	ZINC, TOTAL	237		N	P	1	5.7	0.39	2.3

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA17-2448

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 34.0 **Lab Sample ID:** SE6841-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	226			P	1	5.9	0.37	2.4
7439-92-1	LEAD, TOTAL	138			P	1	1.2	0.20	0.94
7440-66-6	ZINC, TOTAL	309		N	P	1	5.9	0.40	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA21-0012

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 30.6 **Lab Sample ID:** SE6841-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	61.3			P	1	6.2	0.39	2.5
7439-92-1	LEAD, TOTAL	57.4			P	1	1.2	0.22	1.0
7440-66-6	ZINC, TOTAL	167		N	P	1	6.2	0.42	2.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA21-1224
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 33.5
Lab Sample ID: SE6841-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	75.1			P	1	5.7	0.36	2.3
7439-92-1	LEAD, TOTAL	67.4			P	1	1.1	0.20	0.92
7440-66-6	ZINC, TOTAL	155		N	P	1	5.7	0.39	2.3

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA21-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.8
Lab Sample ID: SE6841-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	170			P	1	7.1	0.44	2.8
7439-92-1	LEAD, TOTAL	162			P	1	1.4	0.25	1.1
7440-66-6	ZINC, TOTAL	375		N	P	1	7.1	0.48	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA24-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 42.2
Lab Sample ID: SE6841-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	24.5			P	1	3.6	0.23	1.4
7439-92-1	LEAD, TOTAL	25.2			P	1	0.73	0.13	0.58
7440-66-6	ZINC, TOTAL	66.8		N	P	1	3.6	0.24	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA24-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 34.2 **Lab Sample ID:** SE6841-015

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7440-50-8	COPPER, TOTAL	93.5			P	1	5.9	0.37	2.4
7439-92-1	LEAD, TOTAL	70.6			P	1	1.2	0.21	0.95
7440-66-6	ZINC, TOTAL	229		N	P	1	5.9	0.40	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA24-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 36.0
Lab Sample ID: SE6841-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	87.8			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	81.0			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	197		N	P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA26-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 51.7
Lab Sample ID: SE6841-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	48.8			P	1	3.6	0.22	1.4
7439-92-1	LEAD, TOTAL	44.9			P	1	0.71	0.12	0.57
7440-66-6	ZINC, TOTAL	158		N	P	1	3.6	0.24	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA26-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 48.9 **Lab Sample ID:** SE6841-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	154			P	1	3.8	0.24	1.5
7439-92-1	LEAD, TOTAL	180			P	1	0.76	0.13	0.60
7440-66-6	ZINC, TOTAL	583		N	P	1	3.8	0.25	1.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA26-2448

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 52.2 **Lab Sample ID:** SE6841-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	183			P	1	2.9	0.18	1.1
7439-92-1	LEAD, TOTAL	148			P	1	0.57	0.10	0.46
7440-66-6	ZINC, TOTAL	570		N	P	1	2.9	0.19	1.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA28-0016

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 61.5 **Lab Sample ID:** SE6841-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	82.2			P	1	2.1	0.13	0.84
7439-92-1	LEAD, TOTAL	90.1			P	1	0.42	0.07	0.34
7440-66-6	ZINC, TOTAL	216		N	P	1	2.1	0.14	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA30-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 74.3
Lab Sample ID: SE6841-022

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	37.5			P	1	2.3	0.14	0.92
7439-92-1	LEAD, TOTAL	59.8			P	1	0.46	0.08	0.37
7440-66-6	ZINC, TOTAL	206		N	P	1	2.3	0.15	0.92

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA30-1224

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 78.6
Lab Sample ID: SE6841-023

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	32.4			P	1	1.4	0.09	0.56
7439-92-1	LEAD, TOTAL	48.9			P	1	0.28	0.05	0.23
7440-66-6	ZINC, TOTAL	129		N	P	1	1.4	0.09	0.56

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G30-0018

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 48.2 **Lab Sample ID:** SE6841-024

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	107			P	1	3.0	0.19	1.2
7439-92-1	LEAD, TOTAL	98.2			P	1	0.61	0.11	0.49
7440-66-6	ZINC, TOTAL	243		N	P	1	3.0	0.20	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP34-101311

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 35.6 **Lab Sample ID:** SE6841-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	132			P	1	6.9	0.43	2.8
7439-92-1	LEAD, TOTAL	116			P	1	1.4	0.24	1.1
7440-66-6	ZINC, TOTAL	286		N	P	1	6.9	0.46	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-DUP35-101311
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 58.1
Lab Sample ID: SE6841-021

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	62.9			P	1	2.5	0.16	1.0
7439-92-1	LEAD, TOTAL	73.8			P	1	0.51	0.09	0.40
7440-66-6	ZINC, TOTAL	243		N	P	1	2.5	0.17	1.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-RB14-101311
Matrix: WATER
SDG Name: DSY-24
Percent Solids: 0.00
Lab Sample ID: SE6841-025

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.63	10
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0
7440-66-6	ZINC, TOTAL	2.2	J		P	1	25	0.72	10

Comments:

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-1
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	55000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-OCT-11 10:11:23	N/A	N/A	
Toc In Soil(2)	50000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-OCT-11 10:33:56	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	30. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:48:47	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A00003

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-2
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:00	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0003

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-3
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:09	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0000365

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-4
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	48000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-OCT-11 11:10:02	N/A	N/A	
Toc In Soil(2)	50000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-OCT-11 11:23:06	N/A	N/A	
Toc In Soil(Avg)	49000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	30. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:18	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0003465

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-5
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:35	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A000036

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-6
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:41	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A000034

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-7
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	51000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-OCT-11 11:36:02	N/A	N/A	
Toc In Soil(2)	45000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-OCT-11 11:45:43	N/A	N/A	
Toc In Soil(Avg)	48000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	33. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:06	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000348

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-8
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:24	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000350

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-9
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:35	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000311

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-10
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	55000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-OCT-11 12:02:01	N/A	N/A	
Toc In Soil(2)	41000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-OCT-11 12:41:29	N/A	N/A	
Toc In Soil(Avg)	48000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	31. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:46	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000032

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-11
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	33. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:58	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000363

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-12
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:20	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000336

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-14
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	62000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-OCT-11 12:54:40	N/A	N/A	
Toc In Soil(2)	42000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-OCT-11 13:06:27	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	42. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:44	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0003[illegible]

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-15
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:54	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000037

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-16
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:03	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000388

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-17
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	34000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-OCT-11 13:25:01	N/A	N/A	
Toc In Soil(2)	64000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-OCT-11 13:48:26	N/A	N/A	
Toc In Soil(Avg)	49000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	52. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:18	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A00003

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-18
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	49. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:33	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-19
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	52. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:42	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-20
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA28-0016	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	29000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-OCT-11 14:00:07	N/A	N/A	
Toc In Soil(2)	27000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-OCT-11 14:26:25	N/A	N/A	
Toc In Soil(Avg)	28000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	61. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:51	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-22
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA30-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	15000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-OCT-11 15:18:50	N/A	N/A	
Toc In Soil(2)	19000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-OCT-11 15:50:02	N/A	N/A	
Toc In Soil(Avg)	17000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	74. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:32:56	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A000036

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-23
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA30-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	79. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:34:04	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A000365

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-24
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G30-0018	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	42000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-OCT-11 16:00:06	N/A	N/A	
Toc In Soil(2)	45000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-OCT-11 16:10:54	N/A	N/A	
Toc In Soil(Avg)	44000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	48. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:34:28	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A0000366

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-13
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP34-101311	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:35	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000358

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-21
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP35-101311	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	29000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-OCT-11 14:40:42	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-OCT-11 15:05:39	N/A	N/A	
Toc In Soil(Avg)	33000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	58. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:59	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000333

APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Newport
Reference No. _____

See DV Report

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Kathidin
Case/Project No. _____
SDG No. DSY-27
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Edward Kelly Company Name Tetra Tech Phone Number 412-921-8407

Date Validation Started 12/22/11

Date Validation Completed 12/27/11

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	
VOA/SV-III	INITIAL CALIBRATION	
VOA/SV-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	
SV-VI	SV SURROGATE SPIKE RECOVERIES	
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB-III	INITIAL CALIBRATION	
Pest/PCB-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Edward Sedlmyer

Name: Edward Sedlmyer

Date: 12/27/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Lodmyer

Date: 12/27/11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Ledlow

Date: 12/27/11

See DV Report

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received

Validator: Edward Sedlmayer Date: 12/22/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

See DV Report

Sampler: _____ Company: _____ Contacted: Yes No Date: _____

I. PRESERVATION AND HOLDING TIMES -

Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Acti

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Edward Hedlayer

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-II

See DV Report

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Edward Sedlayer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Edward Hallenger

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments

Validator: Edward Ledbetter

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-A

See DV Report

V. BLANK ANALYSIS

List the blank contamination below.

Sampler: _____ Company: _____ Concentration Level: _____

1. Laboratory: Method, Storage and Instrument Blanks

Contacted: Yes No Date: _____

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Edward Ludlow

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. Blank Actions - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: Edward Hedbergs

Date: 12/27/11

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	Action
	NA				

Validator: Edward Sedlmyer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

* Advisory Surrogates - OLM03.2

Validator: Edward Sudlow

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Edward Ledbetter

Date: 12/22/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: Edward Sedlmayer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Edward Ashley Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

See DV Report

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Edward Ludlow

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

See DV Report

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Edward Medlarz

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

See DV Report

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Edward Lodbouyer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an exampl for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Edward Ludlow

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

NA

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	RRT	Est. Conc.	Action

Validator: Edward Sedlmayer

Date: 12/27/01

EPA-NE - Data Validation Worksheet
VOA/SV-XV

See DV Report

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Edward Sullivan

Date: 12/27/11

APPENDIX D

SUPPORT DOCUMENTATION

HOLDTIME

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-N24-2448	SE6617-009	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-DUP26-100511	SE6617-010	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-1224	SE6617-018	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-0012	SE6617-017	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-2448	SE6617-016	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N28-1224	SE6617-015	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-0012	SE6617-014	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N26-2448	SE6617-013	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N30-2448	SE6617-019	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N26-0012	SE6617-011	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-Q25-0012	SE6617-020	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-1224	SE6617-008	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-0012	SE6617-007	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-L26-2448	SE6617-002	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L26-1224	SE6617-001	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L24-2448	SE6617-005	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-L24-1224	SE6617-004	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-L24-0012	SE6617-003	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-N26-1224	SE6617-012	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-19	M	MG/KG	DSY-SD-T25-2448	SE6618-010	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-2448	SE6618-005	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-1224	SE6618-004	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-0012	SE6618-003	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W24-2448	SE6618-019	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-1224	SE6618-018	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-0012	SE6618-017	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-2448	SE6618-016	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-DUP27-100511	SE6618-006	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T29-0012	SE6618-014	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T25-1224	SE6618-009	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T25-0012	SE6618-008	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-Q29-2448	SE6618-013	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-1224	SE6618-012	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-0012	SE6618-011	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q25-2448	SE6618-002	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	M	MG/KG	DSY-SD-Q25-1224	SE6618-001	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-DUP28-100611	SE6618-020	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-1224	SE6618-015	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-C25-1224	SE6619-009	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-W30-0012	SE6619-001	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-2448	SE6619-006	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-1224	SE6619-005	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-18-0012	SE6619-015	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-18-1224	SE6619-016	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-18-2448	SE6619-017	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-0012	SE6619-018	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-1224	SE6619-019	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-2448	SE6619-020	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-0012	SE6619-012	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-1224	SE6619-013	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-W30-1224	SE6619-002	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C25-0012	SE6619-008	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C25-2448	SE6619-010	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-DUP29-100711	SE6619-011	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	M	MG/KG	DSY-SD-G25-0012	SE6767-021	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP32-101211	SE6767-017	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/31/2011	15	4	19
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-1224	SE6767-005	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-0012	SE6767-001	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-2448	SE6767-006	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-2448	SE6767-016	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-0012	SE6767-011	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-1224	SE6767-019	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-2448	SE6767-010	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-1224	SE6767-015	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-0012	SE6767-004	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-2448	SE6767-003	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-1224	SE6767-012	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-2448	SE6767-013	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-0012	SE6767-014	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-1224	SE6767-002	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-23	M	MG/KG	DSY-SD-AA01-0012	SE6768-001	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	M	MG/KG	DSY-SD-AA01-1224	SE6768-002	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA01-2448	SE6768-003	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-0012	SE6768-005	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-1224	SE6768-006	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-2448	SE6768-007	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-DUP33-101211	SE6768-004	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-G30-0018	SE6841-024	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-0012	SE6841-022	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-0012	SE6841-014	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA28-0016	SE6841-020	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-1224	SE6841-023	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-DUP34-101311	SE6841-013	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-0012	SE6841-001	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA26-2448	SE6841-019	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-1224	SE6841-002	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA09-2448	SE6841-003	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-0012	SE6841-004	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-1224	SE6841-005	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-DUP35-101311	SE6841-021	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TOC	MG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-22	TOC	MG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-18	TS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-19	TS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	TS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/24/2011	10/26/2011	18	2	20
DSY-19	TS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	TS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-21	TS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-22	TS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	TS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-24	TS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	SUR	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	SUR	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	SUR	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	SUR	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	SUR	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	SUR	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	SUR	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	SUR	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	SUR	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-20	OS	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-21	OS	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-23	OS	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7DL	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-24	OS	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-19	OS	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	OS	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	OS	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-18	SIM	%	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	SIM	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	SIM	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	%	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-20	SIM	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	SIM	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-21	SIM	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	SIM	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-22	SIM	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-23	SIM	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-24	SIM	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48
DSY-18	SIM	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	UG/KG	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	SIM	UG/KG	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-21	SIM	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-22	SIM	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-23	SIM	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-24	SIM	UG/KG	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-18	SIM	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-20	SIM	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	SIM	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	SIM	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-18	PCB	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-18	PCB	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-19	PCB	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20
DSY-19	PCB	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-20	PCB	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-20	PCB	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-21	PCB	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-21	PCB	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	PCB	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-23	PCB	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11
DSY-24	PCB	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16RE	NM	10/05/2011	11/21/2011	11/22/2011	47	1	48
DSY-18	PCB	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-19	PCB	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-21	PCB	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-19	PCB	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-21	PCB	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-23	PCB	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-24	PCB	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11

NAVSTA NEWPORT
SEDIMENT DATA
DSY-24

FRACTION	CHEMICAL	DSY-SD-AA21-2448	UNITS	DSY-SD-DUP34-101311	RPD	D	
M	COPPER	170	MG/KG	132	25.17	38.00	
M	LEAD	162	MG/KG	116	33.09	46.00	
M	ZINC	375 J	MG/KG	286 J	26.93	89.00	
OS	BENZO(A)ANTHRACENE	540 J	UG/KG	570 J	5.41	30.00	
OS	BENZO(B)FLUORANTHENE	480 J	UG/KG	520 J	8.00	40.00	
OS	BENZO(K)FLUORANTHENE	280 J	UG/KG	270 J	3.64	10.00	
OS	CHRYSENE	780 J	UG/KG	650 J	18.18	130.00	
OS	FLUORANTHENE	1500	UG/KG	1200	22.22	300.00	
OS	PYRENE	1500	UG/KG	1300	14.29	200.00	
PAH	BENZO(A)PYRENE	310	UG/KG	56	138.80	254.00	J
PCB	AROCLOR-1254	220 J	UG/KG	220 J	0.00	0.00	

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-24

FRACTION	CHEMICAL	DSY-SD-AA28-0016	UNITS	DSY-SD-DUP35-101311	RPD	D
M	COPPER	82.2	MG/KG	62.9	26.60	19.30
M	LEAD	90.1	MG/KG	73.8	19.89	16.30
M	ZINC	216 J	MG/KG	243 J	11.76	27.00
MISC	TOTAL ORGANIC CARBON	28000	MG/KG	33000	16.39	5000.00
MISC	TOTAL SOLIDS	61	%	58	5.04	3.00
MISC	TRIBUTYLTIN (AS TIN)	2.5	UG/KG	1.3 J	63.16	1.20
OS	BENZO(A)ANTHRACENE	330 J	UG/KG	420 J	24.00	90.00
OS	BENZO(B)FLUORANTHENE	400 J	UG/KG	520 J	26.09	120.00
OS	BENZO(K)FLUORANTHENE	170 J	UG/KG	220 J	25.64	50.00
OS	CHRYSENE	400 J	UG/KG	500 J	22.22	100.00
OS	FLUORANTHENE	600	UG/KG	510 J	16.22	90.00
OS	PYRENE	1100	UG/KG	1300	16.67	200.00
PAH	BENZO(A)PYRENE	240	UG/KG	360	40.00	120.00
PCB	AROCLOR-1254	350	UG/KG	470	29.27	120.00
PCB	AROCLOR-1260	240	UG/KG	210	13.33	30.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-24
SE6841

Sample Receipt

The following samples were received on October 17, 2011 and were logged in under Katahdin Analytical Services work order number SE6841 for a hardcopy due date of November 4, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6841-1	DSY-SD-AA09-0012
SE6841-2	DSY-SD-AA09-1224
SE6841-3	DSY-SD-AA09-2448
SE6841-4	DSY-SD-AA13-0012
SE6841-5	DSY-SD-AA13-1224
SE6841-6	DSY-SD-AA13-2448
SE6841-7	DSY-SD-AA17-0012
SE6841-8	DSY-SD-AA17-1224
SE6841-9	DSY-SD-AA17-2448
SE6841-10	DSY-SD-AA21-0012
SE6841-11	DSY-SD-AA21-1224
SE6841-12	DSY-SD-AA21-2448
SE6841-13	DSY-SD-DUP34-101311
SE6841-14	DSY-SD-AA24-0012
SE6841-15	DSY-SD-AA24-1224
SE6841-16	DSY-SD-AA24-2448
SE6841-17	DSY-SD-AA26-0012
SE6841-18	DSY-SD-AA26-1224
SE6841-19	DSY-SD-AA26-2448
SE6841-20	DSY-SD-AA28-0016
SE6841-21	DSY-SD-DUP35-101311
SE6841-22	DSY-SD-AA30-0012
SE6841-23	DSY-SD-AA30-1224
SE6841-24	DSY-SD-G30-0018
SE6841-25	DSY-SD-RB14-101311

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-24 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6841-6 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were subjected to the GPC cleanup process except for SE6841-13.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. Sample SE6841-25 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD associated with samples SE6841-1 through 20 were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for this soil LCS/LCSD.

Samples SE6841-3, 12, 18DL, 19, 20, 21, 22, and 23 were manually integrated for the surrogates fluorene-d10, internal standards acenaphthene-d10, and/or chrysene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6841-25 had a low response for the internal standard perylene-d12, which was outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the responses for the other five internal standards were acceptable, the sample was not reanalyzed.

The LCSD WG99504-3 had this sample had low responses for the internal standards chrysene-d12 and perylene-d12, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the LCS had acceptable internal standard responses and the LCS/LCSD had acceptable spike recoveries, the LCSD was not reanalyzed.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process except for sample SE6841-13. The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6841-20 had a low recovery for the surrogate 2-flurobiphenyl, which was outside the laboratory established acceptance limits. The deviation is within the allowable exceedances according to EPA guidelines, which is one acid and/or base surrogate with a minimal recovery of 10%. Therefore, the sample was not reextracted.

Sample SE6841-13 had a high recovery for the surrogate 2-flurobiphenyl, which was outside of the laboratory established acceptance limits. Due to a laboratory error, the sample was spiked with the EPH fractionation surrogate mix, which also contains the surrogate 2-flurobiphenyl. This resulted in a high recovery for this surrogate. Because the surrogate mix contained hexane, the sample could not be put through the GPC. For these reasons, the sample was not reextracted.

Samples SE6841-18, 19, 22, and 24 had low responses for the internal standard perylene-d12, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the responses for the other five internal standards were acceptable and the surrogate recoveries were acceptable, the samples were not reanalyzed.

Samples SE6841-3, 8, 12, 13, 16, 17, 18, 20, 21, 22, 23 were manually integrated for the analytes benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The CV (file N2122) had a low response for the surrogate terphenyl-d14. The CV (file N2659) had a high response for the analyte pyrene. The CV (file N2682) had a low response for the analyte indeno(1,2,3-cd)pyrene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

8082 Analysis

Surrogate recoveries for the samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6841-11, 12, 13, 16, 21, 22, and 24 were manually integrated for Aroclor 1254, Aroclor 1260 and/or the surrogate TCX. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6841-7 and 22 had %RPD's for Aroclor 1254 or Aroclor 1260 that were outside of the method acceptance limits of 40%. The analyte is flagged with a "J" qualifier on the report of analysis (ROA).

One of the five peaks that was used to quantitate Aroclor 1254 or Aroclor 1260 on one or both channels had an elevated concentration due to interference from one of the aroclors for the following samples: Samples SE6841-16, 18, 21, 22, and 24. The peak was deleted electronically. However, due to software limitations, the average calculated concentration was still based on five peaks. Therefore, the mean concentration was manually calculated based on the correct amount of peaks and was manually corrected on the Form 10. The %RPD was also manually corrected on the Form 10.

Samples SE6841-19 through 24 and the MSD WG99756-5 had low recoveries for TCX and DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

The method blank WG100719-1 and the LCS WG100719-2 had high recoveries for TCX and DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

Samples SE6841-14 and 25 had low recoveries for DCB on both channels that were outside of laboratory established acceptance limits.

The method blank WG99509-1 had no recoveries for TCX on both channels. Due to a laboratory error and noted in the prep log sheet, this extract went close to dryness when it was concentrated. The associated sample SE6841-25 had low recoveries for DCB on both channels. Since the recoveries for DCB were acceptable in the associated method blank and LCS/LCSD, no further action was taken.

Samples SE6841-13 and 18 had low recoveries for DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

The opening/closing calibration verification standard (CV) (file 7EK122) had a low response for DCB on both channels, as well as a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recovery of DCB may be biased low.

The closing CV (file 7EK137) had a high response for TCX and a low response for DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK107 and 7EK218) had high responses for TCX on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EK188) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK268) had low responses for DCB and Aroclor 1260 on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK241, 7EK256 and 7EK467) had high responses for Aroclor 1254 on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK253 and 7EK449) had high responses for TCX and DCB on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EK434) had a high responses for Aroclor 1016, Aroclor 1260, TCX, and DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK464) had high responses for TCX on both channels and Aroclor 1016 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1016 was acceptable on channel B, the associated samples were not reanalyzed. The samples may be biased high for TCX.

The LCS WG99856-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. The LCS also had low recoveries for TCX on both channels that were outside of laboratory established acceptance limits. Since the LCSD had acceptable surrogate and spike recoveries, the associated samples were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-24 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition,

1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6841-25 was originally digested for ICP analysis on 11/01/11 (QC Batch BK01ICW2) in accordance with USEPA Method 3010A. The measured copper recovery of the laboratory control sample in this batch was outside of the project acceptance limit. For this reason, Katahdin Sample Number SE6841-25 was redigested on 11/03/11 (QC Batch BK03ICW3). This redigestate is identified throughout the raw data with the suffix "R" appended to the Katahdin Sample Number (e.g. "SE6841-025R"). This redigestate was successfully analyzed for copper.

Solid-matrix Katahdin Sample Numbers SE6841-(1-5) were digested for ICP analysis on 11/01/11 (QC Batch BK01ICS2) in accordance with USEPA Method 3050B. Katahdin.

Solid-matrix Katahdin Sample Numbers SE6841-(6-24) were digested for ICP analysis on 11/02/11 (QC Batch BK02ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6841-6 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-24 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of zinc in the matrix-spiked aliquot of Katahdin Sample Number SE6841-6 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6841-6 is within the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for all elements.

The measured recovery of all elements in a post-digestion spike of Katahdin Sample Number SE6841-6 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6841-6 is within the project acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all elements.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the

concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-24 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

Subcontracted Analysis

Analyses for Asbestos were performed by a subcontract laboratory. Please refer to the section of the data package titled Subcontracted Data.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.08.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Jennifer Obrin

From: Horton, Mike [Mike.Horton@tetratech.com]
Sent: Tuesday, October 18, 2011 10:59 AM
To: Guzman, Lucy; Jennifer Obrin
Subject: RE: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841
Attachments: DOC.PDF

Jennifer, please find the attached corrected COC for your records (changing all AA11 locations to AA09 locations) thanks for catching that.

Mike Horton

From: Guzman, Lucy
Sent: Tuesday, October 18, 2011 10:44 AM
To: Horton, Mike; Parker, Stephen
Subject: FW: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841

One of the samples was written on the chain as AA11, but on the bottles was written as AA09. The sample was logged in as AA09. Dates and times matched between the chain and the bottles.

Is this correct? Katahdin should always use what is written in the COC-form!

Please let me know
Lucy

From: Jennifer Obrin [mailto:jobrin@katahdinlab.com]
Sent: Tuesday, October 18, 2011 9:51 AM
To: Guzman, Lucy; Sedlmyer, Tobrena
Subject: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841

Please find attached the COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11 under the work order SE6841. Please let me know if you have any questions.

Jennifer Obrin
Project Manager
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
(207) 874-2400 Ext. 17

10000

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000012

Katahdin ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13136

Send Results to:
Name Steve Parker
Company Tetra Tech NUS
Address 250 Andover St.
City Wilmington
State, Zip MA 01887
Phone (978) 471-8434
Fax (978) 471-8499
E-mail

Send Invoice to:
Name
Company
Address
City
State, Zip
Phone
Fax
E-mail

Project No./Name: CTO WE61, Drydock SY

Sampler's (Signature): Michael Horton

Lab Use Only:
VOA Headspace Y N NA
Field Filtered Y N NA
Correct Containers Y N NA
Discrepancies Y N NA
Cust. Seals Intact Y N NA
Containers Intact Y N NA
Airbill #:
CAR #:

Analysis Requirements:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC												Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1155	DSY-SD-AA11 (09 MH) 0012	SED	1	1	1	1													4	
	1158	DSY-SD-AA11 (09 MH) 1224	↓	1	1	1														3	
	1201	DSY-SD-AA11 (09 MH) 2448	↓	1	1	1														3	
	1220	DSY-SD-AA13-0012	↓	1	1	1	1													4	
	1223	DSY-SD-AA13-1224	↓	1	1	1														3	
	1226	DSY-SD-AA13-2448	↓	2	2	2	/												Lab QC	6	
	1245	DSY-SD-AA17-0012	↓	1	1	1	1													4	
	1248	DSY-SD-AA17-1224	↓	1	1	1														3	
	1251	DSY-SD-AA17-2448	↓	1	1	1														3	
	1305	DSY-SD-AA21-0012	↓	1	1	1	1													4	
	1308	DSY-SD-AA21-1224	↓	1	1	1														3	
	1311	DSY-SD-AA21-2448	↓	1	1	1														3	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
[signature]	10/17/11 1300	[signature]
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	Temperature

REMARKS:
COC updated to change all AA11 samples to AA09
[signature] Michael Horton

Details:
Page 1 of 3
Cooler No. ____ of ____
Date Shipped
Shipped By
Turnaround

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

0000013

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: K1S
KAS Work Order#: SE6841	KIMS Review By: JO	Received By: GN
SDG #:	Cooler: 1 of 4	Date/Time Rec.: 10-17-11/15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 1.4
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample set AA11 on chain is marked AA09 on bottles, all times match

0000014

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6341	KIMS Review By: GN	Received By: GN
SDG #:	Cooler: 2 of 4	Date/Time Rec.: 10-17-11 / 15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.7
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GV	Delivered By: KAS
KAS Work Order#: SE6841	KIMS Review By:	Received By: GV
SDG #:	Cooler: 3 of 4	Date/Time Rec.: 10-17-11 / 15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.2
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. **Sample Receipt Condition Report**

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6841	KIMS Review By: JO	Received By: GN
SDG #:	Cooler: 4 of 4	Date/Time Rec.: 10-17-11/15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		—			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 2.6
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,	✓				
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin

SE 6841

~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13136

Send Results to:	Send Invoice to:
Name Stac Parker	Name
Company Tetra Tech NUS	Company
Address 250 Andover St.	Address
City Wilmington	City
State, Zip MA 01887	State, Zip
Phone (978) 474-8434	Phone
Fax (978) 474-8499	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Derecktor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1155	OSY-SD-AA11-0012	SED	1	1	1	1		4	
	1158	OSY-SD-AA11-1224		1	1	1			3	
	1201	OSY-SD-AA11-2448		1	1	1			3	
	1220	OSY-SD-AA13-0012		1	1	1	1		4	
	1223	OSY-SD-AA13-1224		1	1	1			3	
	1226	OSY-SD-AA13-2448		2	2	2	1	Lab QC	7	
	1245	OSY-SD-AA17-0012		1	1	1	1		4	
	1248	OSY-SD-AA17-1224		1	1	1			3	
	1251	OSY-SD-AA17-2448		1	1	1			3	
	1305	OSY-SD-AA21-0012		1	1	1	1		4	
	1308	OSY-SD-AA21-1224		1	1	1			3	
	1311	OSY-SD-AA21-2448		1	1	1			3	

	Date/Time	
Sample Kit Prep'd by: (Signature)		Received By: (Signature)
Michael Horton	10/17/11 1300	Andrew Harlow
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 1 of 3

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

KATAHDIN ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SE6841

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13133

Send Results to:	Send Invoice to:
Name SEE PAGE ONE	Name
Company	Company
Address	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Dereckor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: _____

CAR #: _____

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 —	DSY-SD-DUP34-101311	SED	1	1	1			3	
	1325	DSY-SD-AA28-0012		1	1	1	1		4	
	1328	DSY-SD-AA28-1224		1	1	1			3	
	1331	DSY-SD-AA28-2448		1	1	1			3	
	1400	DSY-SD-AA26-0012		1	1	1	1		4	
	1403	DSY-SD-AA26-1224		1	1	1			3	
	1406	DSY-SD-AA26-2448		1	1	1			3	
	1430	DSY-SD-AA28-0016		1	1	1	1		4	
	—	DSY-SD-~~AA~~DUP35-101311		1	1	1	1		4	
	1445	DSY-SD-AA30-0012		1	1	1	1		4	
	1448	DSY-SD-AA30-1224		1	1	1			3	
	1455	DSY-SD-G30-0018		1	1		1		3	

	Date/Time	
Sample Kit Prep'd by: (Signature)	10/17/11 1300	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 2 of 3

Cooler No. ____ of ____

Date Shipped _____

Shipped By _____

Turnaround _____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SE6841

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13134

Send Results to:	Send Invoice to:
Name	Name
Company SEE PAGE ONE	Company
Address	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Docktor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements:

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PCB	Metals (Pb, Cu, Zn)	PAH	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1630	DSY-SD-RB14-101311	AQ	2	1	2			5	
(6768-5 TOC)	10/12/11 1445	DSY-SD-AA05-0012	SED				1		1	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
	10/17/11 1300	Andrew Harlan
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	Temperature

REMARKS:

Details:

Page 3 of 3

Cooler No. ____ of ____

Date Shipped

Shipped By

Turnaround

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-AA09-0012	SE6841-1	64.5		66.3		69.8		0
DSY-SD-AA21-0012	SE6841-10	58.2		57.5		71.1		0
DSY-SD-AA21-1224	SE6841-11	54.0		57.3		63.4		0
DSY-SD-AA21-2448	SE6841-12	35.4		50.1		65.7		0
DSY-SD-DUP34-101311	SE6841-13	160.	*	36.5		45.7		1
DSY-SD-AA24-0012	SE6841-14	30.0		47.1		63.6		0
DSY-SD-AA24-1224	SE6841-15	29.2		47.4		66.0		0
DSY-SD-AA24-2448	SE6841-16	31.1		39.3		67.4		0
DSY-SD-AA26-0012	SE6841-17	29.8		40.9		70.0		0
DSY-SD-AA26-1224	SE6841-18	42.0		43.5		65.9		0
DSY-SD-AA26-2448	SE6841-19	46.7		47.0		74.6		0
DSY-SD-AA09-1224	SE6841-2	61.7		58.6		71.0		0
DSY-SD-AA28-0016	SE6841-20	25.8	*	25.8		47.6		1
DSY-SD-DUP35-101311	SE6841-21	51.6		47.4		64.8		0
DSY-SD-AA30-0012	SE6841-22	54.9		37.9		60.7		0
DSY-SD-AA30-1224	SE6841-23	52.4		33.2		64.2		0
DSY-SD-G30-0018	SE6841-24	57.8		40.8		54.0		0
DSY-SD-AA09-2448	SE6841-3	61.2		58.1		77.8		0
DSY-SD-AA13-0012	SE6841-4	55.9		64.2		78.0		0
DSY-SD-AA13-1224	SE6841-5	39.1		51.8		49.6		0
DSY-SD-AA13-2448	SE6841-6	51.7		55.5		67.1		0
DSY-SD-AA17-0012	SE6841-7	46.2		61.5		62.3		0
DSY-SD-AA17-1224	SE6841-8	49.0		58.7		69.5		0
DSY-SD-AA17-2448	SE6841-9	43.9		50.4		58.2		0
Method Blank Sample	WG99775-1	62.6		54.9		94.9		0
Laboratory Control S	WG99775-2	64.8		54.2		84.8		0
Laboratory Control S	WG99775-3	60.9		52.1		87.6		0
Matrix Spike	WG99775-4	59.3		58.1		73.2		0
Matrix Spike Duplica	WG99775-5	62.2		61.2		71.9		0
Method Blank Sample	WG99859-1	55.2		49.2		73.6		0

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
Laboratory Control S	WG99859-2	53.0		44.1		68.3		0
Laboratory Control S	WG99859-3	63.1		51.9		77.5		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB14-101311	SE6841-25	68.3		61.8		99.2		0
Method Blank Sample	WG99502-1	81.4		75.3		70.9		0
Laboratory Control S	WG99502-2	79.8		75.8		78.1		0
Laboratory Control S	WG99502-3	73.3		67.2		71.2		0

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND139 DFTPP ~~BFB~~ Injection Date: 10/13/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 1102

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.1
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	36.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	11.1 (74.2)2
442	40.0 - 100.0% of mass 198	77.2
443	17.0 - 23.0% of mass 442	15.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1013	N1952	10/13/11	1127
02		SSTD010N1013	N1953	10/13/11	1209
03		SSTD025N1013	N1954	10/13/11	1252
04		SSTD075N1013	N1955	10/13/11	1334
05		SSTD100N1013	N1956	10/13/11	1416
06		SSTD125N1013	N1957	10/13/11	1459
07		8270C IND CHEC	N1958	10/13/11	1541
08					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-N Calibration Date(s): 10/13/11 10/13/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1127 1459

LAB FILE ID: RF10: N1953 RF25: N1954 RF50: N1952
RF75: N1955 RF100: N1956 RF125: N1957

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	1.097	0.974	0.928	0.840	0.836	0.729	AVRG		0.90072996	14.211	30.000
Pyrene	1.509	1.565	1.504	1.403	1.311	1.250	AVRG		1.42351937	8.730	15.000
Benzo(a)anthracene	1.063	1.053	1.061	0.984	0.959	0.911	AVRG		1.00509683	6.307	15.000
Chrysene	1.058	1.040	1.003	0.916	0.889	0.830	AVRG		0.95600873	9.536	15.000
Benzo(b)fluoranthene	1.125	1.162	1.116	1.075	1.096	0.983	AVRG		1.09290468	5.620	15.000
Benzo(k)fluoranthene	1.216	1.199	1.184	1.164	1.100	1.025	AVRG		1.14810451	6.322	15.000
Benzo(a)pyrene	1.009	1.037	1.048	0.976	0.964	0.882	AVRG		0.98594835	6.154	30.000
Indeno(1,2,3-cd)pyrene	218300	323180	594600	743080	917840	1117000	LINR	-9.42e-002	1.70884978	0.99692	0.99000
Dibenzo(a,h)anthracene	0.676	0.725	0.702	0.655	0.636	0.636	AVRG		0.67176429	5.419	15.000
Benzo(g,h,i)perylene	0.726	0.746	0.714	0.651	0.634	0.628	AVRG		0.68322461	7.554	15.000
Nitrobenzene-D5	0.331	0.342	0.345	0.322	0.314	0.298	AVRG		0.32524779	5.495	15.000
2-Fluorobiphenyl	1.257	1.212	1.139	1.025	0.960	0.893	AVRG		1.08086780	13.395	15.000
Terphenyl-D14	0.820	0.861	0.860	0.830	0.788	0.750	AVRG		0.81840048	5.285	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND150 DFTPP ~~BFB~~ Injection Date: 10/22/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0903

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.0
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Less than 100.0% of mass 198	37.3
70	Less than 2.0% of mass 69	0.3 (0.9)1
127	40.0 - 60.0% of mass 198	53.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	20.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	10.0 (68.2)2
442	40.0 - 100.0% of mass 198	72.7
443	17.0 - 23.0% of mass 442	14.6 (20.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1022	N2122	10/22/11	0928
02	WG99502-BLANK	WG99502-1	N2123	10/22/11	1017
03	WG99502-LCS	WG99502-2	N2125	10/22/11	1142
04	WG99502-LCSD	WG99502-3	N2126	10/22/11	1224
05					
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17					

Katahdin Analytical Services A0000045

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-N Calibration Date: 10/22/11 Time: 0928

Lab File ID: N2122 Init. Calib. Date(s): 10/13/11 10/13/11

Init. Calib. Times: 1127 1459

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	0.9010000	0.9310200	0.9310200	0.01	3.33	20.01	AVRG	
Pyrene	1.4240000	1.1369000	1.1369000	0.01	-20.16	20.00	AVRG	<-
Benzo(a)anthracene	1.0050000	0.9300300	0.9300300	0.01	-7.46	20.00	AVRG	
Chrysene	0.9560000	0.8936300	0.8936300	0.01	-6.52	20.00	AVRG	
Benzo(b)fluoranthene	1.0930000	0.9685900	0.9685900	0.01	-11.38	20.00	AVRG	
Benzo(k)fluoranthene	1.1480000	1.0630000	1.0630000	0.01	-7.40	20.00	AVRG	
Benzo(a)pyrene	0.9860000	0.9015000	0.9015000	0.01	-8.57	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	46.462000	50.000000	0.5878800	0.01	-7.08	20.00	LINR	
Dibenzo(a,h)anthracene	0.6720000	0.6412800	0.6412800	0.01	-4.57	20.00	AVRG	
Benzo(g,h,i)perylene	0.6830000	0.6372600	0.6372600	0.01	-6.70	20.00	AVRG	
Nitrobenzene-D5	0.3250000	0.3003600	0.3003600	0.01	-7.58	20.00	AVRG	
2-Fluorobiphenyl	1.0810000	0.9911500	0.9911500	0.01	-8.31	20.00	AVRG	
Terphenyl-D14	0.8180000	0.6380800	0.6380800	0.01	-22.00	20.00	AVRG	<-

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND180 DFTPP ~~BFB~~ Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 1604

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4	(73.4)2
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6	(19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08					
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FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** DSY-24
Project : NAVSTA Newport CTO WE61 Derecktor **Instrument ID:** GCMS-N
Lab File IDs : N2556.DN2557.DN2555.D **Calibration Date(s):** 15-NOV-11 16:23
N2558.DN2559.DN2560.D 15-NOV-11 20:07

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	10.0000	25.0000	50.0000	75.0000	100.0000	125.0000	New	b	m1	m2	%RSD	%RSD	
Fluoranthene	558752	1422052	2304238	4306477	5111984	6314071	QUA	-0.0081	0.95099	0.20145	0.99971	0.99000	O
Pyrene	1.35704	1.32974	1.16554	1.10244	1.02761	0.98510	AVG		1.16125		13.29001	15.00000	O
Benzo(a)anthracene	0.95816	0.94601	0.87590	0.87144	0.85598	0.84135	AVG		0.89147		5.45799	15.00000	O
Chrysene	0.92893	0.89955	0.78848	0.79504	0.77132	0.76175	AVG		0.82418		8.65987	15.00000	O
Benzo(b)fluoranthene	1.03381	0.99641	1.01878	1.02056	1.00035	1.11500	AVG		1.03082		4.21928	15.00000	O
Benzo(k)fluoranthene	1.01777	1.07940	0.98180	0.92536	0.90933	0.95028	AVG		0.97732		6.49217	15.00000	O
Benzo(a)pyrene	0.87140	0.89980	0.84876	0.84229	0.85409	0.83227	AVG		0.85810		2.82393	30.00000	O
Indeno(1,2,3-cd)pyrene	0.62585	0.69894	0.65196	0.61158	0.65143	0.54298	AVG		0.63046		8.27918	15.00000	O
Dibenzo(a,h)anthracene	0.66592	0.74007	0.69378	0.65089	0.69463	0.59130	AVG		0.67276		7.46543	15.00000	O
Benzo(g,h,i)perylene	0.66159	0.72178	0.66545	0.60243	0.62372	0.53286	AVG		0.63464		10.15921	15.00000	O
Nitrobenzene-D5	0.32744	0.33867	0.30688	0.30398	0.30079	0.28936	AVG		0.31119		5.88091	15.00000	
2-Fluorobiphenyl	1.18443	1.18635	1.04086	0.97163	0.94843	0.88824	AVG		1.03666		12.07191	15.00000	
Terphenyl-D14	0.76913	0.76985	0.68789	0.68306	0.64778	0.63881	AVG		0.69942		8.22861	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND186 DFTPP ~~BFB~~ Injection Date: 11/21/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0733

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.0
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	34.4
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	40.0 - 60.0% of mass 198	54.0
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	10.2 (74.1)2
442	40.0 - 100.0% of mass 198	71.0
443	17.0 - 23.0% of mass 442	13.8 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1121	N2659	11/21/11	0750
02	WG99775-BLANK	WG99775-1	N2660	11/21/11	0833
03	DSY-SD-RB14-101311	SE6841-25	N2663	11/21/11	1040
04	DSY-SD-AA09-0012	SE6841-1	N2664	11/21/11	1124
05	DSY-SD-AA09-1224	SE6841-2	N2665	11/21/11	1206
06	DSY-SD-AA09-2448	SE6841-3	N2666	11/21/11	1248
07	DSY-SD-AA13-0012	SE6841-4	N2667	11/21/11	1330
08	DSY-SD-AA13-1224	SE6841-5	N2668	11/21/11	1413
09	DSY-SD-AA13-2448	SE6841-6	N2669	11/21/11	1455
10	DSY-SD-AA13-2448MS	WG99775-4	N2670	11/21/11	1550
11	DSY-SD-AA13-2448MSD	WG99775-5	N2671	11/21/11	1632
12	DSY-SD-AA17-0012	SE6841-7	N2672	11/21/11	1714
13	DSY-SD-AA17-1224	SE6841-8	N2673	11/21/11	1756
14	DSY-SD-AA21-0012	SE6841-10	N2675	11/21/11	1918
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID : WG101818-1 **Analytical Date:** 11/21/11 07:50
Lab File ID : N2659.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
126 Fluoranthene	50.00000	46.19038	0.80618	0.010	-7.61923	20.01000	Quadratic	
128 Pyrene	1.16125	1.44448	1.44448	0.010	24.39051	20.00000	Averaged	*
139 Benzo(a)anthracene	0.89147	0.94648	0.94648	0.010	6.17009	20.00000	Averaged	
142 Chrysene	0.82418	0.86213	0.86213	0.010	4.60509	20.00000	Averaged	
145 Benzo(b)fluoranthene	1.03082	1.02505	1.02505	0.010	-0.55929	20.00000	Averaged	
147 Benzo(k)fluoranthene	0.97732	1.05448	1.05448	0.010	7.89459	20.00000	Averaged	
149 Benzo(a)pyrene	0.85810	0.90730	0.90730	0.010	5.73366	20.01000	Averaged	
153 Indeno(1,2,3-cd)pyrene	0.63046	0.68498	0.68498	0.010	8.64775	20.00000	Averaged	
154 Dibenzo(a,h)anthracene	0.67276	0.71912	0.71912	0.010	6.89082	20.00000	Averaged	
155 Benzo(g,h,i)perylene	0.63464	0.71264	0.71264	0.010	12.29026	20.00000	Averaged	
33 Nitrobenzene-D5	0.31119	0.30690	0.30690	0.010	-1.37863	20.00000	Averaged	
62 2-Fluorobiphenyl	1.03666	1.05141	1.05141	0.010	1.42277	20.00000	Averaged	
129 Terphenyl-D14	0.69942	0.82601	0.82601	0.010	18.09957	20.00000	Averaged	

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND187 DFTPP ~~BFB~~ Injection Date: 11/22/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0846

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Less than 100.0% of mass 198	31.3
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	12.0 (73.1)2
442	40.0 - 100.0% of mass 198	87.2
443	17.0 - 23.0% of mass 442	16.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1122	N2682	11/22/11	0907
02	WG99775-LCS	WG99775-2	N2686	11/22/11	1156
03	WG99775-LCSD	WG99775-3	N2687	11/22/11	1238
04	DSY-SD-AA21-1224	SE6841-11	N2690	11/22/11	1452
05	DSY-SD-AA21-2448	SE6841-12	N2691	11/22/11	1534
06	DSY-SD-AA24-0012	SE6841-14	N2692	11/22/11	1616
07	DSY-SD-AA24-1224	SE6841-15	N2693	11/22/11	1658
08	DSY-SD-AA24-2448	SE6841-16	N2694	11/22/11	1740
09	DSY-SD-AA26-0012	SE6841-17	N2695	11/22/11	1822
10					
11					
12					
13					
14					
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101496-1
Lab File ID : N2682.D
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

SDG: DSY-24
Analytical Date: 11/22/11 09:07
Instrument ID: GCMS-N

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
126 Fluoranthene	50.00000	45.52873	0.79641	0.010	-8.94254	20.01000	Quadratic	
128 Pyrene	1.16125	1.36738	1.36738	0.010	17.75120	20.00000	Averaged	
139 Benzo(a)anthracene	0.89147	0.85711	0.85711	0.010	-3.85443	20.00000	Averaged	
142 Chrysene	0.82418	0.81908	0.81908	0.010	-0.61896	20.00000	Averaged	
145 Benzo(b)fluoranthene	1.03082	1.04332	1.04332	0.010	1.21295	20.00000	Averaged	
147 Benzo(k)fluoranthene	0.97732	1.10486	1.10486	0.010	13.04943	20.00000	Averaged	
149 Benzo(a)pyrene	0.85810	0.85368	0.85368	0.010	-0.51471	20.01000	Averaged	
153 Indeno(1,2,3-cd)pyrene	0.63046	0.49796	0.49796	0.010	-21.01595	20.00000	Averaged	*
154 Dibenzo(a,h)anthracene	0.67276	0.54577	0.54577	0.010	-18.87657	20.00000	Averaged	
155 Benzo(g,h,i)perylene	0.63464	0.52368	0.52368	0.010	-17.48376	20.00000	Averaged	
33 Nitrobenzene-D5	0.31119	0.27849	0.27849	0.010	-10.50576	20.00000	Averaged	
62 2-Fluorobiphenyl	1.03666	0.98773	0.98773	0.010	-4.71998	20.00000	Averaged	
129 Terphenyl-D14	0.69942	0.81041	0.81041	0.010	15.86939	20.00000	Averaged	

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND188 DFTPP ~~BFB~~ Injection Date: 11/23/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0929

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	32.5
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Less than 100.0% of mass 198	33.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	52.8
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.4 (72.5)2
442	40.0 - 100.0% of mass 198	75.0
443	17.0 - 23.0% of mass 442	14.3 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1123	N2696	11/23/11	0949
02	WG99859-BLANK	WG99859-1	N2697	11/23/11	1034
03	WG99859-LCS	WG99859-2	N2698	11/23/11	1144
04	WG99859-LCSD	WG99859-3	N2699	11/23/11	1226
05	DSY-SD-AA17-2448	SE6841-9	N2700	11/23/11	1309
06	DSY-SD-DUP34-101311	SE6841-13	N2701	11/23/11	1351
07	DSY-SD-AA26-1224	SE6841-18	N2702	11/23/11	1433
08	DSY-SD-AA26-2448	SE6841-19	N2703	11/23/11	1516
09	DSY-SD-AA28-0016	SE6841-20	N2704	11/23/11	1559
10	DSY-SD-DUP35-101311	SE6841-21	N2705	11/23/11	1641
11	DSY-SD-AA30-0012	SE6841-22	N2706	11/23/11	1724
12	DSY-SD-AA30-1224	SE6841-23	N2707	11/23/11	1806
13	DSY-SD-G30-0018	SE6841-24	N2708	11/23/11	1849
14					
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID :WG101563-1 **Analytical Date:** 11/23/11 09:49
Lab File ID :N2696.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	43.67008	0.76878	0.010	-12.65983	20.01000	Quadratic
128 Pyrene	1.16125	1.33815	1.33815	0.010	15.23415	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.87828	0.87828	0.010	-1.48033	20.00000	Averaged
142 Chrysene	0.82418	0.83349	0.83349	0.010	1.12988	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	0.97834	0.97834	0.010	-5.09073	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	1.00272	1.00272	0.010	2.59887	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.87490	0.87490	0.010	1.95812	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.64371	0.64371	0.010	2.10170	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.67161	0.67161	0.010	-0.17192	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.69734	0.69734	0.010	9.88091	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.29081	0.29081	0.010	-6.54722	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.02373	1.02373	0.010	-1.24703	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.76120	0.76120	0.010	8.83317	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2123.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : DSY-24
Lab Sample ID : WG99502-1
Date Extracted : 20-OCT-11
Date Analyzed : 22-OCT-11
Time Analyzed : 10:17

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99502-2	N2125.D	10/22/11	11:42
Laboratory Control S	WG99502-3	N2126.D	10/22/11	12:24
DSY-SD-RB14-101311	SE6841-25	N2663.D	11/21/11	10:40

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Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99502-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2123.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 22-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		75.3						
2-Fluorobiphenyl		81.4						
Terphenyl-d14		70.9						

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LCS/LCSD Recovery Report

LCS ID: WG99502-2
LCSD ID: WG99502-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 22-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	37.5	75.0	34.2	68.4	ug/L	9	30	66-109
Benzo(a)pyrene	50.0	42.6	85.2	38.6	77.2	ug/L	10	30	63-118
Benzo(b)fluoranthene	50.0	38.0	76.0	34.9	69.8	ug/L	8	30	60-108
Benzo(k)fluoranthene	50.0	39.8	79.6	36.7	73.4	ug/L	8	30	59-125
Benzo(g,h,i)perylene	50.0	41.8	83.6	37.5	75.0	ug/L	11	30	58-115
Chrysene	50.0	43.4	86.8	40.1	80.2	ug/L	8	30	68-114
Dibenzo(a,h)anthracene	50.0	41.4	82.8	37.3	74.6	ug/L	10	30	61-111
Fluoranthene	50.0	45.8	91.6	42.7	85.4	ug/L	7	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	40.2	80.4	35.0	70.0	ug/L	14	30	55-111
Pyrene	50.0	39.9	79.8	36.7	73.4	ug/L	8	30	58-135
Nitrobenzene-d5			75.8		67.2				41-91
2-Fluorobiphenyl			79.8		73.3				43-90
Terphenyl-d14			78.1		71.2				36-156

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2660.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99775-1
Date Extracted : 25-OCT-11
Date Analyzed : 21-NOV-11
Time Analyzed : 08:33

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA09-0012	SE6841-1	N2664.D	11/21/11	11:24
DSY-SD-AA09-1224	SE6841-2	N2665.D	11/21/11	12:06
DSY-SD-AA09-2448	SE6841-3	N2666.D	11/21/11	12:48
DSY-SD-AA13-0012	SE6841-4	N2667.D	11/21/11	13:30
DSY-SD-AA13-1224	SE6841-5	N2668.D	11/21/11	14:13
DSY-SD-AA13-2448	SE6841-6	N2669.D	11/21/11	14:55
Matrix Spike	WG99775-4	N2670.D	11/21/11	15:50
Matrix Spike Duplica	WG99775-5	N2671.D	11/21/11	16:32
DSY-SD-AA17-0012	SE6841-7	N2672.D	11/21/11	17:14
DSY-SD-AA17-1224	SE6841-8	N2673.D	11/21/11	17:56
DSY-SD-AA21-0012	SE6841-10	N2675.D	11/21/11	19:18
Laboratory Control S	WG99775-2	N2686.D	11/22/11	11:56
Laboratory Control S	WG99775-3	N2687.D	11/22/11	12:38
DSY-SD-AA21-1224	SE6841-11	N2690.D	11/22/11	14:52
DSY-SD-AA21-2448	SE6841-12	N2691.D	11/22/11	15:34
DSY-SD-AA24-0012	SE6841-14	N2692.D	11/22/11	16:16
DSY-SD-AA24-1224	SE6841-15	N2693.D	11/22/11	16:58
DSY-SD-AA24-2448	SE6841-16	N2694.D	11/22/11	17:40
DSY-SD-AA26-0012	SE6841-17	N2695.D	11/22/11	18:22
DSY-SD-AA17-2448	SE6841-9	N2700.D	11/23/11	13:09
DSY-SD-DUP34-101311	SE6841-13	N2701.D	11/23/11	13:51
DSY-SD-AA26-1224	SE6841-18	N2702.D	11/23/11	14:33
DSY-SD-AA26-2448	SE6841-19	N2703.D	11/23/11	15:16
DSY-SD-AA28-0016	SE6841-20	N2704.D	11/23/11	15:59

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Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99775-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2660.D

Sample Date:
Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		54.9	%					
2-Fluorobiphenyl		62.6	%					
Terphenyl-d14		94.9	%					

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LCS/LCSD Recovery Report

LCS ID: WG99775-2
LCSD ID: WG99775-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1030	61.7	1030	61.7	ug/Kgdrywt	0	30	40-100
Benzo(a)pyrene	1670	1140	68.3	1100	65.9	ug/Kgdrywt	4	30	40-100
Benzo(b)fluoranthene	1670	1180	70.6	1050	62.9	ug/Kgdrywt	12	30	40-100
Benzo(g,h,i)perylene	1670	899.	53.8	960.	57.5	ug/Kgdrywt	6	30	40-100
Benzo(k)fluoranthene	1670	1250	74.8	1250	74.8	ug/Kgdrywt	0	30	40-100
Chrysene	1670	1200	71.8	1190	71.2	ug/Kgdrywt	1	30	40-100
Dibenzo(a,h)anthracene	1670	956.	57.2	955.	57.2	ug/Kgdrywt	0	30	40-100
Fluoranthene	1670	1200	71.8	1120	67.1	ug/Kgdrywt	7	30	40-100
Indeno(1,2,3-cd)pyrene	1670	785.	47.0	798.	47.8	ug/Kgdrywt	2	30	40-100
Pyrene	1670	1410	84.4	1490	89.2	ug/Kgdrywt	6	30	40-100
Nitrobenzene-d5			54.2		52.1				24-81
2-Fluorobiphenyl			64.8		60.9				29-83
Terphenyl-d14			84.8		87.6				24-136

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MS/MSD Recovery Report

MS ID: WG99775-4
MSD ID: WG99775-5
Sample ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project:
SDG: DSY-24

Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775
Report Date: 06-DEC-11

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	4890	4870	ug/Kgdrywt	J530	3800	4200	66.8	74.9	10	30	40-100
Benzo(b)fluoranthene	4890	4870	ug/Kgdrywt	J560	3800	4500	66.6	80.6	16	30	40-100
Benzo(g,h,i)perylene	4890	4870	ug/Kgdrywt	U710	3200	3200	65.9	65.7	1	30	40-100
Benzo(k)fluoranthene	4890	4870	ug/Kgdrywt	J260	3800	4200	71.6	80.3	10	30	40-100
Chrysene	4890	4870	ug/Kgdrywt	J640	4100	4700	71.5	82.6	12	30	40-100
Dibenzo(a,h)anthracene	4890	4870	ug/Kgdrywt	U710	2900	2900	60.0	58.7	2	30	40-100
Fluoranthene	4890	4870	ug/Kgdrywt	J930	5100	5100	85.0	85.0	0	30	40-100
Indeno(1,2,3-cd)pyrene	4890	4870	ug/Kgdrywt	U710	3100	3100	63.6	63.4	1	30	40-100
Pyrene	4890	4870	ug/Kgdrywt	1100	5800	6300	95.1	107.*	10	30	40-100
Nitrobenzene-d5							58.1	61.2			24-81
2-Fluorobiphenyl							59.3	62.2			29-83
Terphenyl-d14							73.2	71.9			24-136

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2697.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99859-1
Date Extracted : 26-OCT-11
Date Analyzed : 23-NOV-11
Time Analyzed : 10:34

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99859-2	N2698.D	11/23/11	11:44
Laboratory Control S	WG99859-3	N2699.D	11/23/11	12:26
DSY-SD-DUP35-101311	SE6841-21	N2705.D	11/23/11	16:41
DSY-SD-AA30-0012	SE6841-22	N2706.D	11/23/11	17:24
DSY-SD-AA30-1224	SE6841-23	N2707.D	11/23/11	18:06
DSY-SD-G30-0018	SE6841-24	N2708.D	11/23/11	18:49

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99859-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2697.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		49.2	%					
2-Fluorobiphenyl		55.2	%					
Terphenyl-d14		73.6	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99859-2
LCSD ID: WG99859-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	909.	54.4	1030	61.7	ug/Kgdrywt	12	30	40-100
Benzo(a)pyrene	1670	983.	58.9	1160	69.5	ug/Kgdrywt	16	30	40-100
Benzo(b)fluoranthene	1670	964.	57.7	1030	61.7	ug/Kgdrywt	7	30	40-100
Benzo(g,h,i)perylene	1670	945.	56.6	1120	67.1	ug/Kgdrywt	17	30	40-100
Benzo(k)fluoranthene	1670	1050	62.9	1230	73.6	ug/Kgdrywt	16	30	40-100
Chrysene	1670	1040	62.3	1180	70.6	ug/Kgdrywt	13	30	40-100
Dibenzo(a,h)anthracene	1670	878.	52.6	1040	62.3	ug/Kgdrywt	17	30	40-100
Fluoranthene	1670	977.	58.5	1020	61.1	ug/Kgdrywt	4	30	40-100
Indeno(1,2,3-cd)pyrene	1670	847.	50.7	997.	59.7	ug/Kgdrywt	16	30	40-100
Pyrene	1670	1200	71.8	1330	79.6	ug/Kgdrywt	10	30	40-100
Nitrobenzene-d5			44.1		51.9				24-81
2-Fluorobiphenyl			53.0		63.1				29-83
Terphenyl-d14			68.3		77.5				24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

GC Column: ZB5-MS ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		473663	8.20	1846906	11.03	1025757	15.13
UPPER LIMIT		947326	8.70	3693812	11.53	2051514	15.63
LOWER LIMIT		236832	7.70	923453	10.53	512879	14.63
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050N1022	566855	7.99	2130395	10.83	1121530	14.93
02	WG99502-BLANK	WG99502-1	639765	8.00	2442965	10.83	1231078	14.93
03	WG99502-LCS	WG99502-2	556696	8.00	2104982	10.83	1131311	14.93
04	WG99502-LCSD	WG99502-3	521876	8.00	1936699	10.83	1053701	14.93
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

GC Column: ZB5-MS ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		1611574	18.64	1003007	24.93	701766	28.06
UPPER LIMIT		3223148	19.14	2006014	25.43	1403532	28.56
LOWER LIMIT		805787	18.14	501504	24.43	350883	27.56
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050N1022	1708726	18.43	1453222	24.70	1127864	27.81
02	WG99502-BLANK	WG99502-1	1912455	18.42	1657934	24.69	1451828*	27.81
03	WG99502-LCS	WG99502-2	1833575	18.43	1442377	24.70	1140068	27.81
04	WG99502-LCSD	WG99502-3	1677924	18.43	1320555	24.70	1056228	27.81
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-24
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4		NAPHTHALENE-D8		ACENAPHTHENE-D10	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	600003	8.76	2389440	11.57	1317918	15.69
	Upper Limit	1200006	9.26	4778880	12.07	2635836	16.19
	Lower Limit	300001.5	8.26	1194720	11.07	658959	15.19
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101818-1	550506	8.73	2158734	11.53	1277364	15.66
Method Blank Sample	WG99775-1	589407	8.73	2216123	11.53	1294946	15.66
DSY-SD-RB14-101311	SE6841-25	592109	8.73	2205087	11.53	1274078	15.66
DSY-SD-AA09-0012	SE6841-1	502479	8.73	1961757	11.53	1171130	15.66
DSY-SD-AA09-1224	SE6841-2	547331	8.73	2145445	11.53	1273302	15.66
DSY-SD-AA09-2448	SE6841-3	581051	8.73	2266836	11.53	1350254	15.66
DSY-SD-AA13-0012	SE6841-4	590435	8.73	2265006	11.53	1333773	15.66
DSY-SD-AA13-1224	SE6841-5	614597	8.73	2350093	11.53	1398541	15.66
DSY-SD-AA13-2448	SE6841-6	659691	8.73	2492983	11.53	1463022	15.66
Matrix Spike	WG99775-4	657303	8.73	2570362	11.53	1502687	15.66
Matrix Spike Duplica	WG99775-5	646421	8.73	2549000	11.53	1497244	15.66
DSY-SD-AA17-0012	SE6841-7	655455	8.73	2502079	11.53	1454542	15.66
DSY-SD-AA17-1224	SE6841-8	636654	8.73	2442521	11.53	1426963	15.66
DSY-SD-AA21-0012	SE6841-10	676661	8.73	2587108	11.53	1488783	15.66
Continuing Calibrati	WG101496-1	590683	8.73	2251914	11.53	1307467	15.66
Laboratory Control S	WG99775-2	598186	8.73	2283600	11.53	1337101	15.66
Laboratory Control S	WG99775-3	550741	8.73	2109001	11.53	1237912	15.66
DSY-SD-AA21-1224	SE6841-11	657636	8.73	2496119	11.53	1391253	15.66
DSY-SD-AA21-2448	SE6841-12	646594	8.73	2436903	11.53	1360679	15.66
DSY-SD-AA24-0012	SE6841-14	557533	8.73	2099813	11.53	1186932	15.66
DSY-SD-AA24-1224	SE6841-15	704143	8.73	2615805	11.53	1450937	15.66
DSY-SD-AA24-2448	SE6841-16	737002	8.73	2740301	11.53	1526552	15.66
DSY-SD-AA26-0012	SE6841-17	687038	8.73	2563806	11.53	1457543	15.66
Continuing Calibrati	WG101563-1	591562	8.73	2226993	11.53	1262658	15.66
Method Blank Sample	WG99859-1	659911	8.72	2476209	11.53	1418458	15.66
Laboratory Control S	WG99859-2	684949	8.73	2559185	11.53	1443350	15.66
Laboratory Control S	WG99859-3	626103	8.73	2351282	11.53	1333971	15.66
DSY-SD-AA17-2448	SE6841-9	665622	8.73	2498122	11.53	1418822	15.66
DSY-SD-DUP34-1013	SE6841-13	611009	8.72	2297133	11.53	1205245	15.66
DSY-SD-AA26-1224	SE6841-18	649590	8.73	2422320	11.53	1299195	15.66
DSY-SD-AA26-2448	SE6841-19	732300	8.73	2672437	11.53	1385364	15.66
DSY-SD-AA28-0016	SE6841-20	643732	8.73	2470287	11.53	1418711	15.66
DSY-SD-DUP35-1013	SE6841-21	682562	8.73	2591286	11.53	1458261	15.66
DSY-SD-AA30-0012	SE6841-22	742947	8.73	2768260	11.53	1579834	15.66
DSY-SD-AA30-1224	SE6841-23	678656	8.73	2557174	11.53	1465435	15.66
DSY-SD-G30-0018	SE6841-24	726639	8.73	2732583	11.53	1418646	15.66

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID : WG101161-3 **Analytical Date:** 11/15/11 16:23
Lab File ID : N2555.D **Instrument ID:** GCMS-N

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	2174245	19.23	1621980	25.55	1257422	28.69
	Upper Limit	4348490	19.73	3243960	26.05	2514844	29.19
	Lower Limit	1087122.5	18.73	810990	25.05	628711	28.19
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101818-1	2067778	19.20	1156450	25.51	922753	28.67
Method Blank Sample	WG99775-1	2073625	19.18	1416321	25.51	1049103	28.67
DSY-SD-RB14-101311	SE6841-25	1988576	19.18	1253192	25.50	857009	28.66
DSY-SD-AA09-0012	SE6841-1	1929222	19.18	1244127	25.51	814967	28.66
DSY-SD-AA09-1224	SE6841-2	2106206	19.19	1395256	25.51	828110	28.67
DSY-SD-AA09-2448	SE6841-3	2000896	19.19	1138740	25.51	666465	28.67
DSY-SD-AA13-0012	SE6841-4	2203296	19.19	1380853	25.51	779457	28.65
DSY-SD-AA13-1224	SE6841-5	2246625	19.19	1385862	25.51	770669	28.66
DSY-SD-AA13-2448	SE6841-6	2324044	19.19	1485858	25.51	837677	28.66
Matrix Spike	WG99775-4	2412607	19.19	1471788	25.52	955280	28.67
Matrix Spike Duplica	WG99775-5	2302360	19.19	1279298	25.51	712204	28.67
DSY-SD-AA17-0012	SE6841-7	2359511	19.18	1465209	25.51	787320	28.66
DSY-SD-AA17-1224	SE6841-8	2357307	19.18	1446840	25.51	782744	28.66
DSY-SD-AA21-0012	SE6841-10	2419720	19.18	1705412	25.51	899388	28.67
Continuing Calibrati	WG101496-1	2161615	19.19	1257109	25.52	717257	28.67
Laboratory Control S	WG99775-2	2281813	19.19	1569688	25.51	837743	28.67
Laboratory Control S	WG99775-3	2080200	19.19	1264179	25.51	758463	28.66
DSY-SD-AA21-1224	SE6841-11	2291524	19.18	1472261	25.51	853162	28.67
DSY-SD-AA21-2448	SE6841-12	2172663	19.19	1339081	25.51	755894	28.67
DSY-SD-AA24-0012	SE6841-14	2004673	19.18	1395205	25.51	800912	28.66
DSY-SD-AA24-1224	SE6841-15	2303852	19.18	1390367	25.51	683433	28.65
DSY-SD-AA24-2448	SE6841-16	2331488	19.19	1340760	25.52	696429	28.67
DSY-SD-AA26-0012	SE6841-17	2421596	19.19	1560819	25.51	823434	28.67
Continuing Calibrati	WG101563-1	1943591	19.19	1124934	25.51	834864	28.67
Method Blank Sample	WG99859-1	2175498	19.18	1536384	25.51	1205462	28.67
Laboratory Control S	WG99859-2	2305189	19.19	1556827	25.51	1033197	28.67
Laboratory Control S	WG99859-3	2037717	19.19	1293521	25.51	883696	28.67
DSY-SD-AA17-2448	SE6841-9	2026994	19.18	1199887	25.51	792386	28.67
DSY-SD-DUP34-1013	SE6841-13	1709754	19.18	1092897	25.51	650424	28.67
DSY-SD-AA26-1224	SE6841-18	1840629	19.20	1013648	25.52	523668 *	28.68
DSY-SD-AA26-2448	SE6841-19	1857512	19.20	925669	25.52	473783 *	28.68
DSY-SD-AA28-0016	SE6841-20	2007585	19.19	1151315	25.51	699298	28.67
DSY-SD-DUP35-1013	SE6841-21	1900274	19.19	1100090	25.51	642064	28.67
DSY-SD-AA30-0012	SE6841-22	2232306	19.19	1141032	25.52	559794 *	28.68
DSY-SD-AA30-1224	SE6841-23	2102583	19.19	1220737	25.52	644703	28.68
DSY-SD-G30-0018	SE6841-24	1872486	19.19	921131	25.52	420215 *	28.68

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-24
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
DSY-SD-AA09-0012	SE6841-1		69.8		74.2		74.7	
DSY-SD-AA21-0012	SE6841-10		53.7		60.7		65.4	
DSY-SD-AA21-1224	SE6841-11		53.8		57.9		61.0	
DSY-SD-AA21-2448	SE6841-12		22.1		34.7		53.2	
DSY-SD-DUP34-101311	SE6841-13		50.6		55.1		55.7	
DSY-SD-AA24-0012	SE6841-14		20.4		33.2		47.6	
DSY-SD-AA24-1224	SE6841-15		19.6		29.3		43.4	
DSY-SD-AA24-2448	SE6841-16		18.8		29.4		49.2	
DSY-SD-AA26-0012	SE6841-17		20.3		35.2		53.8	
DSY-SD-AA26-1224	SE6841-18DL		27.7		36.0		83.6	
DSY-SD-AA26-2448	SE6841-19		41.8		69.4		69.8	
DSY-SD-AA09-1224	SE6841-2		56.2		64.3		66.5	
DSY-SD-AA28-0016	SE6841-20		14.4		25.3		38.8	
DSY-SD-DUP35-101311	SE6841-21		42.1		41.5		52.3	
DSY-SD-AA30-0012	SE6841-22		29.7		49.5		64.3	
DSY-SD-AA30-1224	SE6841-23		28.2		45.9		51.6	
DSY-SD-AA09-2448	SE6841-3		54.9		60.5		62.3	
DSY-SD-AA13-0012	SE6841-4		42.4		51.8		65.7	
DSY-SD-AA13-1224	SE6841-5		37.0		43.0		52.4	
DSY-SD-AA13-2448	SE6841-6		34.3		47.9		58.4	
DSY-SD-AA17-0012	SE6841-7		39.1		52.3		58.9	
DSY-SD-AA17-1224	SE6841-8		29.6		42.0		57.1	
DSY-SD-AA17-2448	SE6841-9DL		34.5		46.5		55.4	
Method Blank Sample	WG101687-1		54.5		70.0		71.9	
Method Blank Sample	WG99860-1		46.8		51.5		75.4	
Laboratory Control S	WG99860-2		35.5		52.5		67.2	

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB14-101311	SE6841-25	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG99504-1	75.1		85.5		84.2		0
Laboratory Control S	WG99504-2	56.5		73.3		66.9		0
Laboratory Control S	WG99504-3	53.8		74.5		65.8		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G3446.D
Instrument ID : GCMS-G
Matrix : AQ

SDG : DSY-24
Lab Sample ID : WG99504-1
Date Extracted : 20-OCT-11
Date Analyzed : 21-OCT-11
Time Analyzed : 17:25

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99504-2	G3447.D	10/21/11	18:09
Laboratory Control S	WG99504-3	G3448.D	10/21/11	18:54
DSY-SD-RB14-101311	SE6841-25	G4127.D	11/25/11	19:39

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99504-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G3446.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 21-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		75.1	%					
Fluorene-D10		85.5	%					
Pyrene-D10		84.2	%					

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99504-2
LCSD ID: WG99504-3
Project:
SDG: DSY-24
Report Date: 05-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 21-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.39	69.5	1.39	69.5	ug/L	0	30	63-98
2-Methylnaphthalene-D10			56.5		53.8				43-92
Fluorene-D10			73.3		74.5				29-101
Pyrene-D10			66.9		65.8				53-166

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4124.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99860-1
Date Extracted : 26-OCT-11
Date Analyzed : 25-NOV-11
Time Analyzed : 17:28

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99860-2	G4125.D	11/25/11	18:12
DSY-SD-DUP35-101311	SE6841-21	G4128.D	11/25/11	20:22
DSY-SD-AA30-0012	SE6841-22	G4187.D	11/30/11	12:10
DSY-SD-AA30-1224	SE6841-23	G4188.D	11/30/11	12:56

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99860-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G4124.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		46.8	%					
Fluorene-D10		51.5	%					
Pyrene-D10		75.4	%					

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Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG99860-2
Client ID: LCS
Project:
SDG: DSY-24

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzo(a)pyrene	61.9	66.7	41.3	ug/Kgdrywt	61-101
2-Methylnaphthalene-D10	35.5				14-131
Fluorene-D10	52.5				18-77
Pyrene-D10	67.2				34-131

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4156.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG101687-1
Date Extracted : 25-OCT-11
Date Analyzed : 28-NOV-11
Time Analyzed : 17:32

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA09-0012	SE6841-1	G4130.D	11/26/11	11:33
DSY-SD-AA09-1224	SE6841-2	G4131.D	11/26/11	12:16
DSY-SD-AA09-2448	SE6841-3	G4132.D	11/26/11	13:00
DSY-SD-AA13-0012	SE6841-4	G4133.D	11/26/11	13:43
DSY-SD-AA13-1224	SE6841-5	G4134.D	11/26/11	14:27
DSY-SD-AA13-2448	SE6841-6	G4135.D	11/26/11	15:11
DSY-SD-AA17-0012	SE6841-7	G4136.D	11/26/11	15:54
DSY-SD-AA17-1224	SE6841-8	G4137.D	11/26/11	16:38
DSY-SD-AA21-0012	SE6841-10	G4139.D	11/26/11	18:05
DSY-SD-AA21-1224	SE6841-11	G4140.D	11/26/11	18:49
DSY-SD-AA21-2448	SE6841-12	G4141.D	11/26/11	19:32
DSY-SD-AA17-2448	SE6841-9DL	G4157.D	11/28/11	18:16
DSY-SD-AA26-1224	SE6841-18DL	G4158.D	11/28/11	19:00
DSY-SD-DUP34-101311	SE6841-13	G4159.D	11/28/11	19:44
DSY-SD-AA24-0012	SE6841-14	G4160.D	11/28/11	20:28
DSY-SD-AA24-1224	SE6841-15	G4161.D	11/28/11	21:12
DSY-SD-AA24-2448	SE6841-16	G4162.D	11/28/11	21:56
DSY-SD-AA26-0012	SE6841-17	G4163.D	11/28/11	22:40
DSY-SD-AA26-2448	SE6841-19	G4164.D	11/28/11	23:24
DSY-SD-AA28-0016	SE6841-20	G4186.D	11/30/11	11:24

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101687-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G4156.D

Sample Date:
Received Date: 28-NOV-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		54.5	%					
Fluorene-D10		70.0	%					
Pyrene-D10		71.9	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD897 DFTPP Injection Date: 10/21/11

Instrument ID: GCMS-G DFTPP Injection Time: 1533

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	32.3
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	8.5 (70.0)2
442	40.0 - 100.0% of mass 198	62.3
443	17.0 - 23.0% of mass 442	12.1 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1021	G3444	10/21/11	1553
02	WG99504-BLANK	WG99504-1	G3446	10/21/11	1725
03	WG99504-LCS	WG99504-2	G3447	10/21/11	1809
04	WG99504-LCSD	WG99504-3	G3448	10/21/11	1854
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-G Calibration Date: 10/21/11 Time: 1553

Lab File ID: G3444 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2724000	0.01	-9.18	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1474000	0.01	2.81	20.00	AVRG
Fluorene-D10	0.8720000	0.9202900	0.01	5.54	20.00	AVRG
Pyrene-D10	1.2360000	1.2828000	0.01	3.79	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : G4023.DG4022.DG4018.D
G4021.DG4020.DG4019.D

SDG: DSY-24
Instrument ID: GCMS-G
Calibration Date(s): 19-NOV-11 11:47
19-NOV-11 15:27

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	0.200000(	0.500000(	1.0000	2.0000	5.0000	8.0000	New	b	m1	m2	%RSD	%RSD	
Benzo(a)pyrene	1.22562	1.33406	1.37656	1.28456	1.31940	1.36721	AVG		1.31790		4.26039	15.00000	O
2-Methylnaphthalene-D10	0.89364	1.10537	1.15001	1.06192	1.07206	1.10290	AVG		1.06432		8.37362	15.00000	
Fluorene-D10	0.70351	0.89827	0.92806	0.97534	0.99465	1.04100	AVG		0.92347		12.86845	15.00000	
Pyrene-D10	0.96288	1.12542	1.16069	1.02833	1.13105	1.14947	AVG		1.09297		7.24856	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD937 DFTPP Injection Date: 11/25/11

Instrument ID: GCMS-G DFTPP Injection Time: 0912

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	44.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	23.9
365	1.0 - 100.0% of mass 198	3.6
441	0.0 - 100.0% of mass 443	11.3 (76.3)2
442	40.0 - 100.0% of mass 198	78.6
443	17.0 - 23.0% of mass 442	14.8 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1125	G4113	11/25/11	0930
02	WG99860-BLANK	WG99860-1	G4124	11/25/11	1728
03	WG99860-LCS	WG99860-2	G4125	11/25/11	1812
04	DSY-SD-RB14-101311	SE6841-25	G4127	11/25/11	1939
05	DSY-SD-DUP35-101311	SE6841-21	G4128	11/25/11	2022
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 [illegible]
SDG: DSY-24
Lab ID : WG101756-1
Analytical Date: 11/25/11 09:30
Lab File ID : G4113.D
Instrument ID: GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.43126	1.43126	0.010	8.60164	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.17687	1.17687	0.010	10.57536	20.00000	Averaged
47 Fluorene-D10	0.92347	0.99377	0.99377	0.010	7.61255	20.00000	Averaged
64 Pyrene-D10	1.09297	1.29053	1.29053	0.010	18.07479	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD938 DFTPP Injection Date: 11/26/11

Instrument ID: GCMS-G DFTPP Injection Time: 1032

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Less than 100.0% of mass 198	42.2
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	11.8 (76.2)2
442	40.0 - 100.0% of mass 198	82.3
443	17.0 - 23.0% of mass 442	15.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1126	G4129	11/26/11	1049
02	DSY-SD-AA09-0012	SE6841-1	G4130	11/26/11	1133
03	DSY-SD-AA09-1224	SE6841-2	G4131	11/26/11	1216
04	DSY-SD-AA09-2448	SE6841-3	G4132	11/26/11	1300
05	DSY-SD-AA13-0012	SE6841-4	G4133	11/26/11	1343
06	DSY-SD-AA13-1224	SE6841-5	G4134	11/26/11	1427
07	DSY-SD-AA13-2448	SE6841-6	G4135	11/26/11	1511
08	DSY-SD-AA17-0012	SE6841-7	G4136	11/26/11	1554
09	DSY-SD-AA17-1224	SE6841-8	G4137	11/26/11	1638
10	DSY-SD-AA21-0012	SE6841-10	G4139	11/26/11	1805
11	DSY-SD-AA21-1224	SE6841-11	G4140	11/26/11	1849
12	DSY-SD-AA21-2448	SE6841-12	G4141	11/26/11	1932
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 :
Lab ID :WG102033-1
Lab File ID :G4129.D
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

SDG: DSY-24
Analytical Date: 11/26/11 10:49
Instrument ID: GCMS-G

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.24192	1.24192	0.010	-5.76549	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.06540	1.06540	0.010	0.10178	20.00000	Averaged
47 Fluorene-D10	0.92347	0.92499	0.92499	0.010	0.16454	20.00000	Averaged
64 Pyrene-D10	1.09297	1.16221	1.16221	0.010	6.33446	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD939 DFTPP Injection Date: 11/28/11

Instrument ID: GCMS-G DFTPP Injection Time: 1154

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.1
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	41.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	55.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	3.5
441	0.0 - 100.0% of mass 443	11.9 (71.0)2
442	40.0 - 100.0% of mass 198	84.5
443	17.0 - 23.0% of mass 442	16.8 (19.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1128	G4149	11/28/11	1215
02		SSTD8.00G1128	G4150	11/28/11	1306
03		SSTD5.00G1128	G4151	11/28/11	1350
04		SSTD2.00G1128	G4152	11/28/11	1434
05		SSTD0.50G1128	G4153	11/28/11	1519
06		SSTD0.20G1128	G4154	11/28/11	1603
07		SIM IND CHECK	G4155	11/28/11	1647
08	WG101687-BLANK	WG101687-1	G4156	11/28/11	1732
09	DSY-SD-AA17-2448	SE6841-9DL	G4157	11/28/11	1816
10	DSY-SD-AA26-1224	SE6841-18DL	G4158	11/28/11	1900
11	DSY-SD-DUP34-101311	SE6841-13	G4159	11/28/11	1944
12	DSY-SD-AA24-0012	SE6841-14	G4160	11/28/11	2028
13	DSY-SD-AA24-1224	SE6841-15	G4161	11/28/11	2112
14	DSY-SD-AA24-2448	SE6841-16	G4162	11/28/11	2156
15	DSY-SD-AA26-0012	SE6841-17	G4163	11/28/11	2240
16	DSY-SD-AA26-2448	SE6841-19	G4164	11/28/11	2324
17					
18					
19					
20					

FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : G4154.DG4153.DG4149.D
G4151.DG4150.D

SDG: DSY-24
Instrument ID: GCMS-G
Calibration Date(s): 28-NOV-11 12:15
28-NOV-11 16:03

	Level 1	Level 2	Level 3	Level 5	Level 6		Crv					Max	
	0.2000000	0.5000000	1.0000	5.0000	8.0000		New	b	m1	m2	%RSD	%RSD	
Benzo(a)pyrene	1.89233	1.55864	1.54681	1.44534	1.35704		AVG		1.56003		13.01747	15.00000	O
2-Methylnaphthalene-D10	1.13264	1.13443	1.21101	1.11800	1.04193		AVG		1.12760		5.33236	15.00000	
Fluorene-D10	0.96222	0.93614	1.05214	1.00846	0.93775		AVG		0.97934		5.11501	15.00000	
Pyrene-D10	1.47812	1.16666	1.33304	1.13716	1.00758		AVG		1.22451		14.95457	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD941 DFTPP Injection Date: 11/30/11

Instrument ID: GCMS-G DFTPP Injection Time: 0718

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.1
68	Less than 2.0% of mass 69	0.8 (1.9)1
69	Less than 100.0% of mass 198	42.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	58.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	11.3 (74.0)2
442	40.0 - 100.0% of mass 198	81.6
443	17.0 - 23.0% of mass 442	15.3 (18.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1130	G4181	11/30/11	0736
02	DSY-SD-AA28-0016	SE6841-20	G4186	11/30/11	1124
03	DSY-SD-AA30-0012	SE6841-22	G4187	11/30/11	1210
04	DSY-SD-AA30-1224	SE6841-23	G4188	11/30/11	1256
05					
06					
07					
08					
09					
10					
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12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
SDG: DSY-24
Lab ID : WG101899-1
Analytical Date: 11/30/11 07:36
Lab File ID : G4181.D
Instrument ID: GCMS-G
Initial Calibration Date(s): 11/28/11 12:15 11/28/11 16:03

Compound	RRF/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.56003	1.49969	1.49969	0.010	-3.86772	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.12760	1.17098	1.17098	0.010	3.84642	20.00000	Averaged
47 Fluorene-D10	0.97934	1.05231	1.05231	0.010	7.45123	20.00000	Averaged
64 Pyrene-D10	1.22451	1.31901	1.31901	0.010	7.71668	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1021	50308	9.08	124469	12.04	57882	16.35
02	WG99504-BLANK	WG99504-1	53932	9.09	141261	12.05	67183	16.35
03	WG99504-LCS	WG99504-2	47803	9.08	124863	12.04	61798	16.35
04	WG99504-LCSD	WG99504-3	50526	9.08	133074	12.04	64650	16.35
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64726	20.09	32119	26.71	23689	30.04
UPPER LIMIT		129452	20.63	64238	27.25	47378	30.58
LOWER LIMIT		32363	19.55	16060	26.17	11845	29.50
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1021	82206	19.96	35503	26.58	25525	29.91
02	WG99504-BLANK	WG99504-1	91776	19.98	50072	26.60	39396	29.91
03	WG99504-LCS	WG99504-2	93863	19.96	54533	26.58	38223	29.91
04	WG99504-LCSD	WG99504-3	94277	19.96	65239*	26.58	48680*	29.91
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101399-3
Lab File ID : G4018.D

SDG: DSY-24
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std.	47822		8.34		158215		11.29		80066		15.58	
	Upper Limit	95644		8.84		316430		11.79		160132		16.08	
	Lower Limit	23911		7.84		79107.5		10.79		40033		15.08	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101756-1	44485		8.22		153139		11.17		75932		15.45	
Method Blank Sample	WG99860-1	40341		8.22		138535		11.18		76838		15.46	
Laboratory Control S	WG99860-2	40382		8.22		135211		11.17		70959		15.45	
DSY-SD-RB14-101311	SE6841-25	34164		8.24		115519		11.19		56579		15.46	
DSY-SD-DUP35-1013	SE6841-21	38351		8.22		138284		11.17		73873		15.45	
Continuing Calibrati	WG102033-1	36033		8.21		128814		11.16		74001		15.43	
DSY-SD-AA09-0012	SE6841-1	38137		8.21		127059		11.16		63196		15.43	
DSY-SD-AA09-1224	SE6841-2	35551		8.21		129605		11.16		66972		15.43	
DSY-SD-AA09-2448	SE6841-3	43842		8.21		142568		11.16		89545		15.43	
DSY-SD-AA13-0012	SE6841-4	40402		8.21		144677		11.16		73741		15.43	
DSY-SD-AA13-1224	SE6841-5	41544		8.21		136617		11.16		71680		15.43	
DSY-SD-AA13-2448	SE6841-6	41992		8.21		148866		11.16		76361		15.43	
DSY-SD-AA17-0012	SE6841-7	42493		8.21		154063		11.16		80826		15.43	
DSY-SD-AA17-1224	SE6841-8	41563		8.21		147770		11.16		77794		15.43	
DSY-SD-AA21-0012	SE6841-10	45716		8.21		159704		11.16		81894		15.43	
DSY-SD-AA21-1224	SE6841-11	43399		8.21		145363		11.16		73156		15.43	
DSY-SD-AA21-2448	SE6841-12	42724		8.21		146593		11.16		77629		15.43	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 :
Lab ID :WG101399-3
Lab File ID :G4018.D

SDG: DSY-24
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	118014		19.19		75564		25.77		53419		29.09	
	Upper Limit	236028		19.69		151128		26.27		106838		29.59	
	Lower Limit	59007		18.69		37782		25.27		26709.5		28.59	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101756-1	111184		19.05		64533		25.62		43078		28.94	
Method Blank Sample	WG99860-1	102077		19.07		54715		25.63		32032		28.95	
Laboratory Control S	WG99860-2	109366		19.05		68343		25.62		40142		28.94	
DSY-SD-RB14-101311	SE6841-25	79504		19.08		38193		25.67		23159	*	28.99	
DSY-SD-DUP35-1013	SE6841-21	101805		19.05		67727		25.63		49361		28.95	
Continuing Calibrati	WG102033-1	96887		19.03		66110		25.60		52806		28.91	
DSY-SD-AA09-0012	SE6841-1	95737		19.02		55373		25.59		41659		28.89	
DSY-SD-AA09-1224	SE6841-2	106777		19.02		60370		25.59		45655		28.89	
DSY-SD-AA09-2448	SE6841-3	114345		19.03		91824		25.62		64149		28.91	
DSY-SD-AA13-0012	SE6841-4	119506		19.02		59404		25.60		44530		28.89	
DSY-SD-AA13-1224	SE6841-5	117895		19.02		65448		25.59		50658		28.89	
DSY-SD-AA13-2448	SE6841-6	125167		19.02		75455		25.60		56967		28.90	
DSY-SD-AA17-0012	SE6841-7	141769		19.02		78230		25.60		62818		28.89	
DSY-SD-AA17-1224	SE6841-8	131611		19.02		68994		25.60		50944		28.89	
DSY-SD-AA21-0012	SE6841-10	137168		19.02		75345		25.60		57272		28.89	
DSY-SD-AA21-1224	SE6841-11	121879		19.02		66254		25.60		51550		28.90	
DSY-SD-AA21-2448	SE6841-12	124377		19.03		78214		25.60		48580		28.91	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61
Lab ID :WG101670-3
Lab File ID :G4149.D

SDG: DSY-24
Analytical Date: 11/28/11 12:15
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	42499		8.16		143688		11.10		67591		15.38	
	Upper Limit	84998		8.66		287376		11.60		135182		15.88	
	Lower Limit	21249.5		7.66		71844		10.60		33795.5		14.88	
Client Sample ID	Lab Sample ID												
Method Blank Sample	WG101687-1	39108		8.16		133690		11.11		65843		15.38	
DSY-SD-AA17-2448	SE6841-9DL	38066		8.16		124893		11.11		58461		15.38	
DSY-SD-AA26-1224	SE6841-18DL	41602		8.16		139604		11.11		75824		15.39	
DSY-SD-DUP34-1013	SE6841-13	40298		8.16		143738		11.10		69718		15.37	
DSY-SD-AA24-0012	SE6841-14	38951		8.16		128694		11.11		65007		15.38	
DSY-SD-AA24-1224	SE6841-15	44987		8.16		143448		11.11		70241		15.38	
DSY-SD-AA24-2448	SE6841-16	42204		8.16		147422		11.10		84214		15.38	
DSY-SD-AA26-0012	SE6841-17	39278		8.16		140300		11.11		69397		15.38	
DSY-SD-AA26-2448	SE6841-19	42878		8.16		142928		11.12		55783		15.42	
Continuing Calibrati	WG101899-1	44755		8.11		152537		11.05		74463		15.33	
DSY-SD-AA28-0016	SE6841-20	50038		8.11		162899		11.06		83742		15.33	
DSY-SD-AA30-0012	SE6841-22	50203		8.11		172853		11.06		93586		15.33	
DSY-SD-AA30-1224	SE6841-23	50840		8.11		174182		11.06		91386		15.33	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101670-3
Lab File ID : G4149.D

SDG: DSY-24
Analytical Date: 11/28/11 12:15
Instrument ID: GCMS-G

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area	# RT #	Area	# RT #	Area	# RT #
	Std .	99082	18.96	51427	25.53	35086	28.84
	Upper Limit	198164	19.46	102854	26.03	70172	29.34
	Lower Limit	49541	18.46	25713.5	25.03	17543	28.34
Client Sample ID	Lab Sample ID						
Method Blank Sample	WG101687-1	95103	18.98	56004	25.54	38264	28.83
DSY-SD-AA17-2448	SE6841-9DL	84966	18.96	45074	25.52	33963	28.83
DSY-SD-AA26-1224	SE6841-18DL	104659	18.99	53850	25.56	50375	28.86
DSY-SD-DUP34-1013	SE6841-13	100058	18.96	53299	25.53	40705	28.83
DSY-SD-AA24-0012	SE6841-14	100244	18.96	52701	25.52	33837	28.83
DSY-SD-AA24-1224	SE6841-15	104726	18.96	53921	25.52	37902	28.83
DSY-SD-AA24-2448	SE6841-16	108464	18.98	78163	25.56	40032	28.85
DSY-SD-AA26-0012	SE6841-17	111167	18.96	58613	25.53	43491	28.83
DSY-SD-AA26-2448	SE6841-19	108056	19.03	58718	25.62	52759	28.91
Continuing Calibrati	WG101899-1	110843	18.90	60266	25.47	40404	28.77
DSY-SD-AA28-0016	SE6841-20	110942	18.92	69021	25.49	44374	28.79
DSY-SD-AA30-0012	SE6841-22	126302	18.93	65577	25.51	45632	28.82
DSY-SD-AA30-1224	SE6841-23	147791	18.93	75716	25.52	60262	28.83

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99856-BLANK	WG99856-1	92	91	95	88			0
02	WG99856-LCS	WG99856-2	47*	46*	80	74			2
03	~~WG99856-LCSD~~	WG99856-3	95	92	98	88			0
04	DSY-SD-AA28-0016	SE6841-20	54*	70	45*	70			2
05	DSY-SD-DUP35-101311	SE6841-21	55*	73	45*	68			2
06	DSY-SD-AA30-0012	SE6841-22	54*	72	47*	104			2
07	DSY-SD-AA30-1224	SE6841-23	50*	68	44*	70			2
08	DSY-SD-G30-0018	SE6841-24	54*	71	39*	77			2
09	WG99756-BLANK	WG99756-1	82	85	87	83			0
10	WG99756-LCS	WG99756-2	85	87	90	86			0
11	WG99756-LCSD	WG99756-3	66	68	88	83			0
12	DSY-SD-AA13-2448MS	WG99756-4	63	81	66	83			0
13	DSY-SD-AA13-2448MSD	WG99756-5	54*	67	52*	65			2
14	DSY-SD-AA09-0012	SE6841-1	58	64	60	61			0
15	DSY-SD-AA09-1224	SE6841-2	61	69	63	71			0
16	DSY-SD-AA09-2448	SE6841-3	58	80	63	86			0
17	DSY-SD-AA13-0012	SE6841-4	77	83	104	85			0
18	DSY-SD-AA13-1224	SE6841-5	78	83	97	82			0
19	DSY-SD-AA13-2448	SE6841-6	68	83	89	87			0
20	DSY-SD-AA17-0012	SE6841-7	87	96	106	99			0
21	DSY-SD-AA17-1224	SE6841-8	59	64	72	65			0
22	DSY-SD-AA17-2448	SE6841-9	56	71	73	77			0
23	DSY-SD-AA21-0012	SE6841-10	82	84	105	84			0
24	DSY-SD-AA21-1224	SE6841-11	83	98	104	102			0
25	DSY-SD-AA21-2448	SE6841-12	57	76	60	72			0
26	DSY-SD-DUP34-101311	SE6841-13	63	85	54*	67			1
27	DSY-SD-AA24-0012	SE6841-14	70	82	39*	41*			2
28	DSY-SD-AA24-2448	SE6841-16	66	87	71	86			0

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	DSY-SD-AA26-0012	SE6841-17	71	89	66	76			0
02	DSY-SD-AA26-2448	SE6841-19	47*	72	48*	82			2
03	WG100719-BLANK	WG100719-1	121*	106	133*	98			2
04	WG100719-LCS	WG100719-2	116*	103	138*	102			2
05	DSY-SD-AA24-1224	SE6841-15	79	87	65	72			0
06	DSY-SD-AA26-1224	SE6841-18	58	78	58*	87			1
07									
08									
09									
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27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000158

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99509-BLANK	WG99509-1	0*	0*	49	44			2
02	WG99509-LCS	WG99509-2	70	77	93	80			0
03	WG99509-LCSD	WG99509-3	79	90	92	78			0
04	DSY-SD-RB14-101311	SE6841-25	65	74	23*	20*			2
05									
06									
07									
08									
09									
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27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000159

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000236

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/24/11	1526	13.29	3.82
02	WG99509-BLANK	WG99509-1	10/24/11	1711	13.30	
03	WG99509-LCS	WG99509-2	10/24/11	1737	13.29	3.81
04	WG99509-LCSD	WG99509-3	10/24/11	1803	13.29	3.81
05	DSY-SD-RB14-101311	SE6841-25	10/24/11	1829	13.29	3.81
06		AR1660 0.25	10/24/11	2156	13.29	3.81
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QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	13.23	3.80
02	WG99856-BLANK	WG99856-1	11/03/11	1300	13.24	3.80
03	WG99856-LCS	WG99856-2	11/03/11	1326	13.24	3.80
04	WG99856-LCSD	WG99856-3	11/03/11	1352	13.24	3.80
05		AR1660 1.0	11/03/11	1536	13.24	3.80
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-AA28-0016	SE6841-20	11/03/11	1956	13.24	3.81
08	DSY-SD-DUP35-101311	SE6841-21	11/03/11	2021	13.24	3.81
09	DSY-SD-AA30-0012	SE6841-22	11/03/11	2047	13.24	3.80
10	DSY-SD-AA30-1224	SE6841-23	11/03/11	2113	13.24	3.81
11		AR1660 0.25	11/03/11	2205	13.24	3.80
12		AR1254 1.0	11/03/11	2322		
13	DSY-SD-G30-0018	SE6841-24	11/03/11	2347	13.24	3.81
14		AR1660 1.0	11/04/11	0429	13.24	3.80
15		AR1254 1.0	11/04/11	0547		
16		AR1660 1.0	11/06/11	1159	13.22	3.80
17	WG99756-BLANK	WG99756-1	11/06/11	1501	13.24	3.81
18	WG99756-LCS	WG99756-2	11/06/11	1527	13.23	3.81
19	WG99756-LCSD	WG99756-3	11/06/11	1553	13.23	3.81
20	DSY-SD-AA13-2448MS	WG99756-4	11/06/11	1619	13.22	3.80

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000240

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA21-1224	SE6841-11	11/07/11	1918	13.20	3.79
02	DSY-SD-AA21-2448	SE6841-12	11/07/11	1944	13.20	3.79
03	DSY-SD-DUP34-101311	SE6841-13	11/07/11	2010	13.20	3.79
04	DSY-SD-AA24-0012	SE6841-14	11/07/11	2036	13.20	3.79
05	DSY-SD-AA24-2448	SE6841-16	11/07/11	2128	13.20	3.79
06	DSY-SD-AA26-0012	SE6841-17	11/07/11	2154	13.20	3.79
07	DSY-SD-AA26-2448	SE6841-19	11/07/11	2246	13.23	3.80
08		AR1660 1.0	11/07/11	2338	13.21	3.79
09		AR1254 1.0	11/08/11	0055		
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12						
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19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000242

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA13-2448MSD	WG99756-5	11/06/11	1645	16.94	4.29
02		AR1660 0.25	11/06/11	1829	16.95	4.29
03		AR1660 1.0	11/07/11	0059	16.94	4.29
04		AR1254 1.0	11/07/11	0217		
05	DSY-SD-AA09-0012	SE6841-1	11/07/11	0545	16.94	4.29
06	DSY-SD-AA09-1224	SE6841-2	11/07/11	0611	16.94	4.29
07	DSY-SD-AA09-2448	SE6841-3	11/07/11	0636	16.94	4.29
08		AR1660 0.25	11/07/11	0729	16.94	4.29
09		AR1254 1.0	11/07/11	0847		
10		AR1660 1.0	11/07/11	1013	16.94	4.28
11		AR1254 1.0	11/07/11	1131		
12	DSY-SD-AA13-0012	SE6841-4	11/07/11	1406	16.94	4.28
13	DSY-SD-AA13-1224	SE6841-5	11/07/11	1432	16.94	4.28
14	DSY-SD-AA13-2448	SE6841-6	11/07/11	1458	16.93	4.28
15	DSY-SD-AA17-0012	SE6841-7	11/07/11	1524	16.94	4.28
16	DSY-SD-AA17-1224	SE6841-8	11/07/11	1550	16.94	4.28
17	DSY-SD-AA17-2448	SE6841-9	11/07/11	1616	16.93	4.28
18		AR1660 0.25	11/07/11	1708	16.95	4.28
19		AR1254 1.0	11/07/11	1826		
20	DSY-SD-AA21-0012	SE6841-10	11/07/11	1852	16.93	4.28

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000244

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.17 TCX: 3.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	13.15	3.75
02	WG100719-BLANK	WG100719-1	11/11/11	1823	13.15	3.76
03	WG100719-LCS	WG100719-2	11/11/11	1848	13.15	3.76
04		AR1660 0.25	11/11/11	2031	13.17	3.77
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-AA24-1224	SE6841-15	11/11/11	2355	13.13	3.75
07	DSY-SD-AA26-1224	SE6841-18	11/12/11	0021	13.14	3.75
08		AR1660 1.0	11/12/11	0254	13.13	3.75
09		AR1254 1.0	11/12/11	0410		
10						
11						
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13						
14						
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16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000246

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 1526

Lab File ID: 7EJ796 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.9841200	1.0000000	31462000	0.001	-1.59	20.00	2RDR	
(2)	0.9608400	1.0000000	18014000	0.001	-3.92	20.00	2RDR	
(3)	0.9094400	1.0000000	44582000	0.001	-9.06	20.00	2RDR	
(4)	0.8885100	1.0000000	26152000	0.001	-11.15	20.00	2RDR	
(5)	0.8008900	1.0000000	20989000	0.001	-19.91	20.00	2RDR	
Average %D: -9.120								
Aroclor-1260	0.8059900	1.0000000	40232000	0.001	-19.40	20.00	2RDR	
(2)	0.8026200	1.0000000	51613000	0.001	-19.74	20.00	2RDR	
(3)	0.8648600	1.0000000	40650000	0.001	-13.51	20.00	2RDR	
(4)	0.7937200	1.0000000	37208000	0.001	-20.63	20.00	2RDR	<-
(5)	0.7538400	1.0000000	23182000	0.001	-24.62	20.00	2RDR	<-
Average %D: -19.58								
Decachlorobiphenyl	1.64e-002	2.e-002	488540000	0.001	-18.00	20.00	2RDR	
Tetrachloro-m-xylene	1.89e-002	2.e-002	1.1e+009	0.001	-5.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 2156

Lab File ID: 7EJ811 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2672600	0.2500000	33677000	0.001	6.90	20.00	2RDR
(2)	0.2707000	0.2500000	19945000	0.001	8.28	20.00	2RDR
(3)	0.2364100	0.2500000	40614000	0.001	-5.44	20.00	2RDR
(4)	0.2576000	0.2500000	28350000	0.001	3.04	20.00	2RDR
(5)	0.2610000	0.2500000	25103000	0.001	4.40	20.00	2RDR
Average %D: 3.4400							
Aroclor-1260	0.2476500	0.2500000	44169000	0.001	-0.94	20.00	2RDR
(2)	0.2468900	0.2500000	53991000	0.001	-1.24	20.00	2RDR
(3)	0.2456100	0.2500000	39820000	0.001	-1.76	20.00	2RDR
(4)	0.2438200	0.2500000	40833000	0.001	-2.47	20.00	2RDR
(5)	0.2578300	0.2500000	30276000	0.001	3.13	20.00	2RDR
Average %D: -0.640							
Decachlorobiphenyl	5.13e-003	5.e-003	570060000	0.001	2.60	20.00	2RDR
Tetrachloro-m-xylene	5.36e-003	5.e-003	1.2e+009	0.001	7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2836100	0.2500000	35801000	0.001	13.44	20.00	2RDR
(2)	0.2823200	0.2500000	20832000	0.001	12.93	20.00	2RDR
(3)	0.2545600	0.2500000	44301000	0.001	1.82	20.00	2RDR
(4)	0.2627600	0.2500000	28973000	0.001	5.10	20.00	2RDR
(5)	0.2365100	0.2500000	22448000	0.001	-5.40	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	0.2354700	0.2500000	41642000	0.001	-5.81	20.00	2RDR
(2)	0.2437800	0.2500000	53135000	0.001	-2.49	20.00	2RDR
(3)	0.2556900	0.2500000	41796000	0.001	2.28	20.00	2RDR
(4)	0.2356400	0.2500000	39239000	0.001	-5.74	20.00	2RDR
(5)	0.2470600	0.2500000	28935000	0.001	-1.18	20.00	2RDR
Average %D: -2.600							
Decachlorobiphenyl	4.64e-003	5.e-003	510940000	0.001	-7.20	20.00	2RDR
Tetrachloro-m-xylene	5.92e-003	5.e-003	1.33e+009	0.001	18.40	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2494000	1.0000000	39862000	0.001	24.94	20.00	2RDR	<-
(2)	1.2631000	1.0000000	23630000	0.001	26.31	20.00	2RDR	<-
(3)	1.1014000	1.0000000	54505000	0.001	10.14	20.00	2RDR	
(4)	1.1811000	1.0000000	35015000	0.001	18.11	20.00	2RDR	
(5)	1.1185000	1.0000000	29717000	0.001	11.85	20.00	2RDR	
Average %D: 18.270								
Aroclor-1260	1.0442000	1.0000000	52828000	0.001	4.42	20.00	2RDR	
(2)	1.0360000	1.0000000	67507000	0.001	3.60	20.00	2RDR	
(3)	1.0815000	1.0000000	51560000	0.001	8.15	20.00	2RDR	
(4)	1.0432000	1.0000000	49615000	0.001	4.32	20.00	2RDR	
(5)	1.1366000	1.0000000	35466000	0.001	13.66	20.00	2RDR	
Average %D: 6.8300								
Decachlorobiphenyl	2.09e-002	2.e-002	627930000	0.001	4.50	20.00	2RDR	
Tetrachloro-m-xylene	2.47e-002	2.e-002	1.44e+009	0.001	23.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1078000	1.0000000	45581000	0.001	10.78	20.00	2RDR
(2)	1.0818000	1.0000000	54483000	0.001	8.18	20.00	2RDR
(3)	1.0835000	1.0000000	35641000	0.001	8.35	20.00	2RDR
(4)	1.0912000	1.0000000	39193000	0.001	9.12	20.00	2RDR
(5)	1.1308000	1.0000000	41809000	0.001	13.08	20.00	2RDR
Average %D: 9.9000							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2360800	0.2500000	29622000	0.001	-5.57	20.00	2RDR	
(2)	0.2372200	0.2500000	17387000	0.001	-5.11	20.00	2RDR	
(3)	0.2305400	0.2500000	39423000	0.001	-7.78	20.00	2RDR	
(4)	0.2147500	0.2500000	23179000	0.001	-14.10	20.00	2RDR	
(5)	0.1813300	0.2500000	16469000	0.001	-27.47	20.00	2RDR	<-
Average %D: -12.00								
Aroclor-1260	0.1785000	0.2500000	29837000	0.001	-28.60	20.00	2RDR	<-
(2)	0.1957500	0.2500000	39887000	0.001	-21.70	20.00	2RDR	<-
(3)	0.2060400	0.2500000	32071000	0.001	-17.58	20.00	2RDR	
(4)	0.1810600	0.2500000	28623000	0.001	-27.58	20.00	2RDR	<-
(5)	0.1896100	0.2500000	21790000	0.001	-24.16	20.00	2RDR	<-
Average %D: -23.92								
Decachlorobiphenyl	3.38e-003	5.e-003	357550000	0.001	-32.40	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.12e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8584600	1.0000000	34898000	0.001	-14.15	20.00	2RDR
(2)	0.8799400	1.0000000	43730000	0.001	-12.01	20.00	2RDR
(3)	0.8480600	1.0000000	27413000	0.001	-15.19	20.00	2RDR
(4)	0.8432800	1.0000000	29899000	0.001	-15.67	20.00	2RDR
(5)	0.9351200	1.0000000	34029000	0.001	-6.49	20.00	2RDR
Average %D: -12.70							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1814000	1.0000000	37718000	0.001	18.14	20.00	2RDR	
(2)	1.1421000	1.0000000	21389000	0.001	14.21	20.00	2RDR	
(3)	1.0620000	1.0000000	52465000	0.001	6.20	20.00	2RDR	
(4)	1.0295000	1.0000000	30420000	0.001	2.95	20.00	2RDR	
(5)	0.8983900	1.0000000	23663000	0.001	-10.16	20.00	2RDR	
Average %D: 6.2700								
Aroclor-1260	0.8317500	1.0000000	41590000	0.001	-16.82	20.00	2RDR	
(2)	0.8579100	1.0000000	55385000	0.001	-14.21	20.00	2RDR	
(3)	0.9233700	1.0000000	43588000	0.001	-7.66	20.00	2RDR	
(4)	0.8385000	1.0000000	39427000	0.001	-16.15	20.00	2RDR	
(5)	0.9340200	1.0000000	28938000	0.001	-6.60	20.00	2RDR	
Average %D: -12.29								
Decachlorobiphenyl	1.59e-002	2.e-002	471100000	0.001	-20.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.49e-002	2.e-002	1.46e+009	0.001	24.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9869400	1.0000000	40396000	0.001	-1.31	20.00	2RDR
(2)	1.0166000	1.0000000	51003000	0.001	1.66	20.00	2RDR
(3)	1.0154000	1.0000000	33256000	0.001	1.54	20.00	2RDR
(4)	1.0011000	1.0000000	35809000	0.001	0.11	20.00	2RDR
(5)	1.0734000	1.0000000	39521000	0.001	7.34	20.00	2RDR
Average %D: 1.8700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0354000	1.0000000	33092000	0.001	3.54	20.00	2RDR	
(2)	1.0432000	1.0000000	19550000	0.001	4.32	20.00	2RDR	
(3)	0.9290900	1.0000000	45595000	0.001	-7.09	20.00	2RDR	
(4)	0.9547000	1.0000000	28156000	0.001	-4.53	20.00	2RDR	
(5)	0.8877900	1.0000000	23372000	0.001	-11.22	20.00	2RDR	
Average %D: -2.990								
Aroclor-1260	0.8184000	1.0000000	40886000	0.001	-18.16	20.00	2RDR	
(2)	0.8199300	1.0000000	52794000	0.001	-18.01	20.00	2RDR	
(3)	0.8748700	1.0000000	41152000	0.001	-12.51	20.00	2RDR	
(4)	0.8318700	1.0000000	39098000	0.001	-16.81	20.00	2RDR	
(5)	0.9753000	1.0000000	30264000	0.001	-2.47	20.00	2RDR	
Average %D: -13.59								
Decachlorobiphenyl	1.57e-002	2.e-002	467440000	0.001	-21.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.19e-002	2.e-002	1.27e+009	0.001	9.50	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2553400	0.2500000	32128000	0.001	2.14	20.00	2RDR
(2)	0.2572600	0.2500000	18918000	0.001	2.90	20.00	2RDR
(3)	0.2035000	0.2500000	33935000	0.001	-18.60	20.00	2RDR
(4)	0.2250200	0.2500000	24418000	0.001	-9.99	20.00	2RDR
(5)	0.2081800	0.2500000	19378000	0.001	-16.73	20.00	2RDR
Average %D: -8.040							
Aroclor-1260	0.2191100	0.2500000	38250000	0.001	-12.36	20.00	2RDR
(2)	0.2256200	0.2500000	48127000	0.001	-9.75	20.00	2RDR
(3)	0.2402400	0.2500000	38767000	0.001	-3.90	20.00	2RDR
(4)	0.2365400	0.2500000	39416000	0.001	-5.38	20.00	2RDR
(5)	0.2912900	0.2500000	34447000	0.001	16.52	20.00	2RDR
Average %D: -2.960							
Decachlorobiphenyl	4.8e-003	5.e-003	530280000	0.001	-4.00	20.00	2RDR
Tetrachloro-m-xylene	5.75e-003	5.e-003	1.29e+009	0.001	15.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1834000	1.0000000	37779000	0.001	18.34	20.00	2RDR	
(2)	1.2166000	1.0000000	22771000	0.001	21.66	20.00	2RDR	<-
(3)	0.9476600	1.0000000	46554000	0.001	-5.23	20.00	2RDR	
(4)	1.0305000	1.0000000	30451000	0.001	3.05	20.00	2RDR	
(5)	0.9079000	1.0000000	23924000	0.001	-9.21	20.00	2RDR	
Average %D: 5.7200								
Aroclor-1260	0.9049300	1.0000000	45453000	0.001	-9.51	20.00	2RDR	
(2)	0.9056200	1.0000000	58637000	0.001	-9.44	20.00	2RDR	
(3)	0.9914700	1.0000000	47016000	0.001	-0.85	20.00	2RDR	
(4)	0.9776300	1.0000000	46343000	0.001	-2.24	20.00	2RDR	
(5)	1.2360000	1.0000000	38692000	0.001	23.60	20.00	2RDR	<-
Average %D: 0.3100								
Decachlorobiphenyl	1.87e-002	2.e-002	559820000	0.001	-6.50	20.00	2RDR	
Tetrachloro-m-xylene	2.46e-002	2.e-002	1.44e+009	0.001	23.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9845000	1.0000000	40292000	0.001	-1.55	20.00	2RDR
(2)	0.9932300	1.0000000	49756000	0.001	-0.68	20.00	2RDR
(3)	0.9689900	1.0000000	31632000	0.001	-3.10	20.00	2RDR
(4)	1.0158000	1.0000000	36363000	0.001	1.58	20.00	2RDR
(5)	0.9865000	1.0000000	36066000	0.001	-1.35	20.00	2RDR
Average %D: -1.020							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2694100	0.2500000	33957000	0.001	7.76	20.00	2RDR	
(2)	0.2791000	0.2500000	20586000	0.001	11.64	20.00	2RDR	
(3)	0.2135800	0.2500000	35982000	0.001	-14.57	20.00	2RDR	
(4)	0.2340200	0.2500000	25504000	0.001	-6.39	20.00	2RDR	
(5)	0.2020200	0.2500000	18710000	0.001	-19.19	20.00	2RDR	
Average %D: -4.160								
Aroclor-1260	0.2341000	0.2500000	41358000	0.001	-6.36	20.00	2RDR	
(2)	0.2413600	0.2500000	52467000	0.001	-3.46	20.00	2RDR	
(3)	0.2603000	0.2500000	42700000	0.001	4.12	20.00	2RDR	
(4)	0.2562700	0.2500000	43256000	0.001	2.51	20.00	2RDR	
(5)	0.3166500	0.2500000	37613000	0.001	26.66	20.00	2RDR	<-
Average %D: 4.6800								
Decachlorobiphenyl	4.8e-003	5.e-003	529890000	0.001	-4.00	20.00	2RDR	
Tetrachloro-m-xylene	5.85e-003	5.e-003	1.31e+009	0.001	17.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0847

Lab File ID: 7EK236 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1086000	1.0000000	45613000	0.001	10.86	20.00	2RDR	
(2)	1.1281000	1.0000000	56958000	0.001	12.81	20.00	2RDR	
(3)	1.1426000	1.0000000	37719000	0.001	14.26	20.00	2RDR	
(4)	1.2427000	1.0000000	44896000	0.001	24.27	20.00	2RDR	<-
(5)	1.2098000	1.0000000	44967000	0.001	20.98	20.00	2RDR	<-
Average %D: 16.640								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1013

Lab File ID: 7EK238 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2171000	1.0000000	38845000	0.001	21.71	20.00	2RDR	<-
(2)	1.2256000	1.0000000	22937000	0.001	22.56	20.00	2RDR	<-
(3)	1.1698000	1.0000000	58051000	0.001	16.98	20.00	2RDR	
(4)	1.1974000	1.0000000	35508000	0.001	19.74	20.00	2RDR	
(5)	1.0493000	1.0000000	27812000	0.001	4.93	20.00	2RDR	
Average %D: 17.190								
Aroclor-1260	1.0829000	1.0000000	54886000	0.001	8.29	20.00	2RDR	
(2)	1.0769000	1.0000000	70291000	0.001	7.69	20.00	2RDR	
(3)	1.1404000	1.0000000	54547000	0.001	14.04	20.00	2RDR	
(4)	1.1306000	1.0000000	53985000	0.001	13.06	20.00	2RDR	
(5)	1.2768000	1.0000000	40021000	0.001	27.68	20.00	2RDR	<-
Average %D: 14.160								
Decachlorobiphenyl	2.32e-002	2.e-002	699090000	0.001	16.00	20.00	2RDR	
Tetrachloro-m-xylene	2.38e-002	2.e-002	1.39e+009	0.001	19.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1131

Lab File ID: 7EK241 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2074000	1.0000000	49861000	0.001	20.74	20.00	2RDR	<-
(2)	1.1789000	1.0000000	59681000	0.001	17.89	20.00	2RDR	
(3)	1.1908000	1.0000000	39416000	0.001	19.08	20.00	2RDR	
(4)	1.2847000	1.0000000	46478000	0.001	28.47	20.00	2RDR	<-
(5)	1.2352000	1.0000000	45987000	0.001	23.52	20.00	2RDR	<-
Average %D: 21.940								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1708

Lab File ID: 7EK253 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3180800	0.2500000	40278000	0.001	27.23	20.00	2RDR	<-
(2)	0.3263000	0.2500000	24187000	0.001	30.52	20.00	2RDR	<-
(3)	0.2738000	0.2500000	48208000	0.001	9.52	20.00	2RDR	
(4)	0.3068700	0.2500000	34296000	0.001	22.75	20.00	2RDR	<-
(5)	0.2751800	0.2500000	26642000	0.001	10.07	20.00	2RDR	
Average %D: 20.000								
Aroclor-1260	0.2836700	0.2500000	51646000	0.001	13.47	20.00	2RDR	
(2)	0.2740200	0.2500000	61469000	0.001	9.61	20.00	2RDR	
(3)	0.2738900	0.2500000	45366000	0.001	9.56	20.00	2RDR	
(4)	0.2876300	0.2500000	49370000	0.001	15.05	20.00	2RDR	
(5)	0.3384300	0.2500000	40334000	0.001	35.37	20.00	2RDR	<-
Average %D: 16.600								
Decachlorobiphenyl	6.06e-003	5.e-003	683540000	0.001	21.20	20.00	2RDR	<-
Tetrachloro-m-xylene	6.79e-003	5.e-003	1.53e+009	0.001	35.80	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1826

Lab File ID: 7EK256 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2436000	1.0000000	51421000	0.001	24.36	20.00	2RDR	<-
(2)	1.1875000	1.0000000	60143000	0.001	18.75	20.00	2RDR	
(3)	1.2028000	1.0000000	39839000	0.001	20.28	20.00	2RDR	<-
(4)	1.3126000	1.0000000	47533000	0.001	31.26	20.00	2RDR	<-
(5)	1.1998000	1.0000000	44566000	0.001	19.98	20.00	2RDR	
Average %D: 22.930								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.9730600	1.0000000	31110000	0.001	-2.69	20.00	2RDR	
(2)	0.9539500	1.0000000	17886000	0.001	-4.60	20.00	2RDR	
(3)	0.8515000	1.0000000	41596000	0.001	-14.85	20.00	2RDR	
(4)	0.8151500	1.0000000	23932000	0.001	-18.48	20.00	2RDR	
(5)	0.6372600	1.0000000	16514000	0.001	-36.27	20.00	2RDR	<-
Average %D: -15.38								
Aroclor-1260	0.6550900	1.0000000	32297000	0.001	-34.49	20.00	2RDR	<-
(2)	0.6635600	1.0000000	42111000	0.001	-33.64	20.00	2RDR	<-
(3)	0.7133100	1.0000000	33071000	0.001	-28.67	20.00	2RDR	<-
(4)	0.6829200	1.0000000	31730000	0.001	-31.71	20.00	2RDR	<-
(5)	0.7095500	1.0000000	21774000	0.001	-29.04	20.00	2RDR	<-
Average %D: -31.51								
Decachlorobiphenyl	1.35e-002	2.e-002	399930000	0.001	-32.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.12e-002	2.e-002	1.23e+009	0.001	6.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0380000	1.0000000	42584000	0.001	3.80	20.00	2RDR
(2)	1.0008000	1.0000000	50158000	0.001	0.08	20.00	2RDR
(3)	0.9512400	1.0000000	31012000	0.001	-4.88	20.00	2RDR
(4)	0.9639200	1.0000000	34416000	0.001	-3.61	20.00	2RDR
(5)	0.9811400	1.0000000	35853000	0.001	-1.89	20.00	2RDR
Average %D: -1.300							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.5517000	1.0000000	49360000	0.001	55.17	20.00	2RDR	<-
(2)	1.5851000	1.0000000	29555000	0.001	58.51	20.00	2RDR	<-
(3)	1.4896000	1.0000000	74704000	0.001	48.96	20.00	2RDR	<-
(4)	1.5058000	1.0000000	44865000	0.001	50.58	20.00	2RDR	<-
(5)	1.3620000	1.0000000	36444000	0.001	36.20	20.00	2RDR	<-
Average %D: 49.880								
Aroclor-1260	1.2826000	1.0000000	65524000	0.001	28.26	20.00	2RDR	<-
(2)	1.2802000	1.0000000	84072000	0.001	28.02	20.00	2RDR	<-
(3)	1.3299000	1.0000000	64192000	0.001	32.99	20.00	2RDR	<-
(4)	1.3209000	1.0000000	63539000	0.001	32.09	20.00	2RDR	<-
(5)	1.4493000	1.0000000	45662000	0.001	44.93	20.00	2RDR	<-
Average %D: 33.260								
Decachlorobiphenyl	2.58e-002	2.e-002	780660000	0.001	29.00	20.00	2RDR	<-
Tetrachloro-m-xylene	3.11e-002	2.e-002	1.83e+009	0.001	55.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3139400	0.2500000	39740000	0.001	25.58	20.00	2RDR	<-
(2)	0.3551000	0.2500000	26382000	0.001	42.04	20.00	2RDR	<-
(3)	0.2376400	0.2500000	40864000	0.001	-4.94	20.00	2RDR	
(4)	0.2696500	0.2500000	29804000	0.001	7.86	20.00	2RDR	
(5)	0.2838600	0.2500000	27583000	0.001	13.54	20.00	2RDR	
Average %D: 16.800								
Aroclor-1260	0.2822600	0.2500000	51352000	0.001	12.90	20.00	2RDR	
(2)	0.2914600	0.2500000	66274000	0.001	16.58	20.00	2RDR	
(3)	0.3270600	0.2500000	55807000	0.001	30.82	20.00	2RDR	<-
(4)	0.2236100	0.2500000	36899000	0.001	-10.56	20.00	2RDR	
(5)	0.3294600	0.2500000	39213000	0.001	31.78	20.00	2RDR	<-
Average %D: 16.320								
Decachlorobiphenyl	6.48e-003	5.e-003	734810000	0.001	29.60	20.00	2RDR	<-
Tetrachloro-m-xylene	7.02e-003	5.e-003	1.59e+009	0.001	40.40	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1713000	1.0000000	48308000	0.001	17.13	20.00	2RDR	
(2)	1.1134000	1.0000000	56175000	0.001	11.34	20.00	2RDR	
(3)	1.1024000	1.0000000	36306000	0.001	10.24	20.00	2RDR	
(4)	1.2162000	1.0000000	43898000	0.001	21.62	20.00	2RDR	<-
(5)	0.9822200	1.0000000	35896000	0.001	-1.78	20.00	2RDR	
Average %D: 11.710								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.4120000	1.0000000	44980000	0.001	41.20	20.00	2RDR	<-
(2)	1.3645000	1.0000000	25502000	0.001	36.45	20.00	2RDR	<-
(3)	1.2210000	1.0000000	60704000	0.001	22.10	20.00	2RDR	<-
(4)	1.2806000	1.0000000	38032000	0.001	28.06	20.00	2RDR	<-
(5)	1.1449000	1.0000000	30446000	0.001	14.49	20.00	2RDR	
Average %D: 28.460								
Aroclor-1260	1.0309000	1.0000000	52124000	0.001	3.09	20.00	2RDR	
(2)	1.0313000	1.0000000	67188000	0.001	3.13	20.00	2RDR	
(3)	1.0861000	1.0000000	51795000	0.001	8.61	20.00	2RDR	
(4)	1.1032000	1.0000000	52613000	0.001	10.32	20.00	2RDR	
(5)	1.1370000	1.0000000	35479000	0.001	13.70	20.00	2RDR	
Average %D: 7.7700								
Decachlorobiphenyl	2.31e-002	2.e-002	696700000	0.001	15.50	20.00	2RDR	
Tetrachloro-m-xylene	3.15e-002	2.e-002	1.85e+009	0.001	57.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.3426000	1.0000000	55686000	0.001	34.26	20.00	2RDR	<-
(2)	1.2788000	1.0000000	65043000	0.001	27.88	20.00	2RDR	<-
(3)	1.2672000	1.0000000	42109000	0.001	26.72	20.00	2RDR	<-
(4)	1.2697000	1.0000000	45915000	0.001	26.97	20.00	2RDR	<-
(5)	1.3228000	1.0000000	49508000	0.001	32.28	20.00	2RDR	<-
Average %D: 29.620								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000237

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/24/11	1526	17.04	4.31
02	WG99509-BLANK	WG99509-1	10/24/11	1711	17.04	
03	WG99509-LCS	WG99509-2	10/24/11	1737	17.04	4.31
04	WG99509-LCSD	WG99509-3	10/24/11	1803	17.03	4.31
05	DSY-SD-RB14-101311	SE6841-25	10/24/11	1829	17.03	4.31
06		AR1660 0.25	10/24/11	2156	17.03	4.31
07						
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QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000239

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA13-2448MSD	WG99756-5	11/06/11	1645	13.22	3.80
02		AR1660 0.25	11/06/11	1829	13.23	3.81
03		AR1660 1.0	11/07/11	0059	13.22	3.80
04		AR1254 1.0	11/07/11	0217		
05	DSY-SD-AA09-0012	SE6841-1	11/07/11	0545	13.23	3.81
06	DSY-SD-AA09-1224	SE6841-2	11/07/11	0611	13.22	3.81
07	DSY-SD-AA09-2448	SE6841-3	11/07/11	0636	13.22	3.80
08		AR1660 0.25	11/07/11	0729	13.23	3.81
09		AR1254 1.0	11/07/11	0847		
10		AR1660 1.0	11/07/11	1013	13.22	3.79
11		AR1254 1.0	11/07/11	1131		
12	DSY-SD-AA13-0012	SE6841-4	11/07/11	1406	13.21	3.80
13	DSY-SD-AA13-1224	SE6841-5	11/07/11	1432	13.21	3.79
14	DSY-SD-AA13-2448	SE6841-6	11/07/11	1458	13.21	3.79
15	DSY-SD-AA17-0012	SE6841-7	11/07/11	1524	13.21	3.79
16	DSY-SD-AA17-1224	SE6841-8	11/07/11	1550	13.21	3.79
17	DSY-SD-AA17-2448	SE6841-9	11/07/11	1616	13.20	3.79
18		AR1660 0.25	11/07/11	1708	13.23	3.79
19		AR1254 1.0	11/07/11	1826		
20	DSY-SD-AA21-0012	SE6841-10	11/07/11	1852	13.21	3.79

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000241

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	16.95	4.29
02	WG99856-BLANK	WG99856-1	11/03/11	1300	16.96	4.29
03	WG99856-LCS	WG99856-2	11/03/11	1326	16.96	4.29
04	WG99856-LCSD	WG99856-3	11/03/11	1352	16.96	4.29
05		AR1660 1.0	11/03/11	1536	16.96	4.29
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-AA28-0016	SE6841-20	11/03/11	1956	16.96	4.30
08	DSY-SD-DUP35-101311	SE6841-21	11/03/11	2021	16.96	4.30
09	DSY-SD-AA30-0012	SE6841-22	11/03/11	2047	16.96	4.30
10	DSY-SD-AA30-1224	SE6841-23	11/03/11	2113	16.96	4.30
11		AR1660 0.25	11/03/11	2205	16.97	4.30
12		AR1254 1.0	11/03/11	2322		
13	DSY-SD-G30-0018	SE6841-24	11/03/11	2347	16.96	4.30
14		AR1660 1.0	11/04/11	0429	16.96	4.29
15		AR1254 1.0	11/04/11	0547		
16		AR1660 1.0	11/06/11	1159	16.94	4.29
17	WG99756-BLANK	WG99756-1	11/06/11	1501	16.95	4.30
18	WG99756-LCS	WG99756-2	11/06/11	1527	16.95	4.30
19	WG99756-LCSD	WG99756-3	11/06/11	1553	16.95	4.30
20	DSY-SD-AA13-2448MS	WG99756-4	11/06/11	1619	16.94	4.29

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000243

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA21-1224	SE6841-11	11/07/11	1918	16.93	4.28
02	DSY-SD-AA21-2448	SE6841-12	11/07/11	1944	16.93	4.28
03	DSY-SD-DUP34-101311	SE6841-13	11/07/11	2010	16.93	4.28
04	DSY-SD-AA24-0012	SE6841-14	11/07/11	2036	16.93	4.28
05	DSY-SD-AA24-2448	SE6841-16	11/07/11	2128	16.93	4.28
06	DSY-SD-AA26-0012	SE6841-17	11/07/11	2154	16.93	4.28
07	DSY-SD-AA26-2448	SE6841-19	11/07/11	2246	16.95	4.29
08		AR1660 1.0	11/07/11	2338	16.93	4.28
09		AR1254 1.0	11/08/11	0055		
10						
11						
12						
13						
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19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000245

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.83 TCX: 4.24

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	16.85	4.24
02	WG100719-BLANK	WG100719-1	11/11/11	1823	16.86	4.25
03	WG100719-LCS	WG100719-2	11/11/11	1848	16.85	4.25
04		AR1660 0.25	11/11/11	2031	16.86	4.25
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-AA24-1224	SE6841-15	11/11/11	2355	16.84	4.24
07	DSY-SD-AA26-1224	SE6841-18	11/12/11	0021	16.84	4.24
08		AR1660 1.0	11/12/11	0254	16.84	4.24
09		AR1254 1.0	11/12/11	0410		
10						
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17						
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20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Katahdin Analytical Services A0000247

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4586000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 1526

Lab File ID: 7EJ796 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9176600	1.0000000	3204400.0	0.001	-8.23	20.00	2RDR
(2)	0.9311500	1.0000000	5346000.0	0.001	-6.88	20.00	2RDR
(3)	0.8931500	1.0000000	9251000.0	0.001	-10.68	20.00	2RDR
(4)	0.8698900	1.0000000	4779700.0	0.001	-13.01	20.00	2RDR
(5)	0.8965200	1.0000000	4403300.0	0.001	-10.35	20.00	2RDR
Average %D: -9.830							
Aroclor-1260	0.8597100	1.0000000	6033400.0	0.001	-14.03	20.00	2RDR
(2)	0.8733100	1.0000000	7406100.0	0.001	-12.67	20.00	2RDR
(3)	0.8897000	1.0000000	5275800.0	0.001	-11.03	20.00	2RDR
(4)	0.8724100	1.0000000	4972000.0	0.001	-12.76	20.00	2RDR
(5)	0.8547700	1.0000000	4849000.0	0.001	-14.52	20.00	2RDR
Average %D: -13.00							
Decachlorobiphenyl	1.7e-002	2.e-002	81386000	0.001	-15.00	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196250000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 2156

Lab File ID: 7EJ811 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2632600	0.2500000	3713200.0	0.001	5.30	20.00	2RDR
(2)	0.2504200	0.2500000	5825800.0	0.001	0.17	20.00	2RDR
(3)	0.2390300	0.2500000	9674000.0	0.001	-4.39	20.00	2RDR
(4)	0.2387100	0.2500000	5104300.0	0.001	-4.52	20.00	2RDR
(5)	0.2517600	0.2500000	4906200.0	0.001	0.70	20.00	2RDR
Average %D: -0.560							
Aroclor-1260	0.2453500	0.2500000	6767300.0	0.001	-1.86	20.00	2RDR
(2)	0.2381800	0.2500000	7716800.0	0.001	-4.73	20.00	2RDR
(3)	0.2448200	0.2500000	5503400.0	0.001	-2.07	20.00	2RDR
(4)	0.2474700	0.2500000	5465300.0	0.001	-1.01	20.00	2RDR
(5)	0.2378000	0.2500000	5081900.0	0.001	-4.88	20.00	2RDR
Average %D: -2.920							
Decachlorobiphenyl	4.82e-003	5.e-003	90979000	0.001	-3.60	20.00	2RDR
Tetrachloro-m-xylene	5.16e-003	5.e-003	221260000	0.001	3.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2765400	0.2500000	3898700.0	0.001	10.62	20.00	2RDR
(2)	0.2684000	0.2500000	6239200.0	0.001	7.36	20.00	2RDR
(3)	0.2450700	0.2500000	9927900.0	0.001	-1.97	20.00	2RDR
(4)	0.2371100	0.2500000	5068700.0	0.001	-5.16	20.00	2RDR
(5)	0.2503700	0.2500000	4878900.0	0.001	0.15	20.00	2RDR
Average %D: 2.2000							
Aroclor-1260	0.2413500	0.2500000	6654100.0	0.001	-3.46	20.00	2RDR
(2)	0.2471100	0.2500000	8024800.0	0.001	-1.16	20.00	2RDR
(3)	0.2527000	0.2500000	5693700.0	0.001	1.08	20.00	2RDR
(4)	0.2524400	0.2500000	5579900.0	0.001	0.98	20.00	2RDR
(5)	0.2513300	0.2500000	5394700.0	0.001	0.53	20.00	2RDR
Average %D: -0.400							
Decachlorobiphenyl	4.72e-003	5.e-003	88981000	0.001	-5.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240130000	0.001	11.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0126000	1.0000000	3533100.0	0.001	1.26	20.00	2RDR
(2)	1.0170000	1.0000000	5832800.0	0.001	1.70	20.00	2RDR
(3)	0.9498100	1.0000000	9839900.0	0.001	-5.02	20.00	2RDR
(4)	0.9208100	1.0000000	5062200.0	0.001	-7.92	20.00	2RDR
(5)	0.9423600	1.0000000	4629200.0	0.001	-5.76	20.00	2RDR
Average %D: -3.150							
Aroclor-1260	0.9328100	1.0000000	6549800.0	0.001	-6.72	20.00	2RDR
(2)	0.9263000	1.0000000	7863200.0	0.001	-7.37	20.00	2RDR
(3)	0.9411500	1.0000000	5587600.0	0.001	-5.88	20.00	2RDR
(4)	0.9666900	1.0000000	5516300.0	0.001	-3.33	20.00	2RDR
(5)	0.9296100	1.0000000	5284900.0	0.001	-7.04	20.00	2RDR
Average %D: -6.070							
Decachlorobiphenyl	1.83e-002	2.e-002	88118000	0.001	-8.50	20.00	2RDR
Tetrachloro-m-xylene	2.08e-002	2.e-002	226400000	0.001	4.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9548400	1.0000000	3866700.0	0.001	-4.52	20.00	2RDR
(2)	0.9774800	1.0000000	6452100.0	0.001	-2.25	20.00	2RDR
(3)	0.9225000	1.0000000	6905100.0	0.001	-7.75	20.00	2RDR
(4)	0.9029400	1.0000000	8501300.0	0.001	-9.71	20.00	2RDR
(5)	0.9607500	1.0000000	5407000.0	0.001	-3.92	20.00	2RDR
Average %D: -5.630							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2304000	0.2500000	3254200.0	0.001	-7.84	20.00	2RDR	
(2)	0.2191900	0.2500000	5107200.0	0.001	-12.32	20.00	2RDR	
(3)	0.2083200	0.2500000	8384600.0	0.001	-16.67	20.00	2RDR	
(4)	0.2008400	0.2500000	4263000.0	0.001	-19.66	20.00	2RDR	
(5)	0.2052900	0.2500000	3990400.0	0.001	-17.88	20.00	2RDR	
Average %D: -14.88								
Aroclor-1260	0.2085400	0.2500000	5726200.0	0.001	-16.58	20.00	2RDR	
(2)	0.2132700	0.2500000	6858200.0	0.001	-14.69	20.00	2RDR	
(3)	0.2220000	0.2500000	4952500.0	0.001	-11.20	20.00	2RDR	
(4)	0.2105200	0.2500000	4612800.0	0.001	-15.79	20.00	2RDR	
(5)	0.2200200	0.2500000	4671100.0	0.001	-11.99	20.00	2RDR	
Average %D: -14.04								
Decachlorobiphenyl	3.8e-003	5.e-003	71218000	0.001	-24.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.55e-003	5.e-003	194740000	0.001	-9.00	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8628200	1.0000000	3493600.0	0.001	-13.72	20.00	2RDR
(2)	0.8810900	1.0000000	5814300.0	0.001	-11.89	20.00	2RDR
(3)	0.8485400	1.0000000	6345400.0	0.001	-15.15	20.00	2RDR
(4)	0.8666500	1.0000000	8151300.0	0.001	-13.34	20.00	2RDR
(5)	0.9313800	1.0000000	5236000.0	0.001	-6.86	20.00	2RDR
Average %D: -12.19							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845100	1.0000000	3436000.0	0.001	-1.55	20.00	2RDR
(2)	0.9754400	1.0000000	5597300.0	0.001	-2.46	20.00	2RDR
(3)	0.9170500	1.0000000	9499500.0	0.001	-8.30	20.00	2RDR
(4)	0.8745500	1.0000000	4805500.0	0.001	-12.54	20.00	2RDR
(5)	0.8678600	1.0000000	4262100.0	0.001	-13.21	20.00	2RDR
Average %D: -7.610							
Aroclor-1260	0.8651300	1.0000000	6071700.0	0.001	-13.49	20.00	2RDR
(2)	0.8918100	1.0000000	7565700.0	0.001	-10.82	20.00	2RDR
(3)	0.9141600	1.0000000	5424000.0	0.001	-8.58	20.00	2RDR
(4)	0.8998600	1.0000000	5130400.0	0.001	-10.01	20.00	2RDR
(5)	0.8968900	1.0000000	5094300.0	0.001	-10.31	20.00	2RDR
Average %D: -10.64							
Decachlorobiphenyl	1.64e-002	2.e-002	78910000	0.001	-18.00	20.00	2RDR
Tetrachloro-m-xylene	1.87e-002	2.e-002	202830000	0.001	-6.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9415000	1.0000000	3812600.0	0.001	-5.85	20.00	2RDR
(2)	0.9712900	1.0000000	6411100.0	0.001	-2.87	20.00	2RDR
(3)	0.9187100	1.0000000	6876500.0	0.001	-8.13	20.00	2RDR
(4)	0.9223700	1.0000000	8688800.0	0.001	-7.76	20.00	2RDR
(5)	0.9870000	1.0000000	5559800.0	0.001	-1.30	20.00	2RDR
Average %D: -5.180							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9993200	1.0000000	3487300.0	0.001	-0.07	20.00	2RDR
(2)	1.0016000	1.0000000	5746000.0	0.001	0.16	20.00	2RDR
(3)	0.9110200	1.0000000	9436800.0	0.001	-8.90	20.00	2RDR
(4)	0.8513900	1.0000000	4677000.0	0.001	-14.86	20.00	2RDR
(5)	0.8709500	1.0000000	4277300.0	0.001	-12.90	20.00	2RDR
Average %D: -7.310							
Aroclor-1260	0.9267600	1.0000000	6507000.0	0.001	-7.32	20.00	2RDR
(2)	0.8864300	1.0000000	7519200.0	0.001	-11.36	20.00	2RDR
(3)	0.9336300	1.0000000	5542000.0	0.001	-6.64	20.00	2RDR
(4)	0.9238300	1.0000000	5268800.0	0.001	-7.62	20.00	2RDR
(5)	0.8850600	1.0000000	5025400.0	0.001	-11.49	20.00	2RDR
Average %D: -8.890							
Decachlorobiphenyl	1.63e-002	2.e-002	78335000	0.001	-18.50	20.00	2RDR
Tetrachloro-m-xylene	2.09e-002	2.e-002	226620000	0.001	4.50	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2518400	0.2500000	3553600.0	0.001	0.74	20.00	2RDR
(2)	0.2567200	0.2500000	5970600.0	0.001	2.69	20.00	2RDR
(3)	0.2144800	0.2500000	8643400.0	0.001	-14.21	20.00	2RDR
(4)	0.2089300	0.2500000	4442800.0	0.001	-16.43	20.00	2RDR
(5)	0.2170900	0.2500000	4223000.0	0.001	-13.16	20.00	2RDR
Average %D: -8.080							
Aroclor-1260	0.2362700	0.2500000	6510400.0	0.001	-5.49	20.00	2RDR
(2)	0.2226800	0.2500000	7182700.0	0.001	-10.93	20.00	2RDR
(3)	0.2410600	0.2500000	5412800.0	0.001	-3.58	20.00	2RDR
(4)	0.2470100	0.2500000	5454600.0	0.001	-1.20	20.00	2RDR
(5)	0.2304000	0.2500000	4910800.0	0.001	-7.84	20.00	2RDR
Average %D: -5.800							
Decachlorobiphenyl	4.59e-003	5.e-003	86522000	0.001	-8.20	20.00	2RDR
Tetrachloro-m-xylene	5.35e-003	5.e-003	229490000	0.001	7.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1025000	1.0000000	3844400.0	0.001	10.25	20.00	2RDR
(2)	1.1388000	1.0000000	6522900.0	0.001	13.88	20.00	2RDR
(3)	1.0060000	1.0000000	10424000	0.001	0.60	20.00	2RDR
(4)	0.9407000	1.0000000	5172600.0	0.001	-5.93	20.00	2RDR
(5)	0.9737300	1.0000000	4783800.0	0.001	-2.63	20.00	2RDR
Average %D: 3.2400							
Aroclor-1260	1.0351000	1.0000000	7272100.0	0.001	3.51	20.00	2RDR
(2)	1.0021000	1.0000000	8517000.0	0.001	0.21	20.00	2RDR
(3)	1.0417000	1.0000000	6197000.0	0.001	4.17	20.00	2RDR
(4)	1.0757000	1.0000000	6145900.0	0.001	7.57	20.00	2RDR
(5)	1.0088000	1.0000000	5746400.0	0.001	0.88	20.00	2RDR
Average %D: 3.2700							
Decachlorobiphenyl	2.03e-002	2.e-002	97807000	0.001	1.50	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	259060000	0.001	19.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0176000	1.0000000	4121200.0	0.001	1.76	20.00	2RDR
(2)	1.1115000	1.0000000	7338000.0	0.001	11.15	20.00	2RDR
(3)	0.9565400	1.0000000	7162800.0	0.001	-4.35	20.00	2RDR
(4)	0.9304800	1.0000000	8767000.0	0.001	-6.95	20.00	2RDR
(5)	0.9868100	1.0000000	5558700.0	0.001	-1.32	20.00	2RDR
Average %D: 0.0600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2544100	0.2500000	3589600.0	0.001	1.76	20.00	2RDR
(2)	0.2760800	0.2500000	6415800.0	0.001	10.43	20.00	2RDR
(3)	0.2297800	0.2500000	9286000.0	0.001	-8.09	20.00	2RDR
(4)	0.2173500	0.2500000	4629700.0	0.001	-13.06	20.00	2RDR
(5)	0.2262100	0.2500000	4402700.0	0.001	-9.52	20.00	2RDR
Average %D: -3.680							
Aroclor-1260	0.2510200	0.2500000	6927700.0	0.001	0.41	20.00	2RDR
(2)	0.2424300	0.2500000	7863300.0	0.001	-3.03	20.00	2RDR
(3)	0.2599300	0.2500000	5868300.0	0.001	3.97	20.00	2RDR
(4)	0.2698500	0.2500000	5981500.0	0.001	7.94	20.00	2RDR
(5)	0.2513600	0.2500000	5395400.0	0.001	0.54	20.00	2RDR
Average %D: 1.9600							
Decachlorobiphenyl	5.18e-003	5.e-003	97920000	0.001	3.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240360000	0.001	11.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0847

Lab File ID: 7EK236 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1025000	1.0000000	4465100.0	0.001	10.25	20.00	2RDR	
(2)	1.2547000	1.0000000	8283200.0	0.001	25.47	20.00	2RDR	<-
(3)	1.0669000	1.0000000	7997200.0	0.001	6.69	20.00	2RDR	
(4)	1.0329000	1.0000000	9754100.0	0.001	3.29	20.00	2RDR	
(5)	1.1050000	1.0000000	6246800.0	0.001	10.50	20.00	2RDR	
Average %D: 11.240								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1013

Lab File ID: 7EK238 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0995000	1.0000000	3833900.0	0.001	9.95	20.00	2RDR
(2)	1.1047000	1.0000000	6329800.0	0.001	10.47	20.00	2RDR
(3)	1.0800000	1.0000000	11191000	0.001	8.00	20.00	2RDR
(4)	1.0606000	1.0000000	5837800.0	0.001	6.06	20.00	2RDR
(5)	1.0848000	1.0000000	5331000.0	0.001	8.48	20.00	2RDR
Average %D: 8.5900							
Aroclor-1260	1.0736000	1.0000000	7544000.0	0.001	7.36	20.00	2RDR
(2)	1.0943000	1.0000000	9313100.0	0.001	9.43	20.00	2RDR
(3)	1.0540000	1.0000000	6271700.0	0.001	5.40	20.00	2RDR
(4)	1.0568000	1.0000000	6036500.0	0.001	5.68	20.00	2RDR
(5)	0.9935900	1.0000000	5657900.0	0.001	-0.64	20.00	2RDR
Average %D: 5.4500							
Decachlorobiphenyl	2.13e-002	2.e-002	102550000	0.001	6.50	20.00	2RDR
Tetrachloro-m-xylene	2.2e-002	2.e-002	239420000	0.001	10.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1131

Lab File ID: 7EK241 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0478000	1.0000000	4243500.0	0.001	4.78	20.00	2RDR
(2)	1.0904000	1.0000000	7198600.0	0.001	9.04	20.00	2RDR
(3)	1.0569000	1.0000000	7922100.0	0.001	5.69	20.00	2RDR
(4)	1.0231000	1.0000000	9659400.0	0.001	2.31	20.00	2RDR
(5)	1.0337000	1.0000000	5831800.0	0.001	3.37	20.00	2RDR
Average %D: 5.0400							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1708

Lab File ID: 7EK253 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2912000	0.2500000	4103300.0	0.001	16.48	20.00	2RDR
(2)	0.2906900	0.2500000	6751600.0	0.001	16.28	20.00	2RDR
(3)	0.2694200	0.2500000	10950000	0.001	7.77	20.00	2RDR
(4)	0.2597000	0.2500000	5570400.0	0.001	3.88	20.00	2RDR
(5)	0.2824000	0.2500000	5509900.0	0.001	12.96	20.00	2RDR
Average %D: 11.480							
Aroclor-1260	0.2727300	0.2500000	7541600.0	0.001	9.09	20.00	2RDR
(2)	0.2552900	0.2500000	8306800.0	0.001	2.12	20.00	2RDR
(3)	0.2571400	0.2500000	5801100.0	0.001	2.86	20.00	2RDR
(4)	0.2689800	0.2500000	5961400.0	0.001	7.59	20.00	2RDR
(5)	0.2378100	0.2500000	5082100.0	0.001	-4.88	20.00	2RDR
Average %D: 3.3600							
Decachlorobiphenyl	5.4e-003	5.e-003	102180000	0.001	8.00	20.00	2RDR
Tetrachloro-m-xylene	5.83e-003	5.e-003	250790000	0.001	16.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1826

Lab File ID: 7EK256 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0724000	1.0000000	4343000.0	0.001	7.24	20.00	2RDR
(2)	1.1270000	1.0000000	7440100.0	0.001	12.70	20.00	2RDR
(3)	1.0642000	1.0000000	7976600.0	0.001	6.42	20.00	2RDR
(4)	1.0309000	1.0000000	9734900.0	0.001	3.09	20.00	2RDR
(5)	1.0175000	1.0000000	5737700.0	0.001	1.75	20.00	2RDR
Average %D: 6.2400							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9058400	1.0000000	3163500.0	0.001	-9.42	20.00	2RDR
(2)	0.9615300	1.0000000	5518400.0	0.001	-3.85	20.00	2RDR
(3)	0.9165100	1.0000000	9493900.0	0.001	-8.35	20.00	2RDR
(4)	0.8846600	1.0000000	4861600.0	0.001	-11.53	20.00	2RDR
(5)	0.8891400	1.0000000	4367000.0	0.001	-11.09	20.00	2RDR
Average %D: -8.850							
Aroclor-1260	0.8749500	1.0000000	6141100.0	0.001	-12.50	20.00	2RDR
(2)	0.8751100	1.0000000	7421600.0	0.001	-12.49	20.00	2RDR
(3)	0.8894400	1.0000000	5274200.0	0.001	-11.06	20.00	2RDR
(4)	0.8509100	1.0000000	4847900.0	0.001	-14.91	20.00	2RDR
(5)	0.8255200	1.0000000	4678700.0	0.001	-17.45	20.00	2RDR
Average %D: -13.68							
Decachlorobiphenyl	1.67e-002	2.e-002	80222000	0.001	-16.50	20.00	2RDR
Tetrachloro-m-xylene	2.04e-002	2.e-002	221250000	0.001	2.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0083000	1.0000000	4083600.0	0.001	0.83	20.00	2RDR
(2)	1.0245000	1.0000000	6763100.0	0.001	2.45	20.00	2RDR
(3)	1.0096000	1.0000000	7563900.0	0.001	0.96	20.00	2RDR
(4)	0.9815300	1.0000000	9259100.0	0.001	-1.85	20.00	2RDR
(5)	0.9994900	1.0000000	5632500.0	0.001	-0.05	20.00	2RDR
Average %D: 0.4700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1706000	1.0000000	4079800.0	0.001	17.06	20.00	2RDR
(2)	1.1369000	1.0000000	6512100.0	0.001	13.69	20.00	2RDR
(3)	1.1138000	1.0000000	11541000	0.001	11.38	20.00	2RDR
(4)	1.0938000	1.0000000	6022100.0	0.001	9.38	20.00	2RDR
(5)	1.1141000	1.0000000	5475500.0	0.001	11.41	20.00	2RDR
Average %D: 12.590							
Aroclor-1260	1.0916000	1.0000000	7671100.0	0.001	9.16	20.00	2RDR
(2)	1.1020000	1.0000000	9379200.0	0.001	10.20	20.00	2RDR
(3)	1.0642000	1.0000000	6333800.0	0.001	6.42	20.00	2RDR
(4)	1.0908000	1.0000000	6232900.0	0.001	9.08	20.00	2RDR
(5)	0.9916600	1.0000000	5646700.0	0.001	-0.83	20.00	2RDR
Average %D: 6.8100							
Decachlorobiphenyl	2.12e-002	2.e-002	101710000	0.001	6.00	20.00	2RDR
Tetrachloro-m-xylene	2.35e-002	2.e-002	256000000	0.001	17.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2707800	0.2500000	3818200.0	0.001	8.31	20.00	2RDR	
(2)	0.2801300	0.2500000	6509000.0	0.001	12.05	20.00	2RDR	
(3)	0.2409300	0.2500000	9753800.0	0.001	-3.63	20.00	2RDR	
(4)	0.2331300	0.2500000	4980200.0	0.001	-6.75	20.00	2RDR	
(5)	0.2566300	0.2500000	5002200.0	0.001	2.65	20.00	2RDR	
Average %D: 2.5200								
Aroclor-1260	0.2464700	0.2500000	6799000.0	0.001	-1.41	20.00	2RDR	
(2)	0.2129700	0.2500000	6847800.0	0.001	-14.81	20.00	2RDR	
(3)	0.2242100	0.2500000	5006000.0	0.001	-10.32	20.00	2RDR	
(4)	0.2426500	0.2500000	5354100.0	0.001	-2.94	20.00	2RDR	
(5)	0.1820400	0.2500000	3793600.0	0.001	-27.18	20.00	2RDR	<-
Average %D: -11.32								
Decachlorobiphenyl	5.14e-003	5.e-003	97202000	0.001	2.80	20.00	2RDR	
Tetrachloro-m-xylene	5.93e-003	5.e-003	255140000	0.001	18.60	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.0127000	1.0000000	4101100.0	0.001	1.27	20.00	2RDR	
(2)	1.1213000	1.0000000	7402900.0	0.001	12.13	20.00	2RDR	
(3)	0.9739600	1.0000000	7294500.0	0.001	-2.60	20.00	2RDR	
(4)	0.8702900	1.0000000	8186400.0	0.001	-12.97	20.00	2RDR	
(5)	0.7957600	1.0000000	4446700.0	0.001	-20.42	20.00	2RDR	<-
Average %D: -4.520								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1701000	1.0000000	4077900.0	0.001	17.01	20.00	2RDR	
(2)	1.0974000	1.0000000	6288500.0	0.001	9.74	20.00	2RDR	
(3)	1.0342000	1.0000000	10716000	0.001	3.42	20.00	2RDR	
(4)	1.0089000	1.0000000	5550800.0	0.001	0.89	20.00	2RDR	
(5)	1.0223000	1.0000000	5023300.0	0.001	2.23	20.00	2RDR	
Average %D: 6.6600								
Aroclor-1260	1.0078000	1.0000000	7079200.0	0.001	0.78	20.00	2RDR	
(2)	1.0114000	1.0000000	8597600.0	0.001	1.14	20.00	2RDR	
(3)	1.1320000	1.0000000	6744800.0	0.001	13.20	20.00	2RDR	
(4)	1.3145000	1.0000000	7524800.0	0.001	31.45	20.00	2RDR	<-
(5)	0.9417800	1.0000000	5355900.0	0.001	-5.82	20.00	2RDR	
Average %D: 8.1500								
Decachlorobiphenyl	1.94e-002	2.e-002	93143000	0.001	-3.00	20.00	2RDR	
Tetrachloro-m-xylene	2.5e-002	2.e-002	271830000	0.001	25.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1228000	1.0000000	4547300.0	0.001	12.28	20.00	2RDR
(2)	1.0991000	1.0000000	7256000.0	0.001	9.91	20.00	2RDR
(3)	1.0687000	1.0000000	8011100.0	0.001	6.87	20.00	2RDR
(4)	1.0489000	1.0000000	9908600.0	0.001	4.89	20.00	2RDR
(5)	1.1383000	1.0000000	6440700.0	0.001	13.83	20.00	2RDR
Average %D: 9.5600							

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99509-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99509-1 Lab File ID: 7EJ800

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/20/11

Date Analyzed (1): 10/24/11 Date Analyzed (2): 10/24/11

Time Analyzed (1): 1711 Time Analyzed (2): 1711

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99509-LCS	WG99509-2	7EJ801	10/24/11	10/24/11
02	WG99509-LCSD	WG99509-3	7EJ802	10/24/11	10/24/11
03	DSY-SD-RB14-101311	SE6841-25	7EJ803	10/24/11	10/24/11
04					
05					
06					
07					
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11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99509-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EJ800.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	0.00	%					
Decachlorobiphenyl		49.0	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99509-2
LCSD ID: WG99509-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	5.00	4.17	83.4	4.42	88.4	ug/L	6	30	65-112
Aroclor-1260	5.00	4.20	84.0	4.20	84.0	ug/L	7	30	62-104
Tetrachloro-M-Xylene			77.5		90.3				62-111
Decachlorobiphenyl			92.8		91.5				44-135

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99756-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99756-1 Lab File ID: 7EK195

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/25/11

Date Analyzed (1): 11/06/11 Date Analyzed (2): 11/06/11

Time Analyzed (1): 1501 Time Analyzed (2): 1501

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99756-LCS	WG99756-2	7EK196	11/06/11	11/06/11
02	WG99756-LCSD	WG99756-3	7EK197	11/06/11	11/06/11
03	DSY-SD-AA13-2448MS	WG99756-4	7EK198	11/06/11	11/06/11
04	DSY-SD-AA13-2448MSD	WG99756-5	7EK199	11/06/11	11/06/11
05	DSY-SD-AA09-0012	SE6841-1	7EK229	11/07/11	11/07/11
06	DSY-SD-AA09-1224	SE6841-2	7EK230	11/07/11	11/07/11
07	DSY-SD-AA09-2448	SE6841-3	7EK231	11/07/11	11/07/11
08	DSY-SD-AA13-0012	SE6841-4	7EK246	11/07/11	11/07/11
09	DSY-SD-AA13-1224	SE6841-5	7EK247	11/07/11	11/07/11
10	DSY-SD-AA13-2448	SE6841-6	7EK248	11/07/11	11/07/11
11	DSY-SD-AA17-0012	SE6841-7	7EK249	11/07/11	11/07/11
12	DSY-SD-AA17-1224	SE6841-8	7EK250	11/07/11	11/07/11
13	DSY-SD-AA17-2448	SE6841-9	7EK251	11/07/11	11/07/11
14	DSY-SD-AA21-0012	SE6841-10	7EK257	11/07/11	11/07/11
15	DSY-SD-AA21-1224	SE6841-11	7EK258	11/07/11	11/07/11
16	DSY-SD-AA21-2448	SE6841-12	7EK259	11/07/11	11/07/11
17	DSY-SD-DUP34-101311	SE6841-13	7EK260	11/07/11	11/07/11
18	DSY-SD-AA24-0012	SE6841-14	7EK261	11/07/11	11/07/11
19	DSY-SD-AA24-2448	SE6841-16	7EK263	11/07/11	11/07/11
20	DSY-SD-AA26-0012	SE6841-17	7EK264	11/07/11	11/07/11
21	DSY-SD-AA26-2448	SE6841-19	7EK266	11/07/11	11/07/11
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin Analytical Services A0000175

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99756-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK195.D

Sample Date:
Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		84.7	%					
Decachlorobiphenyl		87.1	%					

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99756-2
LCSD ID: WG99756-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	135.	80.8	119.	71.2	ug/Kgdrywt	12	50	53-123
Aroclor-1260	167.	146.	87.4	137.	82.0	ug/Kgdrywt	6	50	58-120
Tetrachloro-M-Xylene			87.1		67.9				56-115
Decachlorobiphenyl			90.7		87.7				59-124

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Cert No E87604

MS/MSD Recovery Report

MS ID: WG99756-4
MSD ID: WG99756-5
Sample ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project:
SDG: DSY-24

Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756
Report Date: 06-DEC-11

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	485.	478.	ug/Kgdrywt	U24.	390	310	80.2	63.9	24	30	53-123
Aroclor-1260	485.	478.	ug/Kgdrywt	U24.	460	340	94.7	71.9	29	30	58-120
Tetrachloro-M-Xylene							81.4	67.2			56-115
Decachlorobiphenyl							83.4	64.9			59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99856-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99856-1 Lab File ID: 7EK101

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 11/03/11 Date Analyzed (2): 11/03/11

Time Analyzed (1): 1300 Time Analyzed (2): 1300

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99856-LCS	WG99856-2	7EK102	11/03/11	11/03/11
02	WG99856-LCSD	WG99856-3	7EK103	11/03/11	11/03/11
03	DSY-SD-AA28-0016	SE6841-20	7EK117	11/03/11	11/03/11
04	DSY-SD-DUP35-101311	SE6841-21	7EK118	11/03/11	11/03/11
05	DSY-SD-AA30-0012	SE6841-22	7EK119	11/03/11	11/03/11
06	DSY-SD-AA30-1224	SE6841-23	7EK120	11/03/11	11/03/11
07	DSY-SD-G30-0018	SE6841-24	7EK126	11/03/11	11/03/11
08					
09					
10					
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23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin Analytical Services A0000176

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99856-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK101.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		91.6	%					
Decachlorobiphenyl		95.5	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99856-2
LCSD ID: WG99856-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	84.4	50.5*	155.	92.8	ug/Kgdrywt	59*	50	53-123
Aroclor-1260	167.	105.	62.9	151.	90.4	ug/Kgdrywt	36	50	58-120
Tetrachloro-M-Xylene			46.8*		95.2				56-115
Decachlorobiphenyl			79.9		98.5				59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100719-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG100719-1 Lab File ID: 7EK444

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 11/09/11

Date Analyzed (1): 11/11/11 Date Analyzed (2): 11/11/11

Time Analyzed (1): 1823 Time Analyzed (2): 1823

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG100719-LCS	WG100719-2	7EK445	11/11/11	11/11/11
02	DSY-SD-AA24-1224	SE6841-15	7EK457	11/11/11	11/11/11
03	DSY-SD-AA26-1224	SE6841-18	7EK458	11/12/11	11/12/11
04					
05					
06					
07					
08					
09					
10					
11					
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22					
23					
24					

COMMENTS:

FORM IVPCB

Katahdin Analytical Services A0000177

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG100719-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK444.D

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene	*	122.	%					
Decachlorobiphenyl	*	133.	%					

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ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG100719-2
Client ID: LCS
Project:
SDG: DSY-24

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Aroclor-1016	106.	167.	177.	ug/Kgdrywt	53-123
Aroclor-1260	112.	167.	188.	ug/Kgdrywt	58-120
Tetrachloro-M-Xylene	* 116.				56-115
Decachlorobiphenyl	* 138.				59-124

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-19 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	336		
Aroclor-1254	2	6.46	6.40	6.54	514		
	3	6.83	6.76	6.90	1030		
COLUMN 1	4	7.70	7.60	7.74	972		
	5	8.12	8.06	8.20	786	728	
	1	6.36	6.29	6.43	519		
	2	7.32	7.25	7.39	610		
	3	7.61	7.53	7.67	775		
COLUMN 2	4	8.42	8.35	8.49	741		
	5	10.12	10.05	10.19	1010	732	0.5
	1	7.24	7.17	7.31	654		
Aroclor-1260	2	7.70	7.60	7.74	548		
	3	8.12	8.08	8.22	618		
COLUMN 1	4	8.31	8.24	8.38	184		
	5	10.22	10.13	10.27	180	437	
	1	8.79	8.73	8.87	495		
	2	9.23	9.18	9.32	549		
	3	10.12	10.06	10.20	966		
COLUMN 2	4	11.14	11.08	11.22	290		
	5	12.97	12.94	13.08	375	535	20.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A28-0016

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-20 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	190		
Aroclor-1254	2	6.47	6.41	6.55	294		
	3	6.83	6.77	6.91	379		
COLUMN 1	4	7.67	7.61	7.75	346		
	5	8.13	8.08	8.22	376	317	
	1	6.37	6.30	6.44	263		
	2	7.33	7.26	7.40	305		
	3	7.62	7.55	7.69	343		
COLUMN 2	4	8.43	8.37	8.51	406		
	5	10.13	10.07	10.21	434	350 ✓	9.9
	1	7.25	7.18	7.32	202		
Aroclor-1260	2	7.67	7.61	7.75	202		
	3	8.13	8.08	8.22	293		
COLUMN 1	4	8.32	8.26	8.40	85.6		
	5	10.15	10.10	10.24	95.4	176	
	1	8.80	8.74	8.88	258		
	2	9.24	9.18	9.32	238		
	3	10.13	10.07	10.21	410		
COLUMN 2	4	11.15	11.09	11.23	175		
	5	12.98	12.93	13.07	123	241 ✓	31.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-A
A30-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-22 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	687		
Aroclor-1254	2	6.47	6.41	6.55	836		
	3	6.83	6.77	6.91	838		
COLUMN 1	4	7.67	7.61	7.75	824		
	5	8.13	8.08	8.22	952	828	
	1	6.37	6.30	6.44	1030		
	2	7.33	7.26	7.40	1130		
	3	7.61	7.55	7.69	1110		
COLUMN 2	4	8.43	8.37	8.51	1160		
	5	10.13	10.07	10.21	1190	1120	30.0
	1	7.25	7.18	7.32	391		
Aroclor-1260	2	7.67	7.61	7.75	464		
	3	8.13	8.08	8.22	756		
COLUMN 1	4	8.33	8.26	8.40	13.3	~~437~~	
	5	10.17	10.10	10.24	5.39	~~326~~	
	1	8.80	8.74	8.88	614		
	2	9.24	9.18	9.32	564		
	3	10.13	10.07	10.21	1130		
COLUMN 2	4	11.11	11.09	11.23	814	~~780~~	56.4
	5	13.00	12.93	13.07	7.03	~~626~~	~~63.~~0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
A09-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-3 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	775		
Aroclor-1254	2	6.47	6.41	6.55	1050		
	3	6.83	6.78	6.92	754		
COLUMN 1	4	7.67	7.61	7.75	981		
	5	8.14	8.09	8.23	1140	941	
	1	6.36	6.30	6.44	1230		
	2	7.33	7.26	7.40	1340		
	3	7.61	7.55	7.69	1340		
COLUMN 2	4	8.43	8.37	8.51	1320		
	5	10.12	10.07	10.21	1440	1330	34.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A17-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-7 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	96.7		
Aroclor-1254	2	6.47	6.40	6.54	117		
	3	6.83	6.76	6.90	144		
COLUMN 1	4	7.67	7.60	7.74	442		
	5	8.14	8.06	8.20	401	240	
	1	6.36	6.29	6.43	121		
	2	7.32	7.25	7.39	95.4		
	3	7.61	7.53	7.67	104		
COLUMN 2	4	8.43	8.35	8.49	73.3		
	5	10.12	10.05	10.19	342	147	48.1
	1	7.24	7.17	7.31	231		
Aroclor-1260	2	7.67	7.60	7.74	266		
	3	8.14	8.08	8.22	310		
COLUMN 1	4	8.32	8.24	8.38	300		
	5	10.20	10.13	10.27	367	295	
	1	8.80	8.73	8.87	244		
	2	9.24	9.18	9.32	288		
	3	10.12	10.06	10.20	318		
COLUMN 2	4	11.14	11.08	11.22	331		
	5	12.98	12.94	13.08	449	326	10.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A21-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-12 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.13	6.07	6.21	107		
Aroclor-1254	2	6.46	6.40	6.54	180		
	3	6.82	6.76	6.90	298		
COLUMN 1	4	7.65	7.60	7.74	232		
	5	8.13	8.06	8.20	268	217	
	1	6.36	6.29	6.43	131		
	2	7.32	7.25	7.39	156		
	3	7.60	7.53	7.67	144		
COLUMN 2	4	8.42	8.35	8.49	156		
	5	10.10	10.05	10.19	340	185	15.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A
A24-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-16 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	32.5		
Aroclor-1254	2	6.46	6.40	6.54	138		
	3	6.82	6.76	6.90	213	186	
COLUMN 1	4	7.65	7.60	7.74	186	~~186.2~~	
	5	8.12	8.06	8.20	208	~~156~~	
	1	6.36	6.29	6.43	101		
	2	7.32	7.25	7.39	122		
	3	7.60	7.53	7.67	123		
COLUMN 2	4	8.42	8.35	8.49	125		31.8
	5	10.11	10.05	10.19	203	135	~~14.4~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-17 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	80.1		
Aroclor-1254	2	6.47	6.40	6.54	102		
	3	6.82	6.76	6.90	97.6		
COLUMN 1	4	7.66	7.60	7.74	91.5		
	5	8.12	8.06	8.20	114	97.1	
	1	6.36	6.29	6.43	57.2		
	2	7.32	7.25	7.39	72.9		
	3	7.60	7.53	7.67	64.2		
COLUMN 2	4	8.42	8.35	8.49	68.5		
	5	10.11	10.05	10.19	92.2	71.0	31.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-18 Date(s) Analyzed: 11/12/11 11/12/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.10	6.03	6.17	364		
Aroclor-1254	2	6.42	6.36	6.50	516		
	3	6.78	6.72	6.86	728		
COLUMN 1	4	7.61	7.55	7.69	633		
	5	8.10	8.01	8.15	1610	771	
	1	6.32	6.25	6.39	558		
	2	7.27	7.21	7.35	611		
	3	7.55	7.50	7.64	702		
COLUMN 2	4	8.36	8.32	8.46	698		
	5	10.03	10.01	10.15	2220	958	21.6
	1	7.19	7.15	7.29	402		
Aroclor-1260	2	7.65	7.61	7.75	492		
	3	8.25	8.23	8.37	109		
COLUMN 1	4	8.81	8.70	8.84	49.2		
	5	10.24	10.13	10.27	64.0	223	
	1	8.73	8.66	8.80	412		
	2	9.16	9.10	9.24	436		
	3	10.04	9.97	10.11	11.3		
COLUMN 2	4	11.05	10.99	11.13	264	322	36.3
	5	12.89	12.82	12.96	177	~~260~~	~~15.3~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A30-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-23 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	85.4		
Aroclor-1254	2	6.47	6.41	6.55	138		
	3	6.83	6.77	6.91	178		
COLUMN 1	4	7.67	7.61	7.75	169		
	5	8.13	8.08	8.22	177	149	
	1	6.37	6.30	6.44	110		
	2	7.33	7.26	7.40	136		
	3	7.62	7.55	7.69	164		
COLUMN 2	4	8.43	8.37	8.51	193		
	5	10.13	10.07	10.21	200	161	7.7
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-G30-0018

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-24 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	146		
Aroclor-1254	2	6.48	6.41	6.55	246		
	3	6.83	6.77	6.91	322		
COLUMN 1	4	7.67	7.61	7.75	296		
	5	8.13	8.08	8.22	298	262	
	1	6.37	6.30	6.44	188		
	2	7.33	7.26	7.40	248		
	3	7.62	7.55	7.69	261		
COLUMN 2	4	8.44	8.37	8.51	259		
	5	10.13	10.07	10.21	343	260	0.8
	1	7.25	7.18	7.32	214		
Aroclor-1260	2	7.67	7.61	7.75	179		
	3	8.13	8.08	8.22	231		
COLUMN 1	4	8.32	8.26	8.40	97.8		
	5	10.14	10.10	10.24	111	166	
	1	8.81	8.74	8.88	179		
	2	9.24	9.18	9.32	220		
	3	10.13	10.07	10.21	322		
COLUMN 2	4	11.16	11.09	11.23	7.08	~~222~~	28.9
	5	12.98	12.93	13.07	168	~~179~~	~~7.5~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P34-101311

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-13 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	115		
Aroclor-1254	2	6.46	6.40	6.54	188		
	3	6.82	6.76	6.90	290		
COLUMN 1	4	7.66	7.60	7.74	230		
	5	8.12	8.06	8.20	270	219	
	1	6.36	6.29	6.43	163		
	2	7.32	7.25	7.39	185		
	3	7.60	7.53	7.67	185		
COLUMN 2	4	8.42	8.35	8.49	180		
	5	10.11	10.05	10.19	276	198	10.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P35-101311

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-21 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	250		
Aroclor-1254	2	6.47	6.41	6.55	371		
	3	6.83	6.77	6.91	424		
COLUMN 1	4	7.67	7.61	7.75	405		
	5	8.14	8.08	8.22	493	389	
	1	6.37	6.30	6.44	353		
	2	7.33	7.26	7.40	399		
	3	7.62	7.55	7.69	446		
COLUMN 2	4	8.43	8.37	8.51	456		
	5	10.12	10.07	10.21	699	470	18.8
	1	7.25	7.18	7.32	211		
Aroclor-1260	2	7.67	7.61	7.75	234		
	3	8.14	8.08	8.22	386		
COLUMN 1	4	8.32	8.26	8.40	81.1		
	5	10.15	10.10	10.24	97.3	202	
	1	8.80	8.74	8.88	285		
	2	9.24	9.18	9.32	282		
	3	10.14	10.07	10.21	8.96		
COLUMN 2	4	11.14	11.09	11.23	153	210	3.98
	5	12.99	12.93	13.07	122	~~170~~	~~17.2~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK01A Nov 01, 2011 11:54

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9602.00	96.0
CALCIUM	10000.0	9512.00	95.1
IRON	10000.0	9685.00	96.9
LEAD	400.0	392.40	98.1
MAGNESIUM	10000.0	9694.00	96.9
ZINC	400.0	389.40	97.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 12:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12210.00	97.7
CALCIUM	12500.0	12210.00	97.7
IRON	12500.0	12250.00	98.0
LEAD	500.0	479.20	95.8
MAGNESIUM	12500.0	12180.00	97.4
ZINC	500.0	478.20	95.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 13:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12590.00	100.7
IRON	12500.0	12660.00	101.3
LEAD	500.0	495.30	99.1
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	493.30	98.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 14:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12080.00	96.6
CALCIUM	12500.0	12140.00	97.1
IRON	12500.0	12200.00	97.6
LEAD	500.0	481.30	96.3
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	475.80	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12850.00	102.8
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12880.00	103.0
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.60	100.7
MAGNESIUM	12500.0	12790.00	102.3
ZINC	500.0	501.20	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 16:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12780.00	102.2
LEAD	500.0	503.30	100.7
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	498.50	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 17:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12760.00	102.1
IRON	12500.0	12970.00	103.8
LEAD	500.0	509.20	101.8
MAGNESIUM	12500.0	13000.00	104.0
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 18:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
CALCIUM	12500.0	12630.00	101.0
IRON	12500.0	12800.00	102.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12940.00	103.5
ZINC	500.0	498.30	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 19:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12760.00	102.1
CALCIUM	12500.0	12660.00	101.3
IRON	12500.0	12920.00	103.4
LEAD	500.0	505.00	101.0
MAGNESIUM	12500.0	12960.00	103.7
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 20:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12340.00	98.7
CALCIUM	12500.0	12160.00	97.3
IRON	12500.0	12550.00	100.4
LEAD	500.0	487.00	97.4
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	476.70	95.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 21:18

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13000.00	104.0
CALCIUM	12500.0	12810.00	102.5
IRON	12500.0	13260.00	106.1
LEAD	500.0	510.20	102.0
MAGNESIUM	12500.0	13080.00	104.6
ZINC	500.0	500.40	100.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 22:13

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12380.00	99.0
CALCIUM	12500.0	12240.00	97.9
IRON	12500.0	12620.00	101.0
LEAD	500.0	492.20	98.4
MAGNESIUM	12500.0	12630.00	101.0
ZINC	500.0	482.00	96.4

SAMPLE: CCV

File: IBK01A Nov 01, 2011 23:07

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12970.00	103.8
CALCIUM	12500.0	12710.00	101.7
IRON	12500.0	13240.00	105.9
LEAD	500.0	510.10	102.0
MAGNESIUM	12500.0	13090.00	104.7
ZINC	500.0	500.20	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 02, 2011 0:01

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	13130.00	105.0
LEAD	500.0	491.20	98.2
MAGNESIUM	12500.0	12550.00	100.4
ZINC	500.0	480.90	96.2

SAMPLE: CCV

File: IBK01A Nov 02, 2011 0:55

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12430.00	99.4
CALCIUM	12500.0	12270.00	98.2
IRON	12500.0	12700.00	101.6
LEAD	500.0	490.90	98.2
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	480.40	96.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 02, 2011 1:50

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12430.00	99.4
CALCIUM	12500.0	12390.00	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	489.80	98.0
MAGNESIUM	12500.0	12580.00	100.6
ZINC	500.0	479.20	95.8

SAMPLE: CCV

File: IBK01A Nov 02, 2011 2:45

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12620.00	101.0
CALCIUM	12500.0	12520.00	100.2
IRON	12500.0	12900.00	103.2
LEAD	500.0	493.10	98.6
MAGNESIUM	12500.0	12650.00	101.2
ZINC	500.0	483.60	96.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK02A Nov 02, 2011 15:33

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9867.00	98.7
CALCIUM	10000.0	9826.00	98.3
COPPER	400.0	396.20	99.0
IRON	10000.0	9940.00	99.4
LEAD	400.0	408.50	102.1
MAGNESIUM	10000.0	10100.00	101.0
ZINC	400.0	406.70	101.7

SAMPLE: CCV

File: IBK02A Nov 02, 2011 15:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12750.00	102.0
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	497.00	99.4
IRON	12500.0	12790.00	102.3
LEAD	500.0	506.30	101.3
MAGNESIUM	12500.0	12870.00	103.0
ZINC	500.0	503.80	100.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 16:49

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	12740.00	101.9
COPPER	500.0	495.60	99.1
IRON	12500.0	12820.00	102.6
LEAD	500.0	508.50	101.7
MAGNESIUM	12500.0	12890.00	103.1
ZINC	500.0	501.90	100.4

SAMPLE: CCV

File: IBK02A Nov 02, 2011 17:44

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12620.00	101.0
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	499.10	99.8
IRON	12500.0	12710.00	101.7
LEAD	500.0	495.00	99.0
MAGNESIUM	12500.0	12550.00	100.4
ZINC	500.0	494.70	98.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 18:38

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12560.00	100.5
CALCIUM	12500.0	12640.00	101.1
COPPER	500.0	495.30	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	500.10	100.0
MAGNESIUM	12500.0	12730.00	101.8
ZINC	500.0	497.40	99.5

SAMPLE: CCV

File: IBK02A Nov 02, 2011 19:31

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13070.00	104.6
CALCIUM	12500.0	13010.00	104.1
COPPER	500.0	498.10	99.6
IRON	12500.0	13250.00	106.0
LEAD	500.0	499.40	99.9
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	495.90	99.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 20:25

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12520.00	100.2
CALCIUM	12500.0	12530.00	100.2
COPPER	500.0	494.20	98.8
IRON	12500.0	12600.00	100.8
LEAD	500.0	501.80	100.4
MAGNESIUM	12500.0	12760.00	102.1
ZINC	500.0	496.50	99.3

SAMPLE: CCV

File: IBK02A Nov 02, 2011 21:20

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	496.30	99.3
IRON	12500.0	12850.00	102.8
LEAD	500.0	505.50	101.1
MAGNESIUM	12500.0	12800.00	102.4
ZINC	500.0	498.80	99.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 22:14

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12770.00	102.2
CALCIUM	12500.0	12850.00	102.8
COPPER	500.0	501.70	100.3
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.80	101.0
MAGNESIUM	12500.0	12780.00	102.2
ZINC	500.0	502.80	100.6

SAMPLE: CCV

File: IBK02A Nov 02, 2011 23:08

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12710.00	101.7
CALCIUM	12500.0	12790.00	102.3
COPPER	500.0	500.00	100.0
IRON	12500.0	12820.00	102.6
LEAD	500.0	499.30	99.9
MAGNESIUM	12500.0	12620.00	101.0
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 03, 2011 0:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12820.00	102.6
COPPER	500.0	491.80	98.4
IRON	12500.0	12710.00	101.7
LEAD	500.0	500.80	100.2
MAGNESIUM	12500.0	12650.00	101.2
ZINC	500.0	499.40	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK03B Nov 03, 2011 18:00

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9825.00	98.3
CALCIUM	10000.0	9745.00	97.5
COPPER	400.0	397.40	99.3
IRON	10000.0	9862.00	98.6
MAGNESIUM	10000.0	10100.00	101.0

SAMPLE: CCV

File: IBK03B Nov 03, 2011 18:23

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12480.00	99.8
CALCIUM	12500.0	12570.00	100.6
COPPER	500.0	495.10	99.0
IRON	12500.0	12390.00	99.1
MAGNESIUM	12500.0	12820.00	102.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 19:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12540.00	100.3
CALCIUM	12500.0	12540.00	100.3
COPPER	500.0	492.50	98.5
IRON	12500.0	12370.00	99.0
MAGNESIUM	12500.0	12890.00	103.1

SAMPLE: CCV

File: IBK03B Nov 03, 2011 20:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12640.00	101.1
CALCIUM	12500.0	12640.00	101.1
COPPER	500.0	494.90	99.0
IRON	12500.0	12450.00	99.6
MAGNESIUM	12500.0	12970.00	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 21:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12580.00	100.6
COPPER	500.0	492.10	98.4
IRON	12500.0	12450.00	99.6
MAGNESIUM	12500.0	12910.00	103.3

SAMPLE: CCV

File: IBK03B Nov 03, 2011 21:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12560.00	100.5
CALCIUM	12500.0	12610.00	100.9
COPPER	500.0	496.80	99.4
IRON	12500.0	12360.00	98.9
MAGNESIUM	12500.0	12960.00	103.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 22:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12640.00	101.1
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	493.20	98.6
IRON	12500.0	12490.00	99.9
MAGNESIUM	12500.0	13010.00	104.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK01A Nov 01, 2011 12:03

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	301.90	100.6
CALCIUM	100.0	101.10	101.1
IRON	100.0	98.83	98.8
LEAD	5.0	5.41	108.2
MAGNESIUM	100.0	104.10	104.1
ZINC	20.0	20.26	101.3

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK02A Nov 02, 2011 15:42

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	310.60	103.5
CALCIUM	100.0	106.30	106.3
COPPER	25.0	26.92	107.7
IRON	100.0	103.20	103.2
LEAD	5.0	5.43	108.6
MAGNESIUM	100.0	110.20	110.2
ZINC	20.0	21.12	105.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK03B Nov 03, 2011 18:09

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	310.10	103.4
CALCIUM	100.0	116.50	116.5
COPPER	25.0	26.51	106.0
IRON	100.0	103.10	103.1
MAGNESIUM	100.0	116.60	116.6

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK01A Nov 01, 2011 11:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.241	J

SAMPLE: CCB

File: IBK01A Nov 01, 2011 12:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.030	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 13:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 14:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	6.041	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 16:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 17:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.925	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 18:41

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 19:34

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 20:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.137	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 21:23

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 22:17

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.147	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 23:11

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.881	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 0:05

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 02, 2011 1:00

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.082	J
LEAD	1.330	U
MAGNESIUM	6.335	J
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 1:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.869	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 2:49

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK02A Nov 02, 2011 15:37

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 02, 2011 16:00

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 02, 2011 16:54

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK02A Nov 02, 2011 17:48

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 18:42

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 19:35

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK02A Nov 02, 2011 20:30

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 21:24

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 22:18

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB

File: IBK02A Nov 02, 2011 23:12

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.372	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 03, 2011 0:07

Analyte	Result	C
ALUMINUM	-17.850	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK03B Nov 03, 2011 18:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	-0.869	J
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBK03B Nov 03, 2011 18:27

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBK03B Nov 03, 2011 19:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK03B Nov 03, 2011 20:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB
File: IBK03B Nov 03, 2011 21:09

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB
File: IBK03B Nov 03, 2011 22:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB

File: IBK03B Nov 03, 2011 22:57

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK01ICS2

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services

Sample ID: PBWBK01ICW2

Matrix: WATER

SDG Name: DSY-24

QC Batch ID: BK01ICW2

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U
ZINC	1.775	J

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK02ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBK03ICW3

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK03ICW3

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	10	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK01A Nov 01, 2011 12:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465400	93.1
CALCIUM	500000	436100	87.2
IRON	200000	177400	88.7
LEAD	0	-1	
MAGNESIUM	500000	432700	86.5
ZINC	0	2	

SAMPLE: ICSAB

File: IBK01A Nov 01, 2011 12:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479000	95.8
CALCIUM	500000	435000	87.0
IRON	200000	171700	85.9
LEAD	50	45	90.0
MAGNESIUM	500000	429400	85.9
ZINC	1000	916	91.6

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK02A Nov 02, 2011 15:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	478400	95.7
CALCIUM	500000	439800	88.0
COPPER	0	2	
IRON	200000	178500	89.3
LEAD	0	-2	
MAGNESIUM	500000	438000	87.6
ZINC	0	2	

SAMPLE: ICSAB

File: IBK02A Nov 02, 2011 15:51

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	464800	93.0
CALCIUM	500000	444700	88.9
COPPER	500	512	102.4
IRON	200000	178300	89.1
LEAD	50	42	84.0
MAGNESIUM	500000	434700	86.9
ZINC	1000	922	92.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK03B Nov 03, 2011 18:13

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480600	96.1
CALCIUM	500000	446300	89.3
COPPER	0	-1	
IRON	200000	179900	90.0
MAGNESIUM	500000	430300	86.1

SAMPLE: ICSAB

File: IBK03B Nov 03, 2011 18:18

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479300	95.9
CALCIUM	500000	427600	85.5
COPPER	500	515	103.0
IRON	200000	178900	89.5
MAGNESIUM	500000	438100	87.6

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Client Field ID: DSY-SD-AA13-2448S

Matrix: SOIL

SDG Name: DSY-24

Percent Solids: 34.1

Lab Sample ID: SE6841-006S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	181.1738		126.4915		58.18	94.0		80	120	P
LEAD, TOTAL	142.6119		114.9862		23.27	118.7		80	120	P
ZINC, TOTAL	449.1529		289.4241		116.36	137.3	N	80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448S

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	1016.0000		565.1000		500	90.2		75	125	P
LEAD, TOTAL	950.8000		513.7000		500	87.4		75	125	P
ZINC, TOTAL	1714.0000		1293.0000		500	84.2		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448D

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
COPPER, TOTAL		126.4915		147.1802		15.1		P
LEAD, TOTAL		114.9862		118.2343		2.8		P
ZINC, TOTAL		289.4241		312.0798		7.5		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK01ICS2

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	25.58	102.3	80	120
LEAD	10.00	9.99	99.9	80	120
ZINC	50.00	51.48	103.0	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK02ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.23	96.9	80	120
LEAD	10.00	9.55	95.5	80	120
ZINC	50.00	48.35	96.7	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBK01ICW2

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK01ICW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	106.30	106.3	80	120
ZINC	500.00	599.60	119.9	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBK03ICW3

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK03ICW3

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250.00	264.50	105.8	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services
Matrix: SOIL

Client Field ID: DSY-SD-AA13-2448L
SDG Name: DSY-24
Lab Sample ID: SE6841-006L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
COPPER, TOTAL	565.10		575.00		1.8		P
LEAD, TOTAL	513.70		543.40		5.8		P
ZINC, TOTAL	1293.00		1353.00		4.6		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name: DSY-24**

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Katahdin Analytical Services A0000328

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code: I**

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

Method: P **Prep Date:** 11/01/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBK01ICS2	LCSOBK01ICS2	1	0.1	
PBSBK01ICS2	PBSBK01ICS2	1	0.1	
DSY-SD-AA09-0012	SE6841-001	1.32	0.1	C
DSY-SD-AA09-1224	SE6841-002	1.4	0.1	B
DSY-SD-AA09-2448	SE6841-003	2.06	0.1	B
DSY-SD-AA13-0012	SE6841-004	1.04	0.1	C
DSY-SD-AA13-1224	SE6841-005	1.85	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK01ICW2

Matrix: WATER **SDG Name:** DSY-24

Method: P **Prep Date:** 11/01/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBK01ICW2	LCSWBK01ICW2	0.05	0.05	
PBWBK01ICW2	PBWBK01ICW2	0.05	0.05	
DSY-SD-RB14-101311	SE6841-025	0.05	0.05	A

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

Method: P **Prep Date:** 11/02/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBK02ICS1	LCSOBK02ICS1	1	0.1	
PBSBK02ICS1	PBSBK02ICS1	1	0.1	
DSY-SD-AA13-2448	SE6841-006	1.31	0.1	B
DSY-SD-AA13-2448D	SE6841-006D	1.4	0.1	B
DSY-SD-AA13-2448S	SE6841-006S	1.26	0.1	B
DSY-SD-AA17-0012	SE6841-007	1.08	0.1	A
DSY-SD-AA17-1224	SE6841-008	1.34	0.1	A
DSY-SD-AA17-2448	SE6841-009	1.25	0.1	A
DSY-SD-AA21-0012	SE6841-010	1.31	0.1	C
DSY-SD-AA21-1224	SE6841-011	1.3	0.1	B
DSY-SD-AA21-2448	SE6841-012	1.01	0.1	B
DSY-SD-DUP34-101311	SE6841-013	1.02	0.1	B
DSY-SD-AA24-0012	SE6841-014	1.63	0.1	C
DSY-SD-AA24-1224	SE6841-015	1.23	0.1	A
DSY-SD-AA24-2448	SE6841-016	1.55	0.1	B
DSY-SD-AA26-0012	SE6841-017	1.36	0.1	A
DSY-SD-AA26-1224	SE6841-018	1.35	0.1	A
DSY-SD-AA26-2448	SE6841-019	1.67	0.1	A
DSY-SD-AA28-0016	SE6841-020	1.94	0.1	B
DSY-SD-DUP35-101311	SE6841-021	1.7	0.1	A
DSY-SD-AA30-0012	SE6841-022	1.47	0.1	C
DSY-SD-AA30-1224	SE6841-023	2.25	0.1	A
DSY-SD-G30-0018	SE6841-024	1.7	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK03ICW3

Matrix: WATER **SDG Name:** DSY-24

Method: P **Prep Date:** 11/03/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBK03ICW3	LCSWBK03ICW3	0.05	0.05	
PBWBK03ICW3	PBWBK03ICW3	0.05	0.05	
DSY-SD-RB14-101311	SE6841-025R	0.05	0.05	F

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	11:45 AL	CA	FE PB MG	ZN
Std 1		1	11:50 AL	CA	FE PB MG	ZN
ICV		1	11:54 AL	CA	FE PB MG	ZN
ICB		1	11:59 AL	CA	FE PB MG	ZN
PQL		1	12:03 AL	CA	FE PB MG	ZN
ICSA		1	12:08 AL	CA	FE PB MG	ZN
ICSAB		1	12:12 AL	CA	FE PB MG	ZN
CCV		1	12:17 AL	CA	FE PB MG	ZN
CCB		1	12:21 AL	CA	FE PB MG	ZN
ZZZZZZ		50	12:26			
ZZZZZZ		1	12:30			
ZZZZZZ		1	12:35			
ZZZZZZ		5	12:39			
ZZZZZZ		5	12:44			
ZZZZZZ		1	12:48			
ZZZZZZ		1	12:53			
ZZZZZZ		1	12:57			
ZZZZZZ		1	13:02			
ZZZZZZ		1	13:06			
CCV		1	13:11 AL	CA	FE PB MG	ZN
CCB		1	13:15 AL	CA	FE PB MG	ZN
ZZZZZZ		5	13:20			
ZZZZZZ		25	13:24			
ZZZZZZ		5	13:29			
ZZZZZZ		5	13:33			
ZZZZZZ		50	13:38			
ZZZZZZ		250	13:42			
ZZZZZZ		50	13:47			
ZZZZZZ		50	13:52			
ZZZZZZ		5	13:56			
ZZZZZZ		50	14:01			
CCV		1	14:05 AL	CA	FE PB MG	ZN
CCB		1	14:10 AL	CA	FE PB MG	ZN
ZZZZZZ		1	14:15			
ZZZZZZ		1	14:19			
ZZZZZZ		1	14:24			
ZZZZZZ		2	14:28			
ZZZZZZ		1	14:33			
ZZZZZZ		5	14:38			
ZZZZZZ		1	14:42			
ZZZZZZ		1	14:47			
ZZZZZZ		1	14:51			
ZZZZZZ		1	14:56			
CCV		1	15:00 AL	CA	FE PB MG	ZN
CCB		1	15:04 AL	CA	FE PB MG	ZN
ZZZZZZ		1	15:09			
ZZZZZZ		1	15:14			
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		10	15:32				
ZZZZZZ		10	15:36				
ZZZZZZ		10	15:41				
ZZZZZZ		10	15:45				
ZZZZZZ		5	15:50				
CCV		1	15:54 AL	CA	FE PB MG		ZN
CCB		1	15:58 AL	CA	FE PB MG		ZN
ZZZZZZ		1	16:03				
ZZZZZZ		1	16:07				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:17				
ZZZZZZ		1	16:21				
ZZZZZZ		1	16:26				
ZZZZZZ		1	16:30				
ZZZZZZ		1	16:35				
ZZZZZZ		1	16:39				
ZZZZZZ		1	16:44				
CCV		1	16:48 AL	CA	FE PB MG		ZN
CCB		1	16:52 AL	CA	FE PB MG		ZN
ZZZZZZ		1	16:57				
ZZZZZZ		1	17:02				
ZZZZZZ		1	17:06				
ZZZZZZ		1	17:11				
ZZZZZZ		1	17:15				
ZZZZZZ		1	17:20				
ZZZZZZ		1	17:24				
ZZZZZZ		1	17:29				
ZZZZZZ		1	17:33				
ZZZZZZ		1	17:38				
CCV		1	17:42 AL	CA	FE PB MG		ZN
CCB		1	17:47 AL	CA	FE PB MG		ZN
ZZZZZZ		1	17:51				
ZZZZZZ		1	17:56				
ZZZZZZ		1	18:00				
ZZZZZZ		1	18:05				
ZZZZZZ		5	18:10				
ZZZZZZ		1	18:14				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:23				
ZZZZZZ		1	18:27				
ZZZZZZ		1	18:32				
CCV		1	18:36 AL	CA	FE PB MG		ZN
CCB		1	18:41 AL	CA	FE PB MG		ZN
ZZZZZZ		1	18:45				
ZZZZZZ		1	18:50				
ZZZZZZ		1	18:54				
ZZZZZZ		5	18:59				
ZZZZZZ		1	19:03				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:12				
ZZZZZZ		1	19:17				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
ZZZZZZ		1	19:21			
ZZZZZZ		1	19:26			
CCV		1	19:30 AL	CA	FE PB MG	ZN
CCB		1	19:34 AL	CA	FE PB MG	ZN
ZZZZZZ		1	19:39			
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:06			
ZZZZZZ		1	20:11			
ZZZZZZ		5	20:15			
ZZZZZZ		1	20:20			
CCV		1	20:24 AL	CA	FE PB MG	ZN
CCB		1	20:29 AL	CA	FE PB MG	ZN
ZZZZZZ		1	20:33			
ZZZZZZ		1	20:38			
ZZZZZZ		1	20:42			
ZZZZZZ		1	20:47			
ZZZZZZ		1	20:51			
ZZZZZZ		1	20:56			
ZZZZZZ		1	21:00			
ZZZZZZ		1	21:05			
ZZZZZZ		1	21:09			
ZZZZZZ		1	21:14			
CCV		1	21:18 AL	CA	FE PB MG	ZN
CCB		1	21:23 AL	CA	FE PB MG	ZN
ZZZZZZ		1	21:27			
ZZZZZZ		1	21:32			
ZZZZZZ		1	21:36			
ZZZZZZ		1	21:41			
ZZZZZZ		1	21:46			
ZZZZZZ		1	21:50			
ZZZZZZ		1	21:54			
ZZZZZZ		1	21:59			
ZZZZZZ		1	22:04			
ZZZZZZ		1	22:08			
CCV		1	22:13 AL	CA	FE PB MG	ZN
CCB		1	22:17 AL	CA	FE PB MG	ZN
ZZZZZZ		1	22:22			
ZZZZZZ		1	22:26			
ZZZZZZ		1	22:31			
ZZZZZZ		1	22:35			
ZZZZZZ		5	22:40			
ZZZZZZ		1	22:44			
ZZZZZZ		1	22:49			
ZZZZZZ		1	22:53			
ZZZZZZ		1	22:58			
ZZZZZZ		1	23:02			
CCV		1	23:07 AL	CA	FE PB MG	ZN

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
CCB		1	23:11 AL	CA	FE PB MG	ZN
ZZZZZZ		1	23:16			
ZZZZZZ		1	23:20			
ZZZZZZ		1	23:25			
ZZZZZZ		1	23:29			
ZZZZZZ		1	23:34			
ZZZZZZ		1	23:38			
ZZZZZZ		1	23:43			
ZZZZZZ		1	23:48			
ZZZZZZ		1	23:52			
ZZZZZZ		5	23:57			
CCV		1	0:01 AL	CA	FE PB MG	ZN
CCB		1	0:05 AL	CA	FE PB MG	ZN
ZZZZZZ		1	0:10			
ZZZZZZ		1	0:14			
ZZZZZZ		1	0:19			
ZZZZZZ		1	0:23			
ZZZZZZ		1	0:28			
ZZZZZZ		1	0:33			
ZZZZZZ		1	0:37			
ZZZZZZ		1	0:42			
ZZZZZZ		1	0:46			
ZZZZZZ		1	0:51			
CCV		1	0:55 AL	CA	FE PB MG	ZN
CCB		1	1:00 AL	CA	FE PB MG	ZN
ZZZZZZ		1	1:04			
ZZZZZZ		1	1:09			
ZZZZZZ		1	1:14			
ZZZZZZ		1	1:18			
ZZZZZZ		1	1:23			
ZZZZZZ		1	1:27			
ZZZZZZ		1	1:32			
ZZZZZZ		1	1:37			
ZZZZZZ		1	1:41			
ZZZZZZ		1	1:46			
CCV		1	1:50 AL	CA	FE PB MG	ZN
CCB		1	1:55 AL	CA	FE PB MG	ZN
PBWBK01ICW2		1	1:59		PB	ZN
LCSWBK01ICW2		1	2:04		PB	ZN
ZZZZZZ		1	2:08			
SE6841-025	DSY-SD-RB14-101311	1	2:13		PB	ZN
ZZZZZZ		1	2:18			
ZZZZZZ		5	2:22			
ZZZZZZ		1	2:27			
ZZZZZZ		1	2:31			
ZZZZZZ		1	2:36			
ZZZZZZ		1	2:40			
CCV		1	2:45 AL	CA	FE PB MG	ZN
CCB		1	2:49 AL	CA	FE PB MG	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	15:24 AL	CA	CU FE PB MG	ZN
Std 1		1	15:28 AL	CA	CU FE PB MG	ZN
ICV		1	15:33 AL	CA	CU FE PB MG	ZN
ICB		1	15:37 AL	CA	CU FE PB MG	ZN
PQL		1	15:42 AL	CA	CU FE PB MG	ZN
ICSA		1	15:46 AL	CA	CU FE PB MG	ZN
ICSAB		1	15:51 AL	CA	CU FE PB MG	ZN
CCV		1	15:56 AL	CA	CU FE PB MG	ZN
CCB		1	16:00 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:04			
ZZZZZZ		2	16:09			
ZZZZZZ		1	16:14			
ZZZZZZ		1	16:18			
ZZZZZZ		1	16:23			
ZZZZZZ		5	16:27			
ZZZZZZ		100	16:31			
ZZZZZZ		500	16:36			
ZZZZZZ		100	16:41			
ZZZZZZ		100	16:45			
CCV		1	16:49 AL	CA	CU FE PB MG	ZN
CCB		1	16:54 AL	CA	CU FE PB MG	ZN
ZZZZZZ		100	16:58			
ZZZZZZ		1	17:03			
ZZZZZZ		1	17:07			
ZZZZZZ		5	17:12			
ZZZZZZ		100	17:16			
ZZZZZZ		5	17:21			
ZZZZZZ		5	17:26			
ZZZZZZ		1	17:30			
ZZZZZZ		1	17:35			
ZZZZZZ		3	17:39			
CCV		1	17:44 AL	CA	CU FE PB MG	ZN
CCB		1	17:48 AL	CA	CU FE PB MG	ZN
ZZZZZZ		3	17:52			
ZZZZZZ		1	17:57			
PBSBK01ICS2		1	18:02		CU PB	ZN
LCSOBK01ICS2		1	18:06		CU PB	ZN
ZZZZZZ		1	18:11			
ZZZZZZ		1	18:15			
ZZZZZZ		1	18:19			
ZZZZZZ		1	18:24			
ZZZZZZ		1	18:29			
ZZZZZZ		1	18:33			
CCV		1	18:38 AL	CA	CU FE PB MG	ZN
CCB		1	18:42 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:46			
ZZZZZZ		1	18:51			
ZZZZZZ		1	18:55			
ZZZZZZ		1	19:00			
ZZZZZZ		5	19:04			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		1	19:09			
ZZZZZZ		1	19:13			
ZZZZZZ		1	19:18			
SE6841-001	DSY-SD-AA09-0012	1	19:22		CU PB	ZN
SE6841-002	DSY-SD-AA09-1224	1	19:27		CU PB	ZN
CCV		1	19:31 AL	CA	CU FE PB MG	ZN
CCB		1	19:35 AL	CA	CU FE PB MG	ZN
SE6841-003	DSY-SD-AA09-2448	1	19:40		CU PB	ZN
SE6841-004	DSY-SD-AA13-0012	1	19:45		CU PB	ZN
SE6841-005	DSY-SD-AA13-1224	1	19:49		CU PB	ZN
ZZZZZZ		1	19:54			
ZZZZZZ		1	19:58			
ZZZZZZ		1	20:03			
ZZZZZZ		1	20:07			
ZZZZZZ		1	20:12			
ZZZZZZ		1	20:16			
ZZZZZZ		1	20:21			
CCV		1	20:25 AL	CA	CU FE PB MG	ZN
CCB		1	20:30 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	20:34			
ZZZZZZ		1	20:39			
ZZZZZZ		1	20:43			
ZZZZZZ		1	20:48			
ZZZZZZ		5	20:53			
ZZZZZZ		1	20:57			
ZZZZZZ		1	21:02			
ZZZZZZ		1	21:06			
ZZZZZZ		1	21:11			
ZZZZZZ		1	21:15			
CCV		1	21:20 AL	CA	CU FE PB MG	ZN
CCB		1	21:24 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	21:29			
ZZZZZZ		1	21:33			
ZZZZZZ		1	21:38			
ZZZZZZ		1	21:42			
ZZZZZZ		1	21:47			
PBSBK02ICS1		1	21:51		CU PB	ZN
LCSOBK02ICS1		1	21:56		CU PB	ZN
SE6841-006	DSY-SD-AA13-2448	1	22:00		CU PB	ZN
SE6841-006L	DSY-SD-AA13-2448L	5	22:05		CU PB	ZN
SE6841-006A	DSY-SD-AA13-2448A	1	22:09		CU PB	ZN
CCV		1	22:14 AL	CA	CU FE PB MG	ZN
CCB		1	22:18 AL	CA	CU FE PB MG	ZN
SE6841-006D	DSY-SD-AA13-2448D	1	22:23		CU PB	ZN
SE6841-006S	DSY-SD-AA13-2448S	1	22:27		CU PB	ZN
SE6841-007	DSY-SD-AA17-0012	1	22:32		CU PB	ZN
SE6841-008	DSY-SD-AA17-1224	1	22:36		CU PB	ZN
SE6841-009	DSY-SD-AA17-2448	1	22:41		CU PB	ZN
SE6841-010	DSY-SD-AA21-0012	1	22:46		CU PB	ZN
SE6841-011	DSY-SD-AA21-1224	1	22:50		CU PB	ZN
SE6841-012	DSY-SD-AA21-2448	1	22:55		CU PB	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
SE6841-013	DSY-SD-DUP34-101311	1	22:59		CU PB	ZN
SE6841-014	DSY-SD-AA24-0012	1	23:03		CU PB	ZN
CCV		1	23:08 AL	CA	CU FE PB MG	ZN
CCB		1	23:12 AL	CA	CU FE PB MG	ZN
SE6841-015	DSY-SD-AA24-1224	1	23:17		CU PB	ZN
SE6841-016	DSY-SD-AA24-2448	1	23:22		CU PB	ZN
SE6841-017	DSY-SD-AA26-0012	1	23:26		CU PB	ZN
SE6841-018	DSY-SD-AA26-1224	1	23:31		CU PB	ZN
SE6841-019	DSY-SD-AA26-2448	1	23:36		CU PB	ZN
SE6841-020	DSY-SD-AA28-0016	1	23:40		CU PB	ZN
SE6841-021	DSY-SD-DUP35-101311	1	23:45		CU PB	ZN
SE6841-022	DSY-SD-AA30-0012	1	23:49		CU PB	ZN
SE6841-023	DSY-SD-AA30-1224	1	23:54		CU PB	ZN
SE6841-024	DSY-SD-G30-0018	1	23:59		CU PB	ZN
CCV		1	0:03 AL	CA	CU FE PB MG	ZN
CCB		1	0:07 AL	CA	CU FE PB MG	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK03B

Date: 11/3/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	17:51 AL	CA	CU FE	MG
Std 1		1	17:56 AL	CA	CU FE	MG
ICV		1	18:00 AL	CA	CU FE	MG
ICB		1	18:04 AL	CA	CU FE	MG
PQL		1	18:09 AL	CA	CU FE	MG
ICSA		1	18:13 AL	CA	CU FE	MG
ICSAB		1	18:18 AL	CA	CU FE	MG
CCV		1	18:23 AL	CA	CU FE	MG
CCB		1	18:27 AL	CA	CU FE	MG
ZZZZZZ		1	18:32			
ZZZZZZ		1	18:36			
ZZZZZZ		1	18:41			
ZZZZZZ		1	18:45			
ZZZZZZ		1	18:50			
ZZZZZZ		2	18:54			
ZZZZZZ		5	18:59			
ZZZZZZ		1	19:03			
ZZZZZZ		1	19:08			
ZZZZZZ		1	19:12			
CCV		1	19:17 AL	CA	CU FE	MG
CCB		1	19:21 AL	CA	CU FE	MG
ZZZZZZ		1	19:26			
ZZZZZZ		1	19:30			
ZZZZZZ		1	19:35			
ZZZZZZ		1	19:39			
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:07			
CCV		1	20:11 AL	CA	CU FE	MG
CCB		1	20:15 AL	CA	CU FE	MG
ZZZZZZ		5	20:20			
ZZZZZZ		1	20:25			
ZZZZZZ		1	20:29			
ZZZZZZ		1	20:33			
ZZZZZZ		1	20:38			
ZZZZZZ		1	20:42			
ZZZZZZ		1	20:47			
ZZZZZZ		1	20:51			
ZZZZZZ		1	20:56			
ZZZZZZ		1	21:00			
CCV		1	21:05 AL	CA	CU FE	MG
CCB		1	21:09 AL	CA	CU FE	MG
ZZZZZZ		1	21:14			
ZZZZZZ		1	21:18			
PBWBK03ICW3		1	21:23		CU	
LCSWBK03ICW3		1	21:27		CU	
ZZZZZZ		1	21:32			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK03B

Date: 11/3/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	21:36				
ZZZZZZ		5	21:41				
ZZZZZZ		1	21:45				
ZZZZZZ		1	21:50				
ZZZZZZ		1	21:54				
CCV		1	21:59 AL	CA	CU FE	MG	
CCB		1	22:03 AL	CA	CU FE	MG	
ZZZZZZ		1	22:08				
ZZZZZZ		1	22:12				
ZZZZZZ		1	22:17				
ZZZZZZ		1	22:21				
ZZZZZZ		1	22:26				
ZZZZZZ		1	22:30				
SE6841-025R	DSY-SD-RB14-101311R	1	22:35		CU		
ZZZZZZ		1	22:39				
ZZZZZZ		1	22:44				
ZZZZZZ		1	22:48				
CCV		1	22:53 AL	CA	CU FE	MG	
CCB		1	22:57 AL	CA	CU FE	MG	

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99551	Lloyd Kahn	20-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99551	Lloyd Kahn	20-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG100043	ASTM D2216	31-OCT-11	28-OCT-11	U 1 %	1 %	N/A
MBLANK	WG100067	ASTM D2216	31-OCT-11	29-OCT-11	U 1 %	1 %	N/A
MBLANK	WG100087	ASTM D2216	02-NOV-11	01-NOV-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99551-2	LCS	WG99551	20-OCT-11	N/A	ug/gdrywt	400000.000	420000	105	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99551-2	LCS	WG99551	20-OCT-11	N/A	ug/gdrywt	400000.000	420000	105	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG100043-2	LCS	WG100043	31-OCT-11	28-OCT-11	%	90	92.	102	80-120	
WG100067-2	LCS	WG100067	31-OCT-11	29-OCT-11	%	90	91.	101	80-120	
WG100087-2	LCS	WG100087	02-NOV-11	01-NOV-11	%	90	96.	107	80-120	

Quality Control Report

Duplicate Sample Summary Report

Toc In Soil(1)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99551-3	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	55000	49000	11	30

Toc In Soil(2)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99551-3	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	50000	63000	22	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG100067-3	SE6841-7	WG100067	31-OCT-11	%	33.	33.	0	20
WG100067-4	SE6841-21	WG100067	31-OCT-11	%	58.	61.	4	20
WG100043-4	SE6841-6	WG100043	31-OCT-11	%	34.	34.	1	20
WG100087-3	SE6841-22	WG100087	02-NOV-11	%	74.	76.	2	20

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99551-4	MS	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	53191.67	55000	110000	109	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99551-4	MS	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	53191.67	50000	110000	118	75 - 125

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 9, 2011

Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
jObrin@katahdinlab.com

Re: **Narrative 041128162 Modified Draft ASTM Sieve Method with Qualitative TEM analysis**

Dear Jennifer:

The following set of samples was received October 20th 2011 via FedEx. These samples were received under chain of custody from Katahdin Analytical Services, Scarborough, ME for asbestos content analysis. All samples are associated with the project SE6768/SE6841. The samples submitted were saturated with moisture and required additional time to dry. Most of the samples were received in good condition, except for the following samples below:

EMSL Sample Number	*Client Sample Number*	*Condition at Time of Receipt*
041128162-0015	DSY-SD-AA17-0012	Jar broken
041128162-0019	DSY-SD-AA21-1224	Jar broken
041128162-0028	DSY-SD-AA28-0016	Jar labeled DSY-SD-AA28-0012
041128162-0031	DSY-SD-AA30-1224	Jar broken

The samples were logged in following normal lab procedures. All analyses were performed in the Cinnaminson, NJ laboratory.

Modified Draft ASTM Sieve method

The samples were first dried prior to being fractioned into 3 sieved components, Coarse (<19 mm), Medium (>2 mm) and Fine (<2 mm). The sieved samples were then analyzed via polarized light microscopy (PLM) using the procedures from the EPA 600/R-93/116 method. Any asbestos found in the fine fraction was analyzed via a 400 point count analysis. All data was reported on a percent asbestos basis. The limit of quantification for this method is <1%.

Samples that did not have asbestos detected were analyzed via Qualitative Transmission Electron Microscopy (TEM). Due to the amount of organic material and calcium fibers in these samples, an aliquot of the sample was treated with dilute hydrochloric acid prior to analysis.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

QC Performed

QC guidelines were not specified by the client. EMSL performed QC in compliance with our Quality Assurance Manual (QAM) and pertinent SOPs. For this analysis, two inter-analyst and four intra-analyst samples were analyzed. Six laboratory blanks were also analyzed. All QC was found to be in concordance.

Stephen Siegel, CIH
Asbestos Lab Manager,
EMSL Westmont, NJ

Robyn Denton
Asbestos Quality Assurance Manager
EMSL Westmont, NJ

2. Tabulated Sample Results

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA01-0012 *041128162-0001*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-1224 *041128162-0002*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-2448 *041128162-0003*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-DUP33-101211 *041128162-0004*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA05-0012 *041128162-0005*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-1224 *041128162-0006*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-2448 *041128162-0007*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-0012 *041128162-0008*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-1224 *041128162-0009*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA09-2448 *041128162-0010*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA13-0012 *041128162-0011*	Chrysotile Amosite	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-1224 *041128162-0012*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448 *041128162-0013*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448DUP *041128162-0014*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA17-0013 *041128162-0015*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA17-1224 *041128162-0016*	Amosite	None Detected	<1	None Detected	<1	Not Analyzed	

This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Project: SE6768

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA17-2448 *041128162-0017*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA21-0012 *041128162-0018*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA21-1224 *041128162-0019*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA21-2448 *041128162-0020*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-DUP34-101311 *041128162-0021*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-0012 *041128162-0022*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-1224 *041128162-0023*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA24-2448 *041128162-0024*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-0012 *041128162-0025*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-1224 *041128162-0026*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA26-2448 *041128162-0027*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA28-0016 *041128162-0028*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	Jar labeled as DSY-SD-AA28-0012
DSY-SD-DUP35-101311 *041128162-0029*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA30-0012 *041128162-0030*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA30-1224 *041128162-0031*	Chrysotile Amosite	None Detected	<1	None Detected	<1	Not Analyzed	Jar received Broken

Note: Revised report issued 11-10-11 for data entry errors on EMSL samples 041128162-0016,041128162-0018, 041128162-0031

Analysts

Garret Vliet *David Poitras*
Melissa Klinedinst *Robyn Denton*
Leslie McCluskey

Robyn Denton
Approved Lab Signatory

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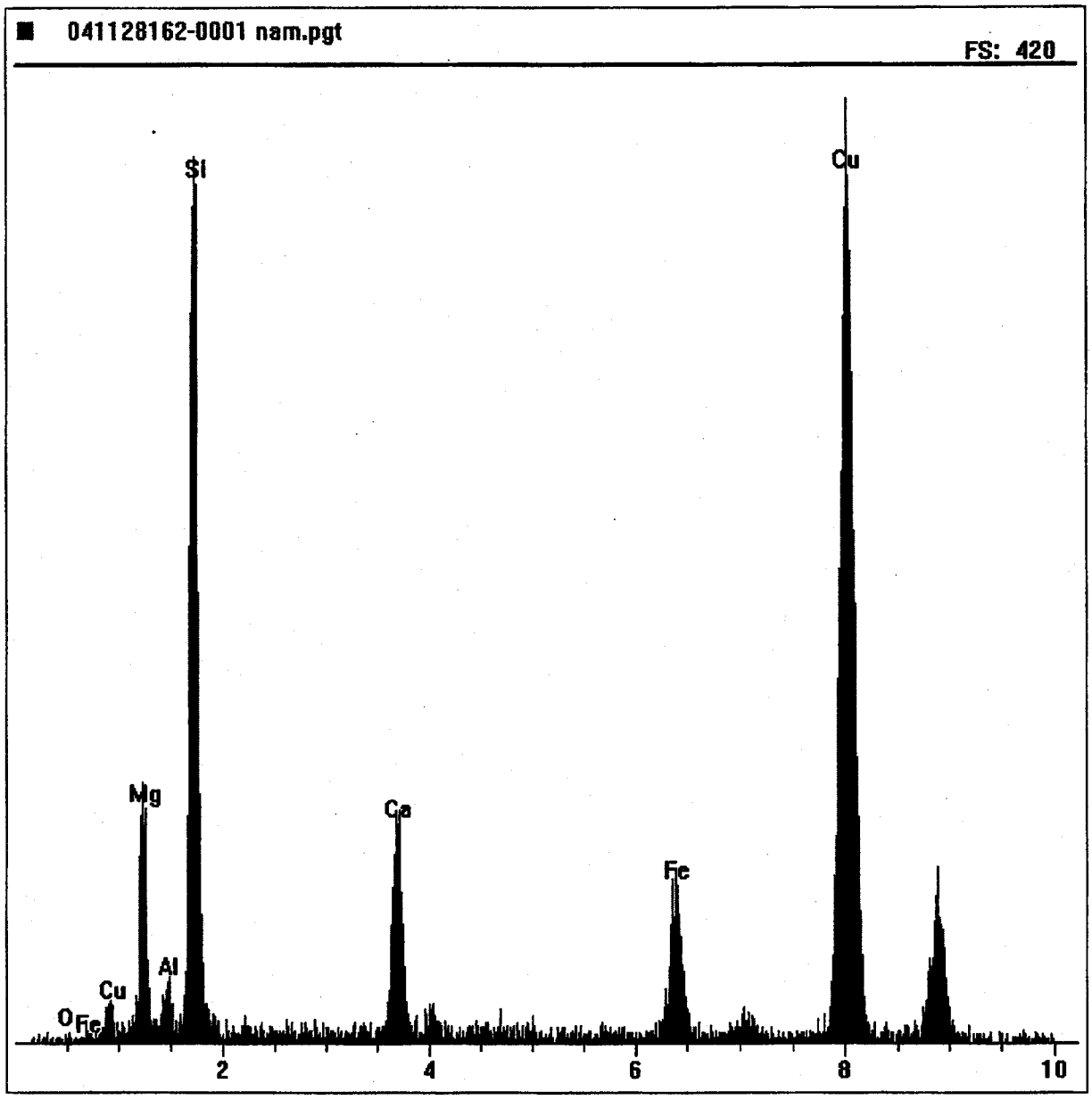
EMSL ANALYTICAL, INC.

Energy Dispersive X-Ray Analysis
Qualitative Spectrum

File: C:\Program Files\PGT\Data\041128162-0001 nam.pgt
Collected: November 08, 2011 12:41:16

Live Time:	35.49	Count Rate:	974	Dead Time:	19.08 %
Beam Voltage:	20.00	Beam Current:	2.00	Takeoff Angle:	31.00



3. Worksheets/Benchsheets

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | Logged: | TAT:

Address: | Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties: Morphology (O): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon Like, 5. Tapered Ends, 6. Equant, 7. Mixed, 8. Modulin, 9. Modulin Shapes, 10. Other; Sign of Elongation (E): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low 0.010, 2. Mod 0.010-0.035, 3. High >0.050, 4. None 0.00 or Isotropic; Fiber Color (FC): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undefined

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-01 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C), (T), (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G. Viet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quarts, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon/Lath, 5 Tapered/Rods, 6 Fibril, 7 Fibrils, 8 Metallic, 9 Basic Shapes, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low 0.010, 2 Med 0.010-0.030, 3 High >0.030, 4 Above 0.09 or Isotropic

Dispersion Color (DC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Dispersion (D): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char.	Optical Properties	
-04 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-04 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-04 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-05 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		1	<1			20	99		1.551, 1.680	1.557, 1.692
				2	<1						1,2 M	S
											2P, 1,2B, (BC) 6, E	LM
-05 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		1	<1			20	99		1.550, 1.678	1.555, 1.696
				2	<1						1, 2 M	S
											2P, 1,2B, (BC) 6, E	LM
-05 FINE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-06 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		2	<1			20	98		1.683 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2P, 2B, (BC) 6, 1 E	MK
-06 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		2	<1			20	98		1.680 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2P, 2B, (BC) 6, 1 E	MK
-06 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
	(C), (T), (H)							20			⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	

Analyst: G.Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.32

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: [redacted]

Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
7 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. / 1.557 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
7 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
7 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
8 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.555 ⊥ R.I. / 1.554 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
8 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
8 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
9 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. / 1.557 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
9 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
9 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P B (FC) E

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10 COARSE	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	3	20	97	M10	1.552 ⊥ R.I. 1.558 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
10 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	5	20	95	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
10 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
11 COARSE	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	3	20	97	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
11 MEDIUM	(C) 3 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
11 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
12 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.554 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
12 MEDIUM	(C) 2 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
12 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

ams

1.680 1.696
2 1
2 2 61

1.682 1.696
2 1
2 2 61

1.680 1.692
2 1
2 2 61

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.7

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (H)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

COMPONENT TYPES — Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

COMPONENT TYPES — Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
13 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
13 MEDIUM	(C) 2 (T) 2 (H)	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
13 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
15 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
15 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.547 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
15 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC *	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 23.6°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
16 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
16 MEDIUM	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
16 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
17 COARSE	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
17 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.678 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
17 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
QC *	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E

QC

Analyst: MK Date: 11/6/11 Computer: _____ Date: _____

Room Temp (C): 24.8°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
19 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 10 E 1
19 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. 1.556 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
19 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
20 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.548 ⊥ R.I. 1.554 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
20 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
20 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
21 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.549 ⊥ R.I. 1.556 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
21 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	~~M10~~ chrysotile	1.548 ⊥ R.I. 1.553 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
21 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

amo 1.678 1.692 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.5

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (A): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Seeded, 7. Fibril, 8. Metallic, 9. Basic Shape, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Med: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
22 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
22 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
22 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.547 ⊥ R.I. / 1.553 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
23 MEDIUM	(C) 2, (T) 1, (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
24 COARSE	(C) 2, (T) 1, (H) 2	1		1 2	<1 <1	11	2	20	98	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
24 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
24 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C), (T), (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.681 1.696 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.0

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC — Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
25 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
25 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E
25 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
26 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	3	20	95	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
26 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
26 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
27 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	2	20	96	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
27 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
27 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.678 1.692 2 1 2 2 61

amo 1.680 1.696 2 1 2 2 61

1.676 1.691 2 1 2 2 61

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.4

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM

Order Number: 0411281682

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (A), Sign of Elongation (S), Birefringence (B), Fiber Color (FC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (L)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
28 COARSE	(C) 1,4	1		chry	<1	11	5	20	95	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 3			amosite	<1						M; S
	(H) 1										P 3; B 1; (FC) C/A; E
28 MEDIUM	(C) 1,4	1		ch	<1	11	5	20	95	M2	1.550 ⊥ R.I.; 1.552 ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B 1; (FC) A/; E
28 FINE	(C) 1	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
29 COARSE	(C) 1,4	1		chry	<1	11	2	20	98	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E
29 MEDIUM	(C) 1,4	1		ch	<1	11	5	20	95	M2	1.550 / 1.560 ⊥ R.I.; 1.552 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E
29 FINE	(C) 1,4	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
30 COARSE	(C) 1,4	1		chry	<1	11	2	20	98	M2	1.550 ⊥ R.I.; 1.556 ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC) A/; E
30 MEDIUM	(C) 1	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
30 FINE	(C) 1	1		~		11	10	20	90	M1	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
QC 30coarse	(C) 1,4	1		chry	<1	11	5	20	95	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E

QC

Analyst: David Portnoi Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): 19.4°C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M), Sign of Elongation (S), Birefringence (B), Fiber Color (FC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (S)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties: ⊥ R.I.	∥ R.I.	M	S	P	B	(FC)	E
31 COARSE	(C) 1,4	1		MD				20	10 J									
	(T) 2																	
	(H) 2																	
31 MEDIUM	(C) 1	1		Chr	C1	11	5	20	95	MX	1.NH	1.NH						
	(T) 1			Amosite	<1								1	2	1	2		
	(H) 1												2	Pl	5	2B	(PC)	1 B
31 FINE	(C) 1	1		MD		11	10	20	90	MX								
	(T) 1																	
	(H) 1																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
QC 31 COARSE	(C)							20										
	(T)																	
	(H)																	

QC

Analyst: Dan Paitsa Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0001
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
01	D3	ND								FBCM		
	J4	1-2	2							FBCM		Mg, Si, Al, Ca, Fe
	O13	3	1							FBCM		Si
	H12	4	1							FBCM		Si
	I11	5-7	3							FBCM		Mg, Si, Al Ca, Fe; Si
02	F5	ND								FBCM		
	F11	8-9	2							FBCM		Si
	G15	~~10~~ NB	2							FBCM		Si
	M4	ND								FBCM		
	N10	ND								FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
(Total)		11	11				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing

Mg, Al, Si, Ca, Fe; Si

Prepped w/ acid

Grid Box # Bulk:0075 Row O Column 1,2

Analyst BD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0002
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
03	C7	ND								F B C M		
	D5	↓								F B C M		
	F4	↓								F B C M		
	G11	1	1							F B C M		Si
	D13	2-4	3							F B C M		Mg,Al,Si,Ca,Fe
04	A11	ND								F B C M		
	B13	↓								F B C M		
	D12	↓								F B C M		
	F4	↓								F B C M		
	G7	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		4	4				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing

Prepped w/ Acid

Grid Box # Bulk.0075 Row O Column 3,4

Analyst RD Scope 04.03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0003
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
05	G5	ND								F B C M		
	H8	ND								F B C M		
	L10	1								F B C M		
	J9	↓								F B C M		
	D9	↓								F B C M		
06	B5	ND								F B C M		
	H9	1								F B C M		
	C13	↓								F B C M		
	D11	↓								F B C M		
	M10	1	1							F B C M		Mg, Al, Si, Ca, Fe
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg Al Si Ca Fe

Prepped w/Acid

Grid Box # Bulk-75 Row 0 Column 5/6

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0004
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P1	03	1	1							F B C M		Ca
	H2	ND								F B C M		
	J4	2-3	2							F B C M		Si, Al, Mg
	K7	4	1							F B C M		Si, Al
	D5	ND								F B C M		
P2	C11	↓								F B C M		
	D14									F B C M		
	K10									F B C M		
	H4	5	1							F B C M		Si
	J2									F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		5	3									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Si, Al, Mg, Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 1,2

Analyst BD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0014
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P3	C7	ND								F B C M		
	D9	↓								F B C M		
	G5	↓								F B C M		
	H11	↓								F B C M		
	D15	↓								F B C M		
P4	A8	1	1							F B C M		Ca
	C10	ND								F B C M		
	D15	↓								F B C M		
	K11	↓								F B C M		
	D13	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 3,4

Analyst RD Scope 0403 Date 11.08.11
RD 11/08/11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0018
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
U1	A4	ND								F B C M		
	B6	|	1							F B C M		Ca
	B8	|								F B C M		
	D6	|								F B C M		
	F8	|	1							F B C M		Si
U2	O14	|								F B C M		
	L15	|	1							F B C M		Mg, Ca, Si, Al
	K11	|								F B C M		
	F14	|								F B C M		
	E4	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		—										

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Ca, Si, Mg, Al

Prepped w/ Acid

Grid Box # Bulk-0075 Row 14 Column 1,2

Analyst RD Scope 04.03 Date 11.10.11

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
1	041128162-0001	DSY-SD-AA01-0012	10/12/2011	109.64	93.13	14.97	1.86	Y
2	041128162-0002	DSY-SD-AA01-1224	10/12/2011	110.96	96.93	12.76	1.65	Y
3	041128162-0003	DSY-SD-AA01-2448	10/12/2011	75.26	61.02	12.87	1.63	Y
4	041128162-0004	DSY-SD-DUP33-101211	10/12/2011	86.24	67.77	16.16	2.7	Y
5	041128162-0005	DSY-SD-AA05-0012	10/12/2011	119.53	98.32	19.09	2.53	Y
6	041128162-0006	DSY-SD-AA05-1224	10/12/2011	100.08	84.64	13.18	2.48	Y
7	041128162-0007	DSY-SD-AA05-2448	10/12/2011	124.57	93.44	25.08	6.31	Y
8	041128162-0008	DSY-SD-AA09-0012	10/13/2011	65.56	49.83	13.68	2.34	Y
9	041128162-0009	DSY-SD-AA09-1224	10/13/2011	100.73	70.26	24.89	5.91	Y
10	041128162-0010	DSY-SD-AA09-2448	10/13/2011	125.05	96.76	22.17	6.49	Y
11	041128162-0011	DSY-SD-AA13-0012	10/13/2011	65.37	49.82	13.41	2.33	Y
12	041128162-0012	DSY-SD-AA13-1224	10/13/2011	113.34	89.41	19.39	4.78	Y
13	041128162-0013	DSY-SD-AA13-2448	10/13/2011	98.20	82.65	13.39	2.57	Y
14	041128162-0014	DSY-SD-AA13-2448DUP	10/13/2011	77.32	63.36	11.73	2.82	Y
15	041128162-0015	DSY-SD-AA17-0013	10/13/2011	96.54	81.39	12.88	2.48	Y
16	041128162-0016	DSY-SD-AA17-1224	10/13/2011	95.61	78.01	14.97	3.04	Y
17	041128162-0017	DSY-SD-AA17-2448	10/13/2011	113.68	89.28	20.83	3.99	Y
18	041128162-0018	DSY-SD-AA21-0012	10/13/2011	63.55	53.08	9.49	1.4	Y
19	041128162-0019	DSY-SD-AA21-1224	10/13/2011	74.76	63.49	9.78	1.83	Y
20	041128162-0020	DSY-SD-AA21-2448	10/13/2011	88.76	78.89	8.24	1.67	Y
21	041128162-0021	DSY-SD-DUP34-101311	10/13/2011	105.22	82.26	19.23	4.02	Y
22	041128162-0022	DSY-SD-AA24-0012	10/13/2011	104.98	83.43	19.38	2.53	Y

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
23	041128162-0023	DSY-SD-AA24-1224	10/13/2011	75.39	60.20	13.51	1.96	Y
24	041128162-0024	DSY-SD-AA24-2448	10/13/2011	105.00	75.29	25.04	4.95	Y
25	041128162-0025	DSY-SD-AA26-0012	10/13/2011	108.33	76.40	29.73	2.71	Y
26	041128162-0026	DSY-SD-AA26-1224	10/13/2011	140.83	93.00	39.86	8.39	Y
27	041128162-0027	DSY-SD-AA26-2448	10/13/2011	121.13	79.09	31.17	11.03	Y
28	041128162-0028	DSY-SD-AA28-0016	10/13/2011	125.92	43.07	67.23	15.61	Y
29	041128162-0029	DSY-SD-DUP35-101311	10/13/2011	123.34	46.17	64.05	13.37	Y
30	041128162-0030	DSY-SD-AA30-0012	10/13/2011	292.02	11.36	263.61	17.26	Y
31	041128162-0031	DSY-SD-AA30-1224	10/13/2011	285.69	4.03	262.76	17.17	Y

4. QC Data Reports/Logs

Monthly PLM Bulk QC Summary

Laboratory: Cinnaminson, NJ **Report #** 1 **Month/Year:** Nov-11

				Original		QC		Variance		
	Date	Reference #	Sample #	Analyst	Result	Analyst	Result	Original	QC	Conclusion
1	11/4/11	041128162-0003	DSY-SD-AA01-2448	GV	0	TY	0	0.00	0.00	Pass
2	11/4/11	041128162-0006	DSY-SD-AA05-1224	GV	0	FD	0	0.00	0.00	Pass
3	11/7/11	041128162-0025C	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
4	11/7/11	041128162-0025M	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
5	11/7/11	041128162-0025F	DSY-SD-AA26-0012	LM	0	LM	0	0.00	N/A	Pass
6	11/7/11	041128162-0030	DSY-SD-AA30-0012	DP	0.5	DP	0.5	0.00	N/A	Pass

EMSL PLM ANALYST ACCURACY

Analyst: Leslie McCluskey

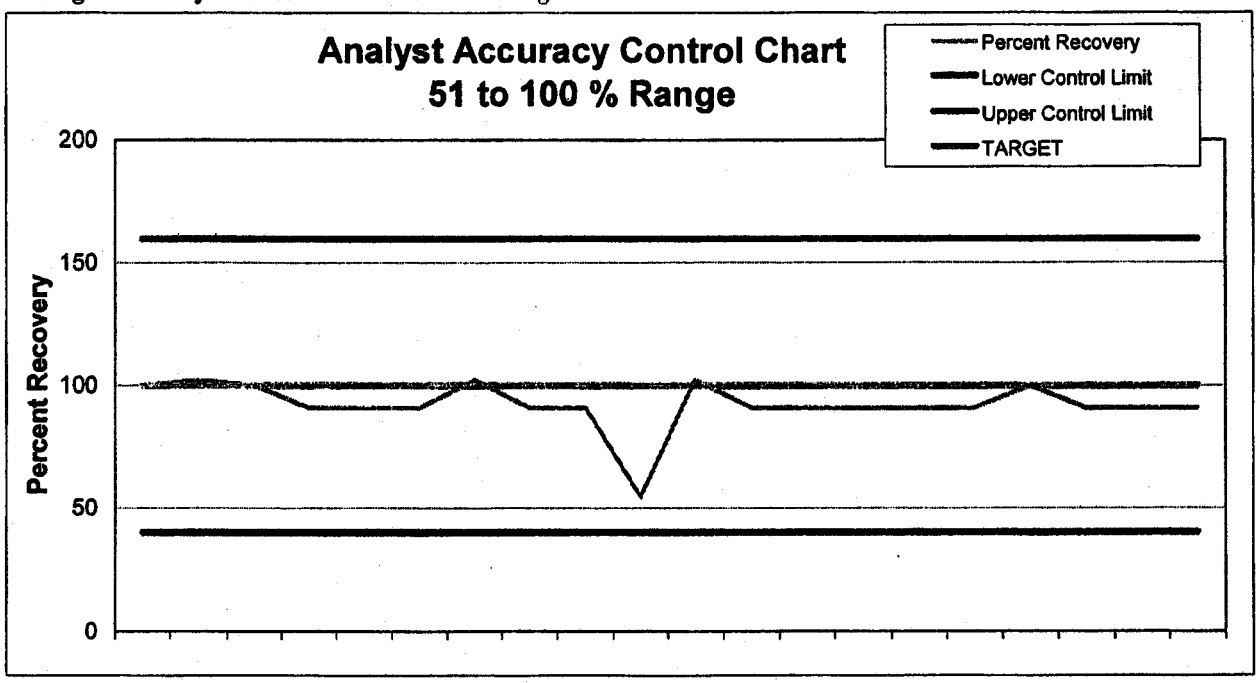
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
1/5/11	6	Chrysotile	55.00	Chrysotile	55.00	IN	100	0	IN
1/6/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
1/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
1/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
2/8/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
3/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	30.00	IN	55	45	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
5/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
6/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
10/21/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **8.5** ***Target = 0***



EMSL PLM ANALYST ACCURACY

Analyst: Melissa Klinedinst

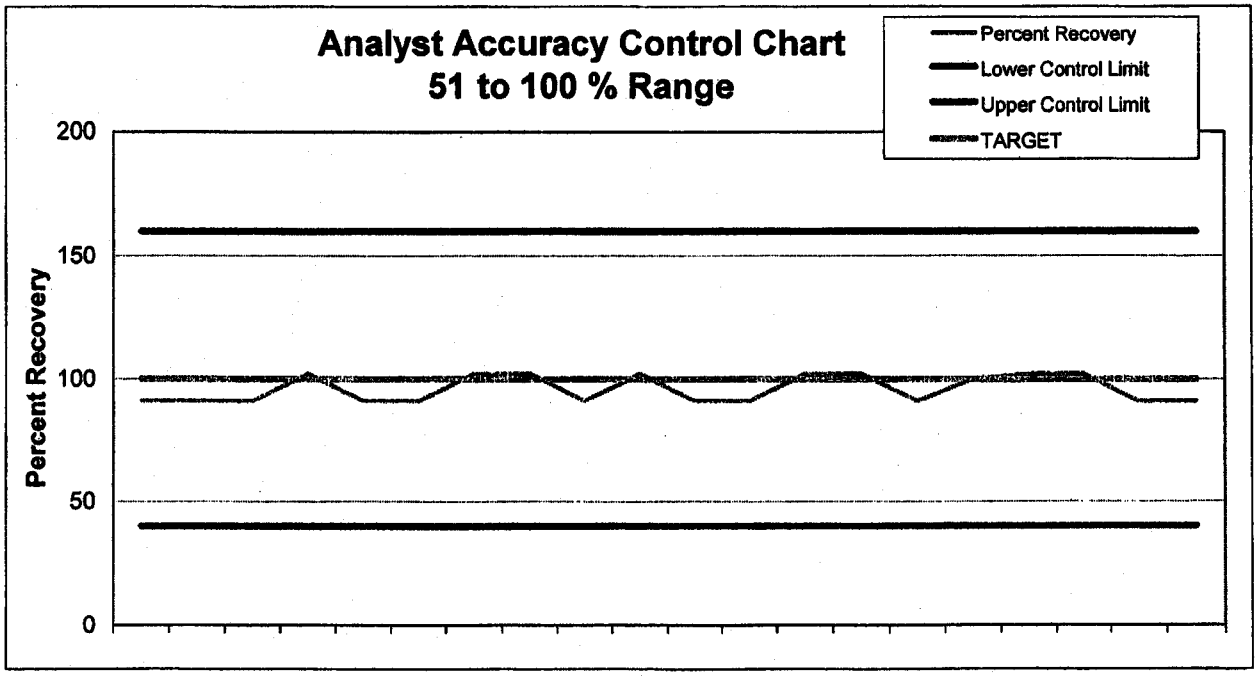
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
6/29/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/11/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/21/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/24/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
9/29/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/3/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/9/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
11/2/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/3/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/6/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **5.8** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Dave Poitras

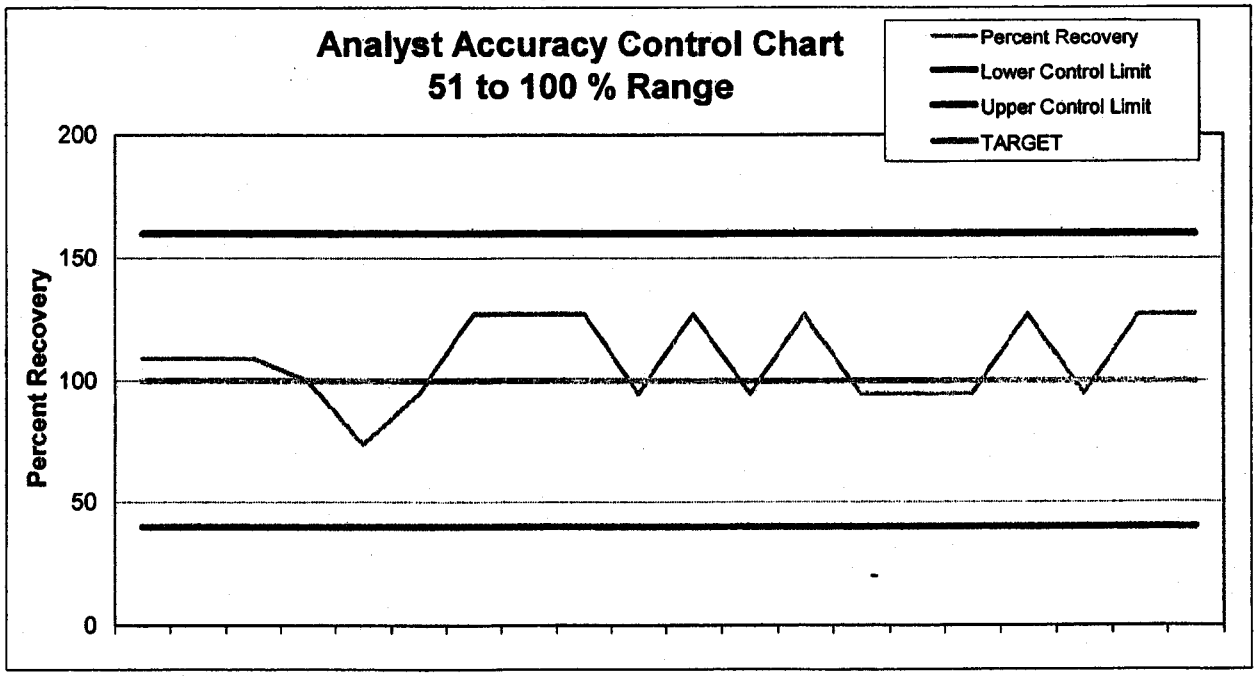
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
3/28/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/12/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
5/3/11	3	Chrysotile	95.00	Chrysotile	70.00	IN	74	26	IN
6/28/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
6/29/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/12/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
7/26/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/2/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/20/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/8/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN

Average Accuracy Coeficent = **15.4** ***Target = 0***



EMSL PLM ANALYST ACCURACY

Analyst: Garret Vliet

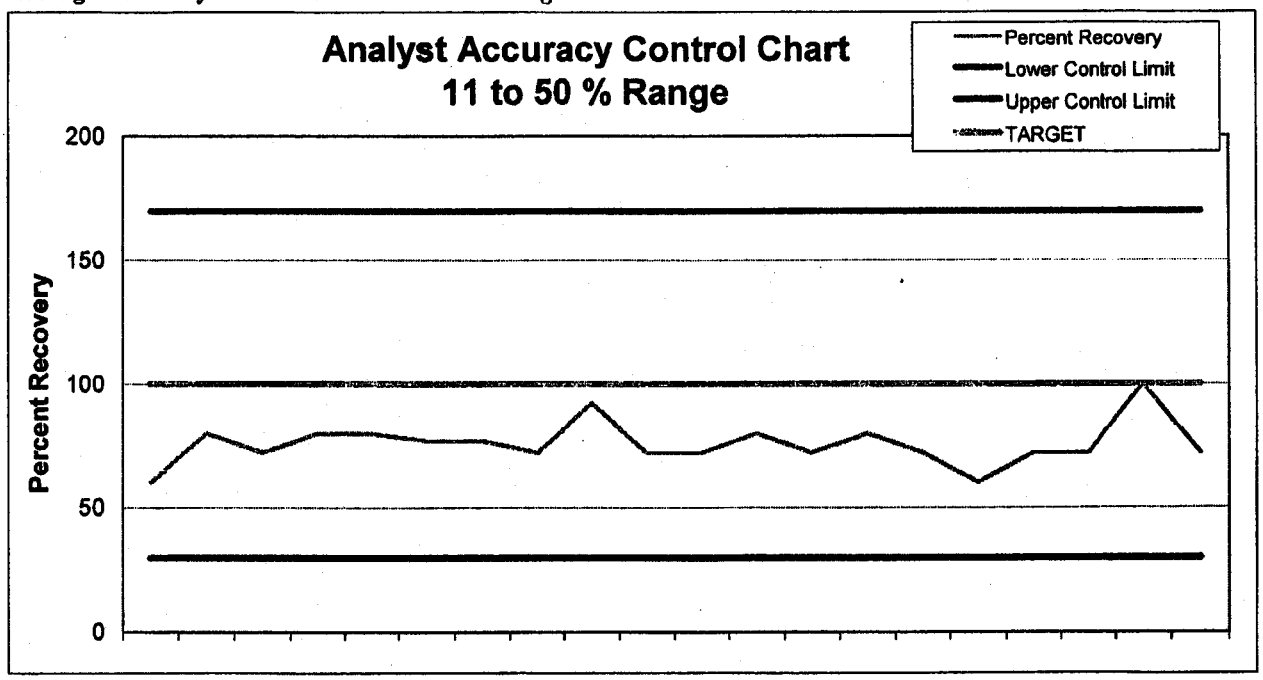
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/24/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	12.00	IN	92	8	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
9/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN

Average Accuracy Coeficent = **24.3** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Frank DiCrescenzo

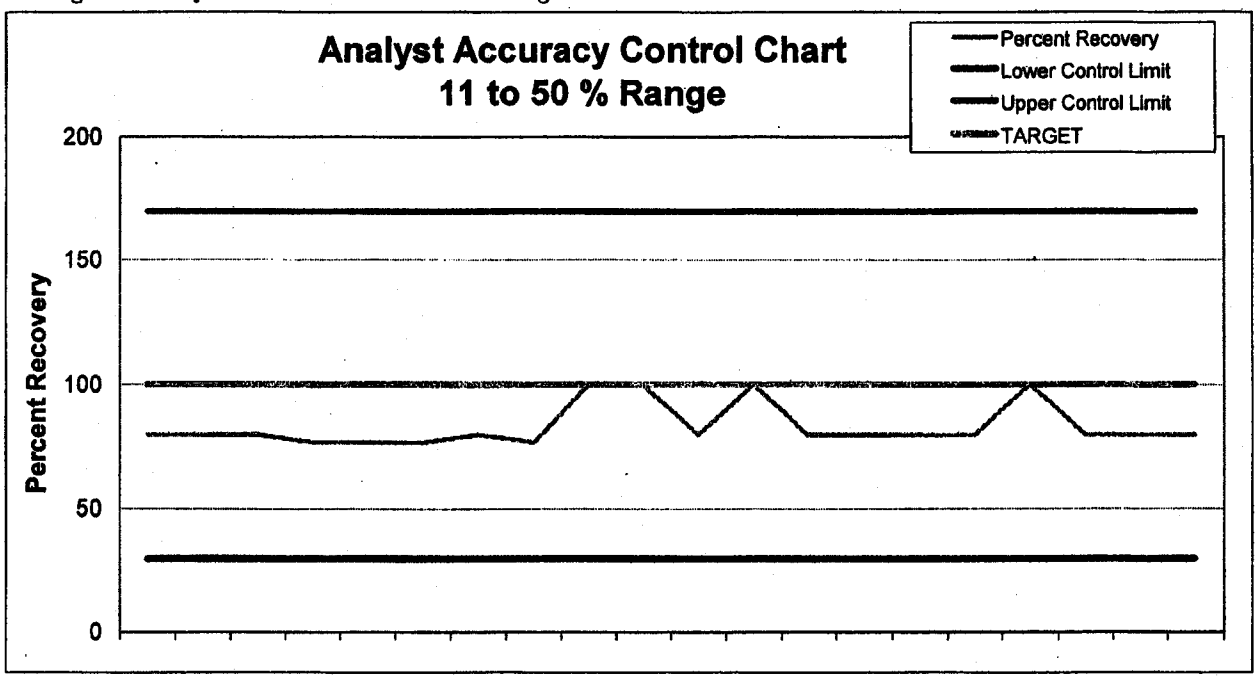
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/18/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/9/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN

Average Accuracy Coeficent = **16.6** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Ted Young

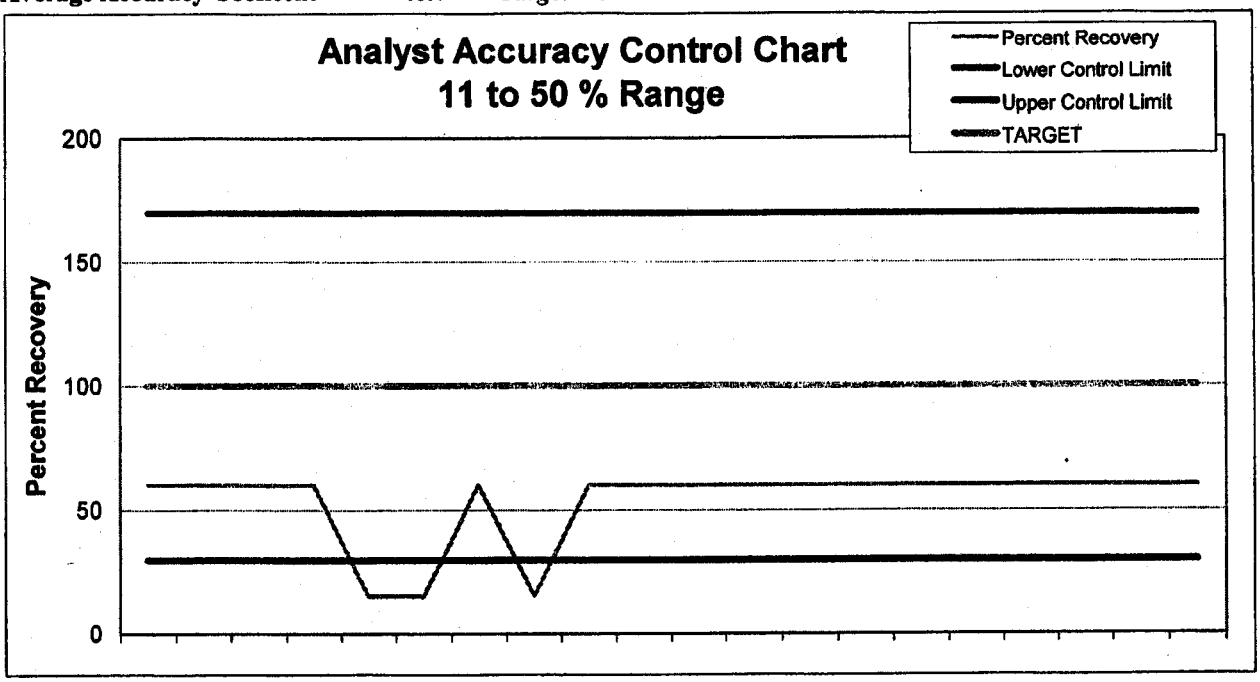
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/20/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
7/1/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/16/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN

Average Accuracy Coeficent = **46.7** ***Target = 0***



Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10.5 6 20.3	(C)			1	50			20			⊥ R.I. 1.551 ∥ R.I. 1.558
	(T)										M 1 S 1
	(H)										P 2 B 1 (FC) 60 E 1
11.7 6 20.3	(C)			1	50			20			⊥ R.I. 1.550 ∥ R.I. 1.557
	(T)										M 1 S 1
	(H)										P 2 B 1 (FC) 60 E 1
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: Computer: Date:

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties		
11/2/11 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/3 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/6 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/7 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		

Analyst: MK Date: Nov 11 Computer: _____ Date: _____

Room Temp (C): _____

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
	(C)			act/tre	3			20	97		⊥ R.I.		∥ R.I.		21.1°C
1/1 8	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			chry	70			20	30		⊥ R.I.		∥ R.I.		25.8°C
1/5 6	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			chry	70			20	30		⊥ R.I.		∥ R.I.		19.8°C
1/7 6	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			act/tre	<1			20	100		⊥ R.I.		∥ R.I.		20°C
1/8 1	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			antho	5			20	95		⊥ R.I.		∥ R.I.		22.8°C
1/9 10	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	

Analyst: David Paitsel Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc. (C) (T) (H)	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11/1 (8)	(C) (T) 1 (H)			5	2			20	98		1.605 ⊥ R.I. 1.618 ∥ R.I. 2.6
											M S
											P 2 B (FC) 1 E
11/2 (3)	(C) (T) 1 (H)	4		1	65			20	35		1.557 ⊥ R.I. 1.558 ∥ R.I. 22.5
											M 1 S
											P 2 B (FC) 1 E
11/3 (3)	(C) (T) 2 (H)	4		1	75			20	25		1.552 ⊥ R.I. 1.557 ∥ R.I. 23.0
											M 1 S
											P 2 B (FC) 1 E
11/4 (9)	(C) (T) 2 (H)	4		1	18			20	82		1.552 ⊥ R.I. 1.557 ∥ R.I. 23.0
											M 1 S
											P 2 B (FC) 1 E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E

Analyst: G. Uliet Date: 11/1/11 Computer: _____ Date: _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Special Instructions | Order Number

Fax:

Project: Ref Slides

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 3 OTHER, 2 Heterogeneous, 4 Layers (S)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
10/31 8	(C)			5	2	-	-	20	98		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/1 8	(C)			5	2	-	-	20	98		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/2 3	(C)			1	60	-	-	20	40		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/3 3	(C)			1	60	-	-	20	40		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	1 B	(FC)	E	
11/4 9	(C)			1	20	-	-	20	80		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	B	(FC)	E	
11/5 6	(C)			1	50	-	-	20	50		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	

Analyst: FD Date: 11-5-11 Computer: Date:

Room Temp (C):

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat.	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11-1-11 8-1.605	(C)			4/5	2			20	98		1.613 ⊥ R.I. 1.635 ∥ R.I.
	(T)										2 M 1 S
	(H)										2 P 2 B (PC) 6 3 E
11-2-11 3-1.550	(C)			1	60			20	40		1.548 ⊥ R.I. 1.574 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
11-3-11 3-1.550	(C)			1	60			20	40		1.549 ⊥ R.I. 1.570 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
11-4-11 9-1.550	(C)			1	15			20	85		1.550 ⊥ R.I. 1.557 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E

Analyst: Tai Young Date: Nov. 2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM sieve

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 3 OTHER, 2 Heterogeneous, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
BLANK 1 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 2 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 3 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 1 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 2 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 3 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3 °C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	28162

COMPONENT TYPES | MICROSCOPIC

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (L)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

Optical Properties: Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Sealed, 7. Pitted, 8. Soluble, 9. Fusion Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low: 0.010, 2. Med 0.010-0.050, 3. High 0.050, 4. Stress 0.005 or Isotropic; Fiber Color (F): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
intro QC 25 C	(C) 2			1	4	~~M~~		20	98	M10	1.551 ⊥ R.I. 1.557 ∥ R.I.
	(T) 1					11	2				1 M 1 S
	(H) 2										2 P ∥ B (FC) 4 1 E
M	(C) 2			1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.
	(T) 1										1 M 1 S
	(H) 2										2 P 1 B (FC) 4 1 E
F	(C) 2			ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.
	(T) 1										M S
	(H) 1										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Curled, 7. Fibril, 8. Matrix, 9. Cleavage Fragments, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low ≤0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Plane Polarized Light Color (PC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-2 COARSE	(C) 2	1/2/3		ND		—	—	20	100	NF	⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E

FD

Analyst: FD Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Curled, 7. Fibril, 8. Matrix, 9. Elastic Shape, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-3 COARSE	(C) 2	2,3,6		NID				20	100		⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

Analyst: Tim Young Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc. PLM7.9.0

5. Client and EMSL Internal Chains of Custody

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
SE6841	

LAB USE ONLY WORK ORDER #: SE6768 ~~SE6841~~

KATAHDIN PROJECT NUMBER _____

REMARKS: To EMSL

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES	Filt. ☐Y ☐N
•	DSY-SD-AA01-0012	10-12-11/14:20	SL	1	✓	SDG: DSY-23	
•	-AA01-1224	/14:23		1	✓		
•	-AA01-2448	/14:28		1	✓		
•	-DUP33-10121	/00:00		1	✓		
•	-AA05-0012	/14:45		1	✓		
•	-AA05-1224	/14:48		1	✓		
•	-AA05-2448	/14:51		1	✓		
		/					
•	DSY-SD-AA09-0012	10-13-11/11:55	SL	1	✓	SDG: DSY-24	
•	-AA09-1224	/11:58		1	✓		
•	-AA09-2448	/12:01		1	✓		
•	-AA13-0012	/12:20		1	✓		
•	-AA13-1224	/12:23		1	✓		
•	-AA13-2448	/12:26		2	✓	MS/MSD	
•	-AA17-0012	/12:45		1	✓		
•	-AA17-1224	/12:48		1	✓		

COMMENTS DOD QSM 4.1 ND to LOD QC Level IV Test America ADAPTED

Due ~~12~~ 11-1-11

31

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11/15:15	10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:

LAB USE ONLY WORK ORDER #: SE6841

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE
PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
1	DSY-SD-AA17-2448	10-13-11 / 12:51	SL	1	✓										
2	-AA21-0012	/ 13:05													
3	-AA21-1224	/ 13:08													
4	-AA21-2448	/ 13:11													
5	-DUP34-101311	/ 00:00													
6	-AA24-0012	/ 13:25													
7	-AA24-1224	/ 13:28													
8	-AA24-2448	/ 13:31													
9	-AA26-0012	/ 14:00													
10	-AA26-1224	/ 14:03													
11	-AA26-2448	/ 14:06													
12	-AA28-0016	/ 14:30													
13	-DUP35-101311	/ 00:00													
14	-AA30-0012	/ 14:45													
15	-AA30-1224	/ 14:48													
		/													

SDG: DSY-24

Jar marked 0012

Jar rec'd broken

OCT 20 PM 5:16

COMMENTS See Page 1 called client/left message for Terri TAT CJK

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11 / 15:15	C LaLena 10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

REPORT TO INSTRUCTIONS

- ☐ Send Receipt Confirmation Emails
- ☐ Email Report Only-Do not send hard copy
- ☐ No electronic signatures
- ☐ Project ID required
- ☐ Cust. COC ID required
- ☐ Miscellaneous account

Sales Rep and Comment: ssteinmetz

Instructions
Received 2 day extention on due date

BILL TO INSTRUCTIONS

- ☐ Exempt from prep charge
- ☐ Exempt from off hour min charges
- ☐ Exempt from layer/aliquot charges
- ☐ Email Invoice Only- Do not send hard copy.
- ☐ Credit Card on File
- ☐ P.O. Required

Billing Frequency: With Report -- Print and send an invoice for each Order ID

Use Billing Contact:
Accounting Terms: N30
Payment Directions: With Report

Instructions

Internal Comment

Test: PLM ASTM Sieve Quantitative **Matrix** Soils **TAT:** 2 Week **Qty:** 31

- ☐ Lab Opening Exempt For Test
- ☐ Prep Charge Exempt For Test
- ☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments
weights are estimated using a blank sample jar as tare weight. Sludge could not be completely removed.

Prepped: DS **Date** 11/3/11
Analyzed: G.Vliet/MM MK **Date** 11/4/11 115, 117
Data Entry RD **Date** 11.8.11
Screened: **Date**
Mailed: KB **Date** 11/10/11

Special Test Instructions

Due Date 11/5/11

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		~~11/3/2011~~ 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0005	DSY-SD-AA05-0012		11/3/2011 2:00:00 PM
041128162-0006	DSY-SD-AA05-1224		11/3/2011 2:00:00 PM
041128162-0007	DSY-SD-AA05-2448		11/3/2011 2:00:00 PM
041128162-0008	DSY-SD-AA09-0012		11/3/2011 2:00:00 PM
041128162-0009	DSY-SD-AA09-1224		11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400

Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

041128162-0010	DSY-SD-AA09-2448	11/3/2011 2:00:00 PM
041128162-0011	DSY-SD-AA13-0012	11/3/2011 2:00:00 PM
041128162-0012	DSY-SD-AA13-1224	11/3/2011 2:00:00 PM
041128162-0013	DSY-SD-AA13-2448	11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP	11/3/2011 2:00:00 PM
041128162-0015	DSY-SD-AA17-0012	11/3/2011 2:00:00 PM
041128162-0016	DSY-SD-AA17-1224	11/3/2011 2:00:00 PM
041128162-0017	DSY-SD-AA17-2448	11/3/2011 2:00:00 PM
041128162-0018	DSY-SD-AA21-0012	11/3/2011 2:00:00 PM
041128162-0019	DSY-SD-AA21-1224	11/3/2011 2:00:00 PM
041128162-0020	DSY-SD-AA21-2448	11/3/2011 2:00:00 PM
041128162-0021	DSY-SD-DUP34-101311	11/3/2011 2:00:00 PM
041128162-0022	DSY-SD-AA24-0012	11/3/2011 2:00:00 PM
041128162-0023	DSY-SD-AA24-1224	11/3/2011 2:00:00 PM
041128162-0024	DSY-SD-AA24-2448	11/3/2011 2:00:00 PM
041128162-0025	DSY-SD-AA26-0012	11/3/2011 2:00:00 PM
041128162-0026	DSY-SD-AA26-1224	11/3/2011 2:00:00 PM
041128162-0027	DSY-SD-AA26-2448	11/3/2011 2:00:00 PM
041128162-0028	DSY-SD-AA28-0016	11/3/2011 2:00:00 PM
041128162-0029	DSY-SD-DUP35-101311	11/3/2011 2:00:00 PM
041128162-0030	DSY-SD-AA30-0012	11/3/2011 2:00:00 PM
041128162-0031	DSY-SD-AA30-1224	11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *11/8/2011 11:23:35 AM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

Test: **TEM ASTM Sieve Qualitative** **Matrix** Soils **TAT:** 2 Week **Qty:** 5

☐ Lab Opening Exempt For Test
☐ Prep Charge Exempt For Test
☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments

Prepped: DB **Date:** 11/8/11
Analyzed: RD **Date:** 11.8.11
Data Entry ↓ **Date:** 11.8.11
Screened: **Date:**
Mailed: DB **Date:** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		11/3/2011 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP		11/3/2011 2:00:00 PM

0411 Bulk 0076 E

Reprep w/acid DB

0411 Bulk 0075 O

6. Equipment Performance Checks

PLM Calibration & Contamination Record

Lab: Cinnaminson Month / Year: November / 2011

PLM Scope #: 02

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	C.H.	✓	✓	✓	✓	✓	✓	420	589
11/2/11	C.H.	✓	✓	✓	✓	✓	✓		
11/3/11	C.H.	✓	✓	✓	✓	✓	✓		
11/4/11	C.H.	✓	✓	✓	✓	✓	✓		
11/5/11	LM	✓	✓	✓	✓	✓	✓		
11/7/11	LM/C.H	✓	✓	✓	✓	✓	✓		
11/8/11	C.H	✓	✓	✓	✓	✓	✓		
11/9/11									
11/10/11									
11/11/11									
11/									
11/									
11/									
11/									
11/									
11/									

26.1°C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Cinn Month / Year: Nov 2011

PLM Scope #: 10

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/2/11	MK	✓	✓	✓	✓	✓	✓	4160	6220
11/3	MK	✓	✓	✓	✓	✓	✓		
11/6	MK	✓	✓	✓	✓	✓	✓		
11/7	MK	✓	✓	✓	✓	✓	✓		
11/9	MK	✓	✓	✓	✓	✓	✓		

21.6 °C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinn. NJ. Month / Year: November 2011

PLM Scope #: 5

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/2011	DP	✓	center	✓	align	✓	✓	460	620
11/2/2011	DP	✓	center	✓	✓	✓	✓		
11/5/2011	DP	✓	center	✓	✓	✓	✓		
11/7/2011	DP		center	✓	✓	✓	✓		
11/8/2011	DP	✓	center	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson 04 Month / Year: Nov. 2011

PLM Scope #: 01

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	G.V.	/	/	/	/	/	///	460	600
11/2/11	G.V.	/	/	/	/	/	///		
11/3/11	G.V.	/	/	/	/	/	////		
11/4/11	G.V.	/	/	/	/	/	///		
11/7/11	G.V.	/	/	/	/	/	///		
11/9/11	G.V.	/	/	/	/	/	///		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson-Asbestos Month / Year: 11/11

PLM Scope #: 06

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11-1-11	FD	✓	✓	✓	✓	✓	✓	460	620
11-2-11	FD	✓	✓	✓	✓	✓	✓		
11-3-11	FD	✓	✓	✓	✓	✓	✓		
11-4-11	FD	✓	✓	✓	✓	✓	✓		
11-5-11	FD	✓	✓	✓	✓	✓	✓		
11-8-11	FD	✓	✓	✓	✓	✓	✓		
11-9-11	FD	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Livermore Month / Year: Nov / 2011

PLM Scope #: 4 Tod Yang

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1	TY	✓	✓	✓	✓	✓	✓	455	550
11/2	TY	✓	✓	✓	✓	✓	✓		
11/3	TY	✓	✓	✓	✓	✓	✓		
11/4	TY	✓	✓	✓	✓	✓	✓		
11/7	TY	✓	✓	✓	✓	✓	✓		
11/8	TY	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

Daily TEM Calibration Sheet

Month: November Year: 2011 Scope: 04-03

Day (1-31)	Analyst Initials	Scope Align.	LN Dewar Filled	Al Peak Actual	Al Peak Accepted Limit	Cu Peak Actual	Cu Peak Accepted Limit	Pass/Fail* (circle)
1	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
2	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
3	CG	✓	FL	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
4	CG	✓	CG	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
5			FL		1.47-1.49		8.03-8.05	Pass/Fail
6					1.47-1.49		8.03-8.05	Pass/Fail
7			FL		1.47-1.49		8.03-8.05	Pass/Fail
8	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
9			FL		1.47-1.49		8.03-8.05	Pass/Fail
10	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
11					1.47-1.49		8.03-8.05	Pass/Fail
12					1.47-1.49		8.03-8.05	Pass/Fail
13					1.47-1.49		8.03-8.05	Pass/Fail
14					1.47-1.49		8.03-8.05	Pass/Fail
15					1.47-1.49		8.03-8.05	Pass/Fail
16					1.47-1.49		8.03-8.05	Pass/Fail
17					1.47-1.49		8.03-8.05	Pass/Fail
18					1.47-1.49		8.03-8.05	Pass/Fail
19					1.47-1.49		8.03-8.05	Pass/Fail
20					1.47-1.49		8.03-8.05	Pass/Fail
21					1.47-1.49		8.03-8.05	Pass/Fail
22					1.47-1.49		8.03-8.05	Pass/Fail
23					1.47-1.49		8.03-8.05	Pass/Fail
24					1.47-1.49		8.03-8.05	Pass/Fail
25					1.47-1.49		8.03-8.05	Pass/Fail
26					1.47-1.49		8.03-8.05	Pass/Fail
27					1.47-1.49		8.03-8.05	Pass/Fail
28					1.47-1.49		8.03-8.05	Pass/Fail
29					1.47-1.49		8.03-8.05	Pass/Fail
30					1.47-1.49		8.03-8.05	Pass/Fail
31					1.47-1.49		8.03-8.05	Pass/Fail

*** Any failing results need immediate corrective action**

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Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Chrysotile Beam Dose Sensitivity

(Quarterly)

Date	Initials	Negative Numbers		At least 90% of patterns >15 seconds ?
		SAED	Morphology	
1/27/2009	JRB	03070	03071	PASS
5/7/2009	KLB	03125	03124	PASS
8/5/2009	KLB	03_247	03_246	PASS
11/3/2009	KLB	03-356	03-357	PASS
2/8/2010	DY	03_372	03_373	PASS
5/18/2010	DY	03373	03374	PASS
8/16/2010	DY	03030	03031	PASS
11/5/2010	CG	11-5-10CG6	11-5-10CG5	PASS
2/18/2011	CG	03125	03126	PASS
5/20/2011	CG	03155	03154	PASS
8/18/2011	CG	03227	03228	PASS
11/4/2011	CG	03316	03317	PASS

Comments:

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

Negative (Camera)					
Date	Initials	Negative Number	Camera Length	Camera Constant	Is 2 Standard Dev. < 5% Mean?
2/25/2010	CJG	03-37216	100	516.02	PASS
3/17/2010	CJG	03-6[4]	100	514.61	PASS
5/18/2010	DY	03006	100	501.47	PASS
6/18/2010	DY	03024	100	510.82	PASS
7/28/2010	DY	03027	100	521.57	PASS
9/3/2010	CG	03030	100	517.31	PASS
10/4/2010	CG	03035	100	521.76	PASS
11/5/2010	CG	11-5-10-CG1	100	526.44	PASS
12/16/2010	CG	03-278	100	527.61	PASS
1/13/2011	CG	1-13-10 CG1	100	523.21	PASS
2/17/2011	CG	03122	100	529.45	PASS
3/18/2011	CG	03139	100	523.70	PASS
4/15/2011	CG	03144	100	510.25	PASS
5/20/2011	CG	03156	100	522.70	PASS
6/13/2011	CG	03163	100	522.09	PASS
7/12/2011	CG	03169	100	533.34	PASS
8/11/2011	CG	03219	100	529.18	PASS
9/15/2011	CG	03258	100	532.16	PASS
10/12/2011	CG	03289	100	524.71	PASS
11/4/2011	CG	03318	100	532.69	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

On Screen					
Date	Initials	Camera Length	Aperture #	Aperture Diameter	Is 2 Standard Dev. < 5% Mean?
7/28/2010	DY	24	1	1.12	PASS
9/3/2010	CG	24	1	1.18	PASS
10/4/2010	CG	24	1	1.18	PASS
11/5/2010	CG	24	1	1.18	PASS
12/16/2010	CG	24	1	1.18	PASS
2/17/2011	CG	24	1	1.18	PASS
2/18/2011	CG	24	1	1.18	PASS
2/22/2011	CG	24	1	1.18	PASS
3/3/2011	CG	24	1	1.18	PASS
3/7/2011	CG	24	1	1.18	PASS
3/8/2011	CG	24	1	1.18	PASS
3/18/2011	CG	24	1	1.18	PASS
4/15/2011	CG	24	1	1.18	PASS
5/20/2011	CG	24	1	1.18	PASS
6/13/2011	CG	24	1	1.18	PASS
7/12/2011	CG	24	1	1.20	PASS
8/11/2011	CG	24	1	1.20	PASS
9/15/2011	CG	24	1	1.18	PASS
10/12/2011	CG	24	1	1.18	PASS
11/4/2011	CG	24	1	1.18	PASS

The above aperture diameter represents the on screen diameter in reciprocal space. Multiply this number times the number of layer lines seen to get layer line spacing.

Comments:

Plasma Asher Calibration

(Quarterly)

Time To Ash 5% of Collapsed MCE Filter			
Date	Initials	Min	Sec
10/28/2009	SNS	3	18
2/2/2010	SNS	6	49
5/12/2010	DY	7	28
8/20/2010	DS	9	32
9/13/2010	WP	4	15

Comments: This is Asher is no longer in use as off Dec 2010. The 2 ashers currently in use for prep are on Scope 1 and Scope 2's calibration report.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Magnification Calibrations
(Monthly)

20,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	20963	20925	PASS
6/18/2010	DY	20963	21060	PASS
7/28/2010	DY	20963	21060	PASS
9/3/2010	CG	20963	20250	PASS
10/4/2010	CG	20963	21330	PASS
11/5/2010	CG	20963	21060	PASS
12/17/2010	CG	20963	21060	PASS
1/13/2011	CG	20963	21060	PASS
2/17/2011	CG	20963	21330	PASS
3/18/2011	CG	20963	21330	PASS
4/15/2011	CG	20963	21330	PASS
5/20/2011	CG	20963	20790	PASS
6/13/2011	CG	20963	20304	PASS
7/12/2011	CG	20963	20790	PASS
8/11/2011	CG	20963	21276	PASS
9/15/2011	CG	20963	20385	PASS
10/12/2011	CG	20963	20925	PASS
11/4/2011	CG	20963	21060	PASS

Comments:

20,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DY	14474	14644	PASS
3/18/2010	DY	14474	14400	PASS
5/18/2010	DY	14474	14582	PASS
6/18/2010	DY	14474	14400	PASS
7/28/2010	DY	14474	14400	PASS
9/3/2010	CG	14474	14164	PASS
10/3/2010	CG	14474	14521	PASS
11/5/2010	CG	14474	14644	PASS
12/17/2010	CG	14474	14400	PASS
1/13/2011	CG	14474	14400	PASS
2/17/2011	CG	14474	14521	PASS
3/18/2011	CG	14474	14644	PASS
4/15/2011	CG	14474	14644	PASS
5/20/2011	CG	14474	14400	PASS
6/13/2011	CG	14474	14521	PASS
7/12/2011	CG	14474	14400	PASS
8/11/2011	CG	14474	14521	PASS
9/15/2011	CG	14474	14521	PASS
10/11/2011	CG	14474	14281	PASS
11/4/2011	CG	14474	14400	PASS

Comments:

10,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	10641	10800	PASS
6/18/2010	DY	10641	10962	PASS
7/28/2010	DY	10641	10800	PASS
9/3/2010	CG	10641	10908	PASS
10/4/2010	CG	10641	10584	PASS
11/5/2010	CG	10641	10692	PASS
12/17/2010	CG	10641	10757	PASS
1/13/2011	CG	10641	10757	PASS
2/17/2011	CG	10641	10584	PASS
3/18/2011	CG	10641	10843	PASS
4/15/2011	CG	10641	10692	PASS
5/20/2011	CG	10641	10584	PASS
6/13/2011	CG	10641	10303	PASS
7/12/2011	CG	10641	10368	PASS
8/11/2011	CG	10641	10627	PASS
9/15/2011	CG	10641	10152	PASS
10/12/2011	CG	10641	10584	PASS
11/4/2011	CG	10641	10541	PASS

Comments:

10,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DLY	7293	7448	PASS
3/18/2010	DLY	7293	7353	PASS
5/18/2010	DY	7293	7353	PASS
6/18/2010	DY	7293	7353	PASS
7/28/2010	DY	7293	7353	PASS
9/3/2010	CG	7293	7082	PASS
10/4/2010	CG	7293	7140	PASS
11/5/2010	CG	7293	7385	PASS
12/16/2010	CG	7293	7200	PASS
1/13/2011	CG	7293	7140	PASS
2/17/2011	CG	7293	7261	PASS
3/18/2011	CG	7293	7448	PASS
4/15/2011	CG	7293	7448	PASS
5/20/2011	CG	7293	7291	PASS
6/13/2011	CG	7293	7353	PASS
7/12/2011	CG	7293	7291	PASS
8/11/2011	CG	7293	7322	PASS
9/15/2011	CG	7293	7200	PASS
10/11/2011	CG	7293	7140	PASS
11/4/2011	CG	7293	7140	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Calibration of On Screen 0.5 and 5µm

Measuring Aids at EPA AHERA Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DY	0.55	5.46
3/18/2010	DY	0.56	5.56
5/18/2010	DY	0.55	5.49
6/18/2010	DY	0.56	5.56
7/28/2010	DY	0.56	5.56
9/3/2010	CG	0.56	5.65
10/3/2010	CG	0.55	5.51
11/5/2010	CG	0.55	5.46
12/17/2010	CG	0.56	5.56
1/13/2011	CG	0.56	5.56
2/17/2011	CG	0.55	5.51
3/18/2011	CG	0.55	5.46
4/15/2011	CG	0.55	5.46
5/20/2011	CG	0.56	5.56
6/13/2011	CG	0.55	5.51
7/12/2011	CG	0.56	5.56
8/11/2011	CG	0.55	5.51
9/15/2011	CG	0.55	5.51
10/11/2011	CG	0.56	5.60
11/4/2011	CG	0.56	5.56
Comments:			

Calibration of On Screen 1.0 and 10µm

Measuring Aids at EPA 100.2 Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DLY	1.07	10.74
3/18/2010	DLY	1.09	10.88
5/18/2010	DY	1.09	10.88
6/18/2010	DY	1.09	10.88
7/28/2010	DY	1.09	10.88
9/3/2010	CG	1.13	11.30
10/4/2010	CG	1.12	11.20
11/5/2010	CG	1.08	10.83
12/16/2010	CG	1.11	11.11
1/13/2011	CG	1.12	11.20
2/17/2011	CG	1.10	11.02
3/18/2011	CG	1.07	10.74
4/15/2011	CG	1.07	10.74
5/20/2011	CG	1.10	10.97
6/13/2011	CG	1.09	10.88
7/12/2011	CG	1.10	10.97
8/11/2011	CG	1.09	10.93
9/15/2011	CG	1.11	11.11
10/11/2011	CG	1.12	11.20
11/4/2011	CG	1.12	11.20
Comments:			

Spot Size Measurements

(Quarterly)

Date	Initials	Actual Spot	Target Spot Size	FAIL ≤250nm =	Is 2 SD <25% of
5/18/2010	DY	203.11	≤ 250 nm	PASS	PASS
8/16/2010	DY	213.68	≤ 250 nm	PASS	PASS
11/5/2010	CG	216.38	≤ 250 nm	PASS	PASS
12/17/2010	CG	206.76	≤ 250 nm	PASS	PASS
2/17/2011	CG	192.34	≤ 250 nm	PASS	PASS
2/18/2011	CG	216.38	≤ 250 nm	PASS	PASS
2/22/2011	CG	201.95	≤ 250 nm	PASS	PASS
3/3/2011	CG	221.19	≤ 250 nm	PASS	PASS
3/7/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/8/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/18/2011	CG	192.34	≤ 250 nm	PASS	PASS
4/15/2011	CG	201.95	≤ 250 nm	PASS	PASS
5/20/2011	CG	240.42	≤ 250 nm	PASS	PASS
6/13/2011	CG	231.48	≤ 250 nm	PASS	PASS
7/12/2011	CG	216.45	≤ 250 nm	PASS	PASS
8/11/2011	CG	197.41	≤ 250 nm	PASS	PASS
9/15/2011	CG	245.28	≤ 250 nm	PASS	PASS
10/12/2011	CG	215.05	≤ 250 nm	PASS	PASS
11/4/2011	CG	223.17	≤ 250 nm	PASS	PASS
Comments:					

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

K Factors

(Semi-Annually)

Test Dates	Initials	Mean K Factor	Pass Criteria	Actual	PASS FAIL	Acceptance Criteria	PASS/FAIL
5/19/2011	CG	Mg:Si	1.0 - 2.0	1.63	PASS	2SD < 10% Mean	PASS
5/19/2011	CG	Ca:Si	1.0 - 1.75	1.11	PASS	2SD < 10% Mean	PASS
----		Fe:Si	1.0 - 2.0	1.46	PASS	2SD < 10% Mean	PASS
----		Mg:Fe	1.5 or less	1.11	PASS	N / A	N / A
12/16/2010	CG	Na:Si	1.0 - 4.0	3.02	PASS	2SD < 20% Mean	PASS
5/20/2011	CG	Al:Si	1.0 - 1.75	1.19	PASS	2SD < 10% Mean	PASS

Comments:

Detector Resolution

(Semi-Annually / Quarterly when necessary to meet TNI Standard)

Date	@Mn Kα Peak Initials	Resolution	<175?	Resolution + 2(s) <180?
10/25/2007	GPA	130.5	Pass	Pass
5/1/2008	GPA	134.8	Pass	Pass
10/29/2008	JRB	115.9	Pass	Pass
5/6/2009	JB	128.9	Pass	Pass
11/3/2009	KLB	141.0	Pass	Pass
4/28/2010	DY	131.0	Pass	Pass
11/4/2010	CG	120.0	Pass	Pass
5/20/2011	CG	135.0	Pass	Pass
8/18/2011	CG	125.0	Pass	Pass
11/4/2011	CG	135.0	Pass	Pass

Comments:

Significant Na and Resolvable Mg-Si Peaks

(Quarterly)

Significant Na				Resolvable			
Date	Initials	Na		Date	Initials	Mg	Si
8/5/2009	KLB	Pass		8/5/09	KLB	Yes	Yes
11/3/2009	KLB	Pass		11/3/09	KLB	Yes	Yes
2/5/2010	DY	Pass		2/5/10	DY	Yes	Yes
4/28/2010	DY	Pass		4/28/10	DY	Yes	Yes
7/28/2010	DY	Pass		7/28/10	DY	Yes	Yes
11/5/2010	CG	Pass		11/4/10	CG	Yes	Yes
2/18/2011	CG	Pass		2/18/11	CG	Yes	Yes
5/20/2011	CG	Pass		5/20/11	CG	Yes	Yes
8/18/2011	CG	Pass		8/18/11	CG	Yes	Yes
11/4/2011	CG	Pass		11/4/11	CG	Yes	Yes

Comments:

7. NVLAP/AIHA Certifications

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2006-05-19)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.

Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC thereby conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA-LAP, LLC in the following:

LABORATORY ACCREDITATION PROGRAMS

√	INDUSTRIAL HYGIENE	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL LEAD	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: July 01, 2012
☐	FOOD	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current scope of accreditation.

Dave Sandusky

Dave Sandusky, CIH
Chairperson, Analytical Accreditation Board

Date Issued: 07/01/2010

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
107 Haddon Avenue, Westmont, NJ 08108

Laboratory ID: 100194
Issue Date: 07/01/2010

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or revocation. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Gas Chromatography	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1400	
		NIOSH 1500	
		NIOSH 1550	
		NIOSH 1603	
		NIOSH 2000	
		NIOSH 2551	
		NIOSH 5502	
		NIOSH 5503	
		NIOSH 5510	
		OSHA 1010	
	GC (Diffusive Samplers)	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1501	
	GC/MS	EPA TO-15	
	HPLC	NIOSH 2016	
		NIOSH 5506	
		OSHA 47	
		OSHA 58	
	AA	NIOSH 6009	
		NIOSH 7105	
		OSHA ID-140	
		OSHA ID-145	
	ICP	NIOSH 7300	
	XRD	NIOSH 7500	
	Ion Chromatography	NIOSH 6004	
		NIOSH 6011	
		NIOSH 7903	

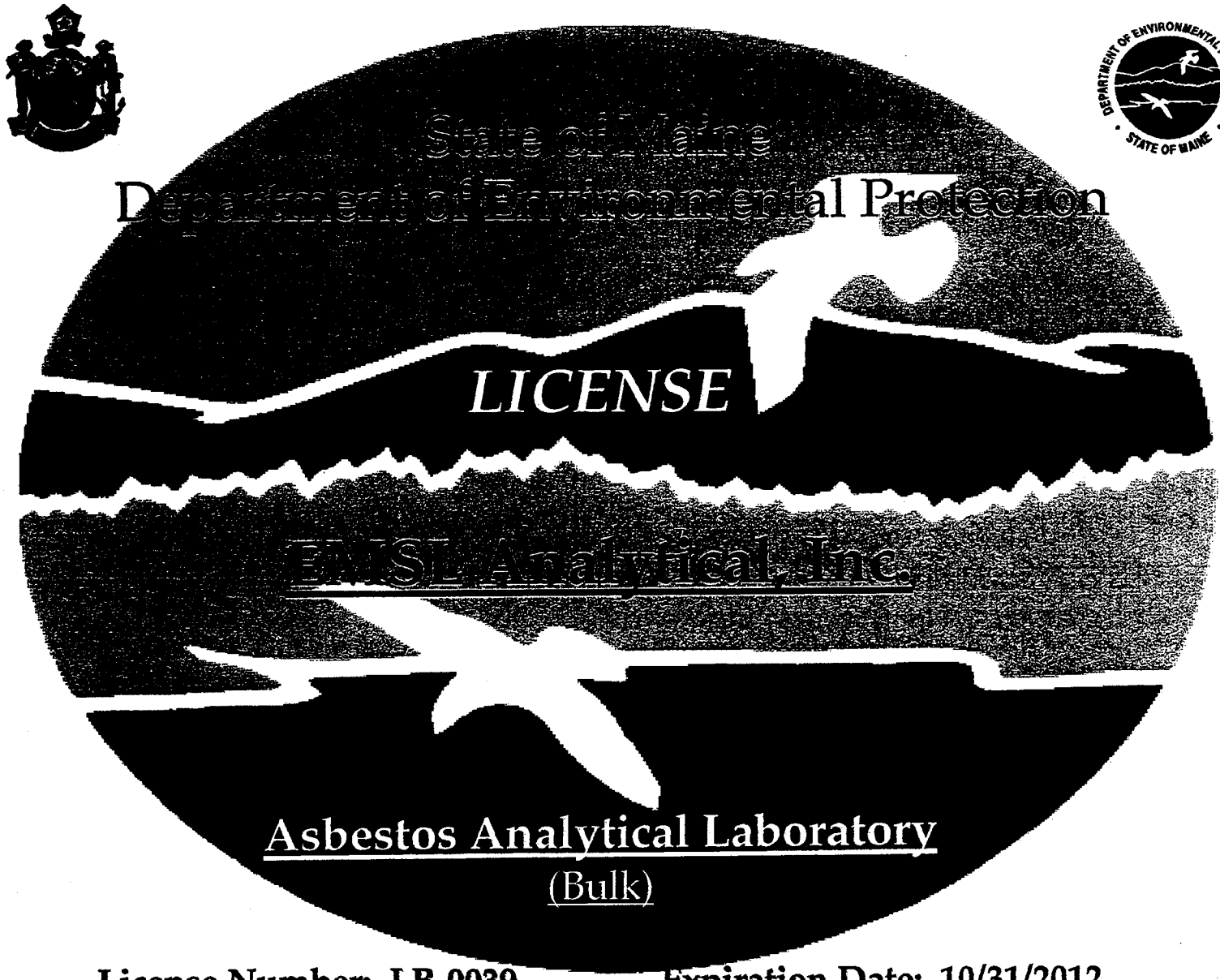
AIHA
Laboratory Accreditation Programs, LLC

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Ion Chromatography	OSHA ID-214	
		OSHA ID-215	
	Gravimetric	NIOSH 0500	
		NIOSH 0600	
	UV/VIS (Colorimetric)	NIOSH 6010	
	Thermal Optical Analyzer	NIOSH 5040	
	Polarized Light Microscopy (PLM)	EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)	NIOSH 7400	
	Transmission Electron Microscopy (TEM)	EPA AHERA - 40 CFR Part 763	
		NIOSH 7402	

The laboratory participates in the following AIHA-LAP, LLC-approved proficiency testing programs:

- ✓ Metals*
- ✓ Silica*
- ✓ Asbestos*
- ☐ Bulk Asbestos*
- ✓ Beryllium
- ☐ WASP[1] (Thermal Desorption Tubes)
- ☐ Pharmaceutical Round Robin
- ☐ Compressed/Breathing Air Round Robin
- ☐ NVLAP (determined at the time of site assessment)
- ✓ Organic Solvents*
- ✓ Diffusive Sampler (3M)*
- ☐ Diffusive Sampler (SKC)*
- ☐ Diffusive Sampler (AT)
- ✓ WASP[1] (Formaldehyde)

[1] Workplace Analytical Scheme for Proficiency



License Number: LB-0039 **Expiration Date:** 10/31/2012

8. Shipping Documentation

From:
WILLARD WARREN
KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY

SCARBOROUGH, ME 04074
(207) 874-2400

Ship Date: 18OCT11
ActWgt: 36.6 LB
CAD: 683287/CAFE2472

TO SAMPLE RECEIVING
EMSL
3 COOPER STREET

WESTMONT, NJ 08108 (US)

FedEx Ground

Ref:
INV:
PO:
Dept:

1 of 1

(9612019) 8146969 60046520

Part # 156148-434 RIT2 04/11 **

GND Prepaid

Katahdin ANALYTICAL SERVICES

Date: 10-18-11 Signature

CUS

ENVIRONMEN
ULTRA CL

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE: JANUARY 13, 2012**

FROM: **A. COGNETTI** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: SELECT SVOC/SELECT PAH/PCB**
CTO WE61, NAVSTA NEWPORT- DERECKTOR SHIPYARD
SAMPLE DELIVERY GROUP (SDG) – DSY-9

SAMPLES: 13/Sediment/Select SVOC/SELECT PAH/PCB

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448
DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
DSY-SD-DUP11-092611		

1/Aqueous/Select SVOC/Select PAH/PCB

DSY-SD-RB04-092611

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-9 consists of thirteen (13) environmental sediment samples and a rinsate blank. All samples were analyzed for select semivolatile organic compounds (SVOC), select polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The select SVOCs are benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene and pyrene. The select PAH is benzo(a)pyrene. There is one field duplicate pair contained within this SDG: DSY-SD-AG26-0012/DSY-SD-DUP11-092611.

The samples were collected on September 26, 2011 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270D for SVOCs, 8270D SIM for PAH, and 8082A for PCB analytical and reporting protocol. A Tier 2 data validation was performed on the analyses.

The data contained in this SDG were validated with regard to the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Initial and Continuing Calibration
*	•	Laboratory Method and/or Field Quality Control Blanks
	•	Surrogate Spike Recoveries
	•	Laboratory Control Spike / Laboratory Control Spike Duplicate Recoveries
	•	Internal Standards Performance
*	•	Matrix Spike/Matrix Spike Duplicate Results
*	•	Detection Limits
*	•	Field Duplicate Precision

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

CALIBRATIONS

The initial calibration percent relative standard deviation (%RSD) for indeno(1,2,3-cd)pyrene was greater than the 20% quality control limit on October 25, 2011 on instrument GCMS-U. This noncompliance affects all sediment samples. The nondetected indeno(1,2,3-cd)pyrene results in the affected samples were qualified as estimated (UJ).

The continuing calibration percent difference (%D) for Aroclor 1254 was greater than the 20% quality control limit on column 1 on October 17, 2011 @ 8:48 affecting samples DSY-SD-AI26-0012, DSY-SD-AI26-1224, DSY-SD-AI26-2448 and DSY-SD-AG26-0012. The positive Aroclor 1254 results reported from column 1 in samples DSY-SD-AI26-1224 and DSY-SD-AI26-2448 were qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The %Rs of both PCB surrogates were less than the lower quality control limit but greater than 10% on both columns for all sediment samples, except sample DSY-SD-AC24-2448. In sample DSY-SD-AC24-2448, surrogate TCX %Rs were less than the lower quality control limit on both columns and surrogate DCB %R was less than the lower quality control limit on column 1 only. The positive and nondetected PCB results in all sediment samples were qualified as estimated (J) and (UJ), respectively.

LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

The SVOC laboratory control sample duplicate (LCSD) %Rs of benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were less than the lower quality control limit in batch WG98302 affecting the rinsate blank. The relative percent differences (RPDs) for benzo(g,h,i)perylene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene exceeded quality control limits. The LCS %Rs were within quality control limits. The nondetected benzo(g,h,i)perylene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene results in the rinsate blank, DSY-SD-RB04-092611, were qualified as estimated (UJ).

DIFFERENCE BETWEEN COLUMNS/DETECTORS

The RPD between columns in the PCB analyses was greater than 40% in the following samples. Positive results were qualified as estimated (J).

Sample	Analyte	RPD	Qualification
DSY-SD-AG26-2448	Arolcor 1254	54.1	J
DSY-SD-AI26-1224	Aroclor 1254	65.0	J

INTERNAL STANDARDS

The SVOC internal standard perylene-d12 had areas less than the lower quality control limit in samples DSY-SD-AI26-0012, DSY-SD-AI26-2448, DSY-SD-AG26-1224, DSY-SD-DUP11-092611, DSY-AC24-0012, DSY-SD-AC24-1224, DSY-SD-AC24-2448 and DSY-SD-AE24-1224. Samples DSY-SD-AG26-1224 and DSY-SD-AC24-1224 also had areas less than the lower quality control limit for internal standard chrysene-d12. The nondetected analytes quantitated using these internal standards were qualified as estimated (UJ) in the affected samples. A copy of the continuing calibration raw data is included in Appendix D.

The PAH internal standard perylene-d12 had areas less than the lower quality control limit in samples DSY-SD-AI26-0012, DSY-SD-AI26-1224, DSY-SD-AG26-0012, DSY-SD-AC24-2448, DSY-SD-AE-0012 and DSY-SD-AE24-2448. In addition samples DSY-SD-AC24-1224 and DSY-SD-AE24-1224 had noncompliances with internal standard phenanthrene-d10. The positive benzo(a)pyrene results in the affected samples were qualified as estimated (J).

ADDITIONAL COMMENTS

The PAH LCSD associated with batch WG98304 had a %R of benzo(a)pyrene greater than the upper quality control limit. The %R in the LCS and the RPD for benzo(a)pyrene were within quality control limits. No action was taken on the nondetected benzo(a)pyrene result in the affected sample DSY-SD-RB04-092611.

The continuing calibration %Ds for Aroclor 1016 were greater than the 20% quality control limit on column 1 on October 13, 2011 @ 21:17 and October 14, 2011 @ 1:25. No action was taken on the nondetected Aroclor 1016 result in the affected sample DSY-SD-RB04-092611.

The continuing calibration %D for Arolocr 1260 was greater than the 20% quality control limit on October 16, 2011 @ 11:20. No action was taken on the nondetected Arolocr 1260 result in the affected sample DSY-SD-RB04-092611.

The PCB surrogate recovery of DCB was less than the lower quality control limit but greater than 10% on column 2 for sample DSY-SD-RB04-092611. No action was taken on the nondetected PCB results in sample DSY-SD-RB04-092611.

The PCB LCS associated with batch WG98765 had a %R of Aroclor 1260 less than the lower quality control limit. The %R of Aroclor 1260 in the LCSD and the RPD were within quality control limits. No action was taken on the Aroclor 1260 results in the affected sediment samples.

According to the SAP for Derecktor Shipyard, August 2011, Total High Molecular Weight PAHs and Total PCBs were to be reported by the laboratory. The laboratory did not report them.

According to Worksheet #15 of the SAP, the laboratory first will analyze the samples in full scan mode. If the value associated with any J-flagged sample result or U-flagged (non-detected) sample result for any HMW PAH is above the project LOQ goal, the laboratory will reanalyze the sample for that PAH in SIM mode. The laboratory only analyzed benzo(a)pyrene for all samples in the SIM mode. Several samples had PAH results in the full scan mode that were greater than the project limit of quantitation (LOQ).

Positive results reported at concentrations greater than the method detection limit (MDL) but less than the Reporting Limit (RL) were qualified as estimated (J).

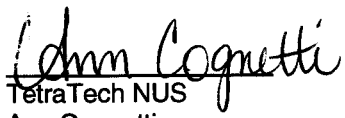
Nondetected results were reported at the limit of detection (LOD).

EXECUTIVE SUMMARY

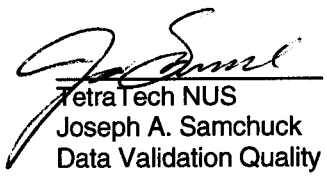
Laboratory Performance: Continuing calibration noncompliances in the SVOC and PCB fractions resulted in the qualification of data. The percent recovery of surrogates was outside quality control limits in the PAH and PCB fractions resulting in the qualification of data. The percent recoveries in LCSD and RPD were outside quality control limits for several analytes in the SVOC fractions. The %D between columns in the PCB fraction exceeded quality control limits in samples DSY-SD-AG26-2448 and DSY-SD-AI26-1224. Internal standard noncompliances were noted for perylene-d12 in the SVOC and PAH fractions.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96), and the Department of Defense (DoD) document entitled, "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.



TetraTech NUS
Ann Cognetti
Chemist/Data Validator



TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-9 FRACTION: OS MEDIA: SOIL	NSAMPLE	DSY-SD-AC24-0012			DSY-SD-AC24-1224			DSY-SD-AC24-2448			DSY-SD-AE24-0012		
	LAB_ID	SE6227-8			SE6227-9			SE6227-10			SE6227-11		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			69.5			76.7			36.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		690	U		340	UJ	N	300	U		630	U	
BENZO(B)FLUORANTHENE		690	UJ	N	340	UJ	N	300	UJ	N	630	U	
BENZO(G,H,I)PERYLENE		690	UJ	N	340	UJ	N	300	UJ	N	630	U	
BENZO(K)FLUORANTHENE		690	UJ	N	340	UJ	N	300	UJ	N	630	U	
CHRYSENE		300	J	P	340	UJ	N	300	U		330	J	P
DIBENZO(A,H)ANTHRACENE		690	UJ	N	340	UJ	N	300	UJ	N	630	U	
FLUORANTHENE		690	U		340	U		300	U		630	U	
INDENO(1,2,3-CD)PYRENE		690	UJ	CN	340	UJ	CN	300	UJ	CN	630	UJ	C
PYRENE		800	J	P	780	J	N	300	U		760	J	P

PROJ_NO: 02747 SDG: DSY-9 FRACTION: OS MEDIA: SOIL	NSAMPLE	DSY-SD-AE24-1224			DSY-SD-AE24-2448			DSY-SD-AG26-0012			DSY-SD-AG26-1224		
	LAB_ID	SE6227-12			SE6227-13			SE6227-4			SE6227-5		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.8			75.0			36.4			43.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		200	J	P	320	U		620	U		550	UJ	N
BENZO(B)FLUORANTHENE		490	UJ	N	320	U		620	U		550	UJ	N
BENZO(G,H,I)PERYLENE		490	UJ	N	320	U		620	U		550	UJ	N
BENZO(K)FLUORANTHENE		490	UJ	N	320	U		620	U		550	UJ	N
CHRYSENE		290	J	P	320	U		250	J	P	550	UJ	N
DIBENZO(A,H)ANTHRACENE		490	UJ	N	320	U		620	U		550	UJ	N
FLUORANTHENE		490	U		320	U		620	U		550	U	
INDENO(1,2,3-CD)PYRENE		490	UJ	CN	320	UJ	C	620	UJ	C	550	UJ	CN
PYRENE		980			320	U		490	J	P	1100	J	N

PROJ_NO: 02747 SDG: DSY-9 FRACTION: OS MEDIA: SOIL	NSAMPLE	DSY-SD-AG26-2448			DSY-SD-AI26-0012			DSY-SD-AI26-1224			DSY-SD-AI26-2448		
	LAB_ID	SE6227-6			SE6227-1			SE6227-2			SE6227-3		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.0			38.2			40.0			56.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		340	U		630	U		620	U		440	U	
BENZO(B)FLUORANTHENE		340	U		380	J	PN	620	U		440	UJ	N
BENZO(G,H,I)PERYLENE		340	U		630	UJ	N	620	U		440	UJ	N
BENZO(K)FLUORANTHENE		340	U		630	UJ	N	620	U		440	UJ	N
CHRYSENE		340	U		630	U		240	J	P	440	U	
DIBENZO(A,H)ANTHRACENE		340	U		630	UJ	N	620	U		440	UJ	N
FLUORANTHENE		340	U		440	J	P	620	U		440	U	
INDENO(1,2,3-CD)PYRENE		340	UJ	C	630	UJ	CN	620	UJ	C	440	UJ	CN
PYRENE		270	J	P	800	J	P	620	J	P	620		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP11-092611
SDG: DSY-9	LAB_ID	SE6227-7
FRACTION: OS	SAMP_DATE	9/26/2011
MEDIA: SOIL	QC_TYPE	NM
	UNITS	UG/KG
	PCT_SOLIDS	37.4
	DUP_OF	DSY-SD-AG26-0012

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	240	J	P
BENZO(B)FLUORANTHENE	480	J	PN
BENZO(G,H,I)PERYLENE	630	UJ	N
BENZO(K)FLUORANTHENE	260	J	PN
CHRYSENE	380	J	P
DIBENZO(A,H)ANTHRACENE	630	UJ	N
FLUORANTHENE	310	J	P
INDENO(1,2,3-CD)PYRENE	630	UJ	CN
PYRENE	990		

PROJ_NO: 02747 SDG: DSY-9 FRACTION: OS MEDIA: WATER	NSAMPLE	DSY-SD-RB04-092611		
	LAB_ID	SE6227-14		
	SAMP_DATE	9/26/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.1	U	
BENZO(B)FLUORANTHENE		7.1	U	
BENZO(G,H,I)PERYLENE		7.1	UJ	E
BENZO(K)FLUORANTHENE		7.1	U	
CHRYSENE		7.1	U	
DIBENZO(A,H)ANTHRACENE		7.1	UJ	E
FLUORANTHENE		7.1	U	
INDENO(1,2,3-CD)PYRENE		7.1	UJ	E
PYRENE		7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC24-0012			DSY-SD-AC24-1224			DSY-SD-AC24-2448			DSY-SD-AE24-0012		
SDG: DSY-9	LAB_ID	SE6227-8			SE6227-9			SE6227-10			SE6227-11		
FRACTION: PAH	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			69.5			76.7			36.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		180	J	N	100			11	J	P	270	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE24-1224			DSY-SD-AE24-2448			DSY-SD-AG26-0012			DSY-SD-AG26-1224		
SDG: DSY-9	LAB_ID	SE6227-12			SE6227-13			SE6227-4			SE6227-5		
FRACTION: PAH	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.8			75.0			36.4			43.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		190			16	J	NP	170	J	N	200		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG26-2448			DSY-SD-AI26-0012			DSY-SD-AI26-1224			DSY-SD-AI26-2448		
SDG: DSY-9	LAB_ID	SE6227-6			SE6227-1			SE6227-2			SE6227-3		
FRACTION: PAH	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.0			38.2			40.0			56.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		67			240	J	N	170	J	N	120		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP11-092611		
SDG: DSY-9	LAB_ID	SE6227-7		
FRACTION: PAH	SAMP_DATE	9/26/2011		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	37.4		
	DUP_OF	DSY-SD-AG26-0012		
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		280		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB04-092611		
SDG: DSY-9	LAB_ID	SE6227-14		
FRACTION: PAH	SAMP_DATE	9/26/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC24-0012			DSY-SD-AC24-1224			DSY-SD-AC24-2448			DSY-SD-AE24-0012		
SDG: DSY-9	LAB_ID	SE6227-8			SE6227-9			SE6227-10			SE6227-11		
FRACTION: PCB	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			69.5			76.7			36.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	UJ	R	12	UJ	R	11	UJ	R	23	UJ	R
AROCLOR-1221		24	UJ	R	12	UJ	R	11	UJ	R	23	UJ	R
AROCLOR-1232		28	UJ	R	14	UJ	R	13	UJ	R	27	UJ	R
AROCLOR-1242		24	UJ	R	12	UJ	R	11	UJ	R	23	UJ	R
AROCLOR-1248		24	UJ	R	12	UJ	R	11	UJ	R	23	UJ	R
AROCLOR-1254		24	UJ	R	170	J	R	11	UJ	R	290	J	R
AROCLOR-1260		24	UJ	R	12	UJ	R	11	UJ	R	23	UJ	R

PROJ_NO: 02747 SDG: DSY-9 FRACTION: PCB MEDIA: SOIL	NSAMPLE	DSY-SD-AE24-1224			DSY-SD-AE24-2448			DSY-SD-AG26-0012			DSY-SD-AG26-1224		
	LAB_ID	SE6227-12			SE6227-13			SE6227-4			SE6227-5		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.8			75.0			36.4			43.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		16	UJ	R	11	UJ	R	23	UJ	R	19	UJ	R
AROCLOR-1221		16	UJ	R	11	UJ	R	23	UJ	R	19	UJ	R
AROCLOR-1232		19	UJ	R	13	UJ	R	27	UJ	R	22	UJ	R
AROCLOR-1242		16	UJ	R	11	UJ	R	23	UJ	R	19	UJ	R
AROCLOR-1248		16	UJ	R	11	UJ	R	23	UJ	R	19	UJ	R
AROCLOR-1254		160	J	R	11	UJ	R	23	UJ	R	130	J	R
AROCLOR-1260		16	UJ	R	11	UJ	R	23	UJ	R	19	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG26-2448			DSY-SD-AI26-0012			DSY-SD-AI26-1224			DSY-SD-AI26-2448		
SDG: DSY-9	LAB_ID	SE6227-6			SE6227-1			SE6227-2			SE6227-3		
FRACTION: PCB	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.0			38.2			40.0			56.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	UJ	R	22	UJ	R	20	UJ	R	15	UJ	R
AROCLOR-1221		13	UJ	R	22	UJ	R	20	UJ	R	15	UJ	R
AROCLOR-1232		15	UJ	R	25	UJ	R	24	UJ	R	17	UJ	R
AROCLOR-1242		13	UJ	R	22	UJ	R	20	UJ	R	15	UJ	R
AROCLOR-1248		13	UJ	R	22	UJ	R	20	UJ	R	15	UJ	R
AROCLOR-1254		55	J	PR	22	UJ	R	63	J	CPR	86	J	CR
AROCLOR-1260		13	UJ	R	22	UJ	R	20	UJ	R	15	UJ	R

PROJ_NO: 02747 SDG: DSY-9 FRACTION: PCB MEDIA: SOIL	NSAMPLE	DSY-SD-DUP11-092611		
	LAB_ID	SE6227-7		
	SAMP_DATE	9/26/2011		
	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	37.4		
	DUP_OF	DSY-SD-AG26-0012		
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		22	UJ	R
AROCLOR-1221		22	UJ	R
AROCLOR-1232		26	UJ	R
AROCLOR-1242		22	UJ	R
AROCLOR-1248		22	UJ	R
AROCLOR-1254		22	UJ	R
AROCLOR-1260		22	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB04-092611
SDG: DSY-9	LAB_ID	SE6227-14
FRACTION: PCB	SAMP_DATE	9/26/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
AROCLOR-1016	0.24	U	
AROCLOR-1221	0.24	U	
AROCLOR-1232	0.24	U	
AROCLOR-1242	0.24	U	
AROCLOR-1248	0.24	U	
AROCLOR-1254	0.24	U	
AROCLOR-1260	0.24	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-8
Client ID: DSY-SD-AC24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	690	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	U	690	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	U	690	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	300	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	360	690
Fluoranthene	U	690	ug/Kgdrywt	1	330	920	300	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene	J	800	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		34.7	%					
2-Fluorobiphenyl		50.2	%					
Terphenyl-d14		56.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-9
Client ID: DSY-SD-AC24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 70.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	340	ug/Kgdrywt	1	330	450	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	450	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	450	140	340
Benzo(k)fluoranthene	U	340	ug/Kgdrywt	1	330	450	110	340
Chrysene	U	340	ug/Kgdrywt	1	330	450	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	450	170	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	450	140	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	450	170	340
Pyrene		780	ug/Kgdrywt	1	330	450	140	340
Nitrobenzene-d5		63.6	%					
2-Fluorobiphenyl		79.4	%					
Terphenyl-d14		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-10
Client ID: DSY-SD-AC24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 77.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	300	ug/Kgdrywt	1	330	400	100	300
Benzo(b)fluoranthene	U	300	ug/Kgdrywt	1	330	400	160	300
Benzo(g,h,i)perylene	U	300	ug/Kgdrywt	1	330	400	120	300
Benzo(k)fluoranthene	U	300	ug/Kgdrywt	1	330	400	100	300
Chrysene	U	300	ug/Kgdrywt	1	330	400	110	300
Dibenzo(a,h)anthracene	U	300	ug/Kgdrywt	1	330	400	150	300
Fluoranthene	U	300	ug/Kgdrywt	1	330	400	130	300
Indeno(1,2,3-cd)pyrene	U	300	ug/Kgdrywt	1	330	400	150	300
Pyrene	U	300	ug/Kgdrywt	1	330	400	120	300
Nitrobenzene-d5		47.6	%					
2-Fluorobiphenyl		57.5	%					
Terphenyl-d14		91.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-11
Client ID: DSY-SD-AE24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	630	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	U	630	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	U	630	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	330	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	320	630
Fluoranthene	U	630	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene	J	760	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		37.0	%					
2-Fluorobiphenyl		55.2	%					
Terphenyl-d14		56.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-12
Client ID: DSY-SD-AE24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 49.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	200	ug/Kgdrywt	1	330	650	170	490
Benzo(b)fluoranthene	U	490	ug/Kgdrywt	1	330	650	260	490
Benzo(g,h,i)perylene	U	490	ug/Kgdrywt	1	330	650	200	490
Benzo(k)fluoranthene	U	490	ug/Kgdrywt	1	330	650	160	490
Chrysene	J	290	ug/Kgdrywt	1	330	650	190	490
Dibenzo(a,h)anthracene	U	490	ug/Kgdrywt	1	330	650	250	490
Fluoranthene	U	490	ug/Kgdrywt	1	330	650	210	490
Indeno(1,2,3-cd)pyrene	U	490	ug/Kgdrywt	1	330	650	240	490
Pyrene		980	ug/Kgdrywt	1	330	650	200	490
Nitrobenzene-d5		45.0	%					
2-Fluorobiphenyl		55.3	%					
Terphenyl-d14		59.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-13
Client ID: DSY-SD-AE24-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 75.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	320	ug/Kgdrywt	1	330	420	110	320
Benzo(b)fluoranthene	U	320	ug/Kgdrywt	1	330	420	170	320
Benzo(g,h,i)perylene	U	320	ug/Kgdrywt	1	330	420	130	320
Benzo(k)fluoranthene	U	320	ug/Kgdrywt	1	330	420	100	320
Chrysene	U	320	ug/Kgdrywt	1	330	420	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	420	160	320
Fluoranthene	U	320	ug/Kgdrywt	1	330	420	140	320
Indeno(1,2,3-cd)pyrene	U	320	ug/Kgdrywt	1	330	420	160	320
Pyrene	U	320	ug/Kgdrywt	1	330	420	130	320
Nitrobenzene-d5		46.2	%					
2-Fluorobiphenyl		54.7	%					
Terphenyl-d14		91.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-4
Client ID: DSY-SD-AG26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	620	ug/Kgdrywt	1	330	820	210	620
Benzo(b)fluoranthene	U	620	ug/Kgdrywt	1	330	820	330	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	820	260	620
Benzo(k)fluoranthene	U	620	ug/Kgdrywt	1	330	820	200	620
Chrysene	J	250	ug/Kgdrywt	1	330	820	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	820	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	820	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	820	300	620
Pyrene	J	490	ug/Kgdrywt	1	330	820	250	620
Nitrobenzene-d5		46.4	%					
2-Fluorobiphenyl		58.0	%					
Terphenyl-d14		70.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-5
Client ID: DSY-SD-AG26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 43.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	550	ug/Kgdrywt	1	330	740	190	550
Benzo(b)fluoranthene	U	550	ug/Kgdrywt	1	330	740	300	550
Benzo(g,h,i)perylene	U	550	ug/Kgdrywt	1	330	740	230	550
Benzo(k)fluoranthene	U	550	ug/Kgdrywt	1	330	740	180	550
Chrysene	U	550	ug/Kgdrywt	1	330	740	210	550
Dibenzo(a,h)anthracene	U	550	ug/Kgdrywt	1	330	740	290	550
Fluoranthene	U	550	ug/Kgdrywt	1	330	740	240	550
Indeno(1,2,3-cd)pyrene	U	550	ug/Kgdrywt	1	330	740	270	550
Pyrene		1100	ug/Kgdrywt	1	330	740	220	550
Nitrobenzene-d5		39.5	%					
2-Fluorobiphenyl		51.1	%					
Terphenyl-d14		65.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-6
Client ID: DSY-SD-AG26-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 66.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	340	ug/Kgdrywt	1	330	460	120	340
Benzo(b)fluoranthene	U	340	ug/Kgdrywt	1	330	460	180	340
Benzo(g,h,i)perylene	U	340	ug/Kgdrywt	1	330	460	140	340
Benzo(k)fluoranthene	U	340	ug/Kgdrywt	1	330	460	120	340
Chrysene	U	340	ug/Kgdrywt	1	330	460	130	340
Dibenzo(a,h)anthracene	U	340	ug/Kgdrywt	1	330	460	180	340
Fluoranthene	U	340	ug/Kgdrywt	1	330	460	150	340
Indeno(1,2,3-cd)pyrene	U	340	ug/Kgdrywt	1	330	460	170	340
Pyrene	J	270	ug/Kgdrywt	1	330	460	140	340
Nitrobenzene-d5		55.0	%					
2-Fluorobiphenyl		63.6	%					
Terphenyl-d14		81.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-1
Client ID: DSY-SD-AI26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 38.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	630	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	J	380	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	U	630	ug/Kgdrywt	1	330	840	210	630
Chrysene	U	630	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	320	630
Fluoranthene	J	440	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene	J	800	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		51.4	%					
2-Fluorobiphenyl		68.0	%					
Terphenyl-d14		76.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-2
Client ID: DSY-SD-AI26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 09-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	620	ug/Kgdrywt	1	330	820	210	620
Benzo(b)fluoranthene	U	620	ug/Kgdrywt	1	330	820	330	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	820	260	620
Benzo(k)fluoranthene	U	620	ug/Kgdrywt	1	330	820	210	620
Chrysene	J	240	ug/Kgdrywt	1	330	820	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	820	320	620
Fluoranthene	U	620	ug/Kgdrywt	1	330	820	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	820	300	620
Pyrene	J	620	ug/Kgdrywt	1	330	820	250	620
Nitrobenzene-d5		32.2	%					
2-Fluorobiphenyl		46.9	%					
Terphenyl-d14		61.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-3
Client ID: DSY-SD-AI26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 56.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	440	ug/Kgdrywt	1	330	580	150	440
Benzo(b)fluoranthene	U	440	ug/Kgdrywt	1	330	580	240	440
Benzo(g,h,i)perylene	U	440	ug/Kgdrywt	1	330	580	180	440
Benzo(k)fluoranthene	U	440	ug/Kgdrywt	1	330	580	150	440
Chrysene	U	440	ug/Kgdrywt	1	330	580	170	440
Dibenzo(a,h)anthracene	U	440	ug/Kgdrywt	1	330	580	230	440
Fluoranthene	U	440	ug/Kgdrywt	1	330	580	190	440
Indeno(1,2,3-cd)pyrene	U	440	ug/Kgdrywt	1	330	580	220	440
Pyrene		620	ug/Kgdrywt	1	330	580	180	440
Nitrobenzene-d5		37.1	%					
2-Fluorobiphenyl		43.2	%					
Terphenyl-d14		57.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-7
Client ID: DSY-SD-DUP11-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 37.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	240	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	J	480	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	J	260	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	380	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	330	630
Fluoranthene	J	310	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene		990	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		42.2	%					
2-Fluorobiphenyl		61.3	%					
Terphenyl-d14		81.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-14
Client ID: DSY-SD-RB04-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98302

Analysis Date: 05-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		67.3						
2-Fluorobiphenyl		73.5						
Terphenyl-d14		89.8						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-8
Client ID: DSY-SD-AC24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	56.	9.2	28.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-9
Client ID: DSY-SD-AC24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 70.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		100	ug/Kgdrywt	1	20	27.	4.5	14.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-10
Client ID: DSY-SD-AC24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 77.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	11.	ug/Kgdrywt	1	20	24.	4.0	12.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-11
Client ID: DSY-SD-AE24-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		270	ug/Kgdrywt	1	20	51.	8.4	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-12
Client ID: DSY-SD-AE24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 49.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	40.	6.5	20.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-13
Client ID: DSY-SD-AE24-2448
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 75.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	J	16.	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-4
Client ID: DSY-SD-AG26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-5
Client ID: DSY-SD-AG26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 43.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	45.	7.4	22.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-6
Client ID: DSY-SD-AG26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 66.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		67.	ug/Kgdrywt	1	20	28.	4.6	14.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-1
Client ID: DSY-SD-AI26-0012
Project: NAVSTA Newport CTO WEt
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 38.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	51.	8.4	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-2
Client ID: DSY-SD-AI26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	50.	8.2	25.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-3
Client ID: DSY-SD-AI26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 56.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	35.	5.8	18.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-7
Client ID: DSY-SD-DUP11-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		280	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-14
Client ID: DSY-SD-RB04-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98304

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-8
Client ID: DSY-SD-AC24-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene	*	36.5	%					
Decachlorobiphenyl	*	30.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-9
Client ID: DSY-SD-AC24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 70.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.8	12.
Aroclor-1254		170	ug/Kgdrywt	1	17	24.	6.8	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Tetrachloro-M-Xylene	*	38.2	%					
Decachlorobiphenyl	*	47.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-10
Client ID: DSY-SD-AC24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 77.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	21.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	21.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	21.	7.3	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	21.	7.7	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	21.	5.9	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Tetrachloro-M-Xylene	*	49.3	%					
Decachlorobiphenyl		60.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-11
Client ID: DSY-SD-AE24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	17.	23.
Aroclor-1254		290	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene	*	25.9	%					
Decachlorobiphenyl	*	22.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-12
Client ID: DSY-SD-AE24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 49.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	33.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	33.	18.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	33.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1254		160	ug/Kgdrywt	1	17	33.	9.1	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Tetrachloro-M-Xylene	*	24.8	%					
Decachlorobiphenyl	*	41.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-13
Client ID: DSY-SD-AE24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 75.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.5	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.1	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Tetrachloro-M-Xylene	*	30.1	%					
Decachlorobiphenyl	*	23.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-4
Client ID: DSY-SD-AG26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	21.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	46.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene	*	35.3	%					
Decachlorobiphenyl	*	30.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-5
Client ID: DSY-SD-AG26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 43.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254		130	ug/Kgdrywt	1	17	38.	10.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Tetrachloro-M-Xylene	*	22.9	%					
Decachlorobiphenyl	*	36.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-6
Client ID: DSY-SD-AG26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 66.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	25.	9.0	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	25.	12.	13.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	25.	14.	15.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	25.	8.7	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	25.	9.1	13.
Aroclor-1254	J	55.	ug/Kgdrywt	1	17	25.	7.0	13.
Aroclor-1260	U	13.	ug/Kgdrywt	1	17	25.	9.0	13.
Tetrachloro-M-Xylene	*	32.9	%					
Decachlorobiphenyl	*	47.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-1
Client ID: DSY-SD-AI26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 38.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	24.	25.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene	*	33.4	%					
Decachlorobiphenyl	*	28.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-2
Client ID: DSY-SD-AI26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1221	U	20.	ug/Kgdrywt	1	17	41.	19.	20.
Aroclor-1232	U	24.	ug/Kgdrywt	1	17	41.	22.	24.
Aroclor-1242	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Aroclor-1248	U	20.	ug/Kgdrywt	1	17	41.	15.	20.
Aroclor-1254	J	63.	ug/Kgdrywt	1	17	41.	11.	20.
Aroclor-1260	U	20.	ug/Kgdrywt	1	17	41.	14.	20.
Tetrachloro-M-Xylene	*	14.5	%					
Decachlorobiphenyl	*	18.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-3
Client ID: DSY-SD-AI26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 56.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	15.	ug/Kgdrywt	1	17	29.	10.	15.
Aroclor-1221	U	15.	ug/Kgdrywt	1	17	29.	14.	15.
Aroclor-1232	U	17.	ug/Kgdrywt	1	17	29.	16.	17.
Aroclor-1242	U	15.	ug/Kgdrywt	1	17	29.	10.	15.
Aroclor-1248	U	15.	ug/Kgdrywt	1	17	29.	10.	15.
Aroclor-1254		86.	ug/Kgdrywt	1	17	29.	8.1	15.
Aroclor-1260	U	15.	ug/Kgdrywt	1	17	29.	10.	15.
Tetrachloro-M-Xylene	*	41.7	%					
Decachlorobiphenyl	*	49.6	%					

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-7
Client ID: DSY-SD-DUP11-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 17-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 37.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Tetrachloro-M-Xylene	*	11.3	%					
Decachlorobiphenyl	*	48.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-14
Client ID: DSY-SD-RB04-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98322

Analysis Date: 13-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		98.3	%					
Decachlorobiphenyl		50.5	%					

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APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name _____
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdan
Case/Project No. 112602747
SDG No. DSV-9
No. of Samples/Matrix 13-sediment

SOW/Method No. 8270, 8082
Sampling Date(s) 9/26/11
Shipping Date(s) _____
Date Rec'd by lab 9/27/11

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. DSV-SD-A626-0012 and DSV-SD-DUP11-092611

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Ann Cognetta Company Name Tetra Tech Phone Number (412) 921-8862

Date Validation Started 11/30/11 Date Validation Completed 12/1/11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	____
VOA/SV-III	INITIAL CALIBRATION	____
VOA/SV-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	____
SV-VI	SV SURROGATE SPIKE RECOVERIES	____
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	____
VOA/SV-XV	SEMIVOLATILE CLEANUP	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	✓
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	✓
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	✓
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	✓
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	____
Pest/PCB-III	INITIAL CALIBRATION	✓
Pest/PCB-IV	CONTINUING CALIBRATION	✓
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	✓
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	✓
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	✓
Pest/PCB-VII	PESTICIDE CLEANUP	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	✓
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	✓
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	✓
Pest/PCB-XII	COMPOUND IDENTIFICATION	✓
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	✓
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	✓

I certify that all criteria were met for the worksheets checked above.

Signature: Ann Cognetti Name: Ann Cognetti

Date: 12/1/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		NA			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetti

Date: 12/1/11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
	See Validation Report				

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Ann Cognetta

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: SVOC, PAH, PCB

Missing Information	Date Lab Contacted	Date Received

Validator: Ann Cognetti Date: 12/1/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

Sampler: Michael Horton Company: _____ Contacted: Yes (No) Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action

See Validation Report

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Ann Coquette Date: 12-1-11

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments:

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments: See Validation Report

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Ann Cognetta

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

See validation report

Validator: Ann Cognetti

Date: 12-1-11

EPA-NE - Data Validation Worksheet

VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

See validation report

Validator: Ann Cognetti

Date: 12-1-11

12/96

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:_____

Sampler: Michael Horton Company: _____

Contacted: Yes (No) Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
		See validation report				

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
		See validation report				

Validator: Ann Cognetta Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: See validation report

Validator: John Cognetti

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
		NA			

Validator: Ann Cognetti

Date: 12-1-11

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
	See validation report					

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Ann Cognetti Date: 12-11

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
		See validation report						

Validator: Ann Cognetta

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
	See Validation Report										

Validator: Dawn Cognetta

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: See validation report

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Ann Cognetta Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? **Y N**
- Date of Preparation/Analysis: _____ Within 1 year? **Y N**
- Instrument I.D.: _____ Same as samples? **Y N**
- Column I.D.: _____ Same as samples? **Y N**

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does it contain all target compounds at the method-required QLs? **Y N**
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? **Y N**

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Adam Cognetta

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Ann Cognetta Date: 12-1-11

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Ann Cognetti

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y N**
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		See validation report
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Ann Cognetti

Date: 12-1-11

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action
		NA			

Validator: Ann Cognetti

Date: 12-1-11

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Ann Cognetti Date: 12-1-11

APPENDIX D

SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-9
SE6227

Sample Receipt

The following samples were received on September 27, 2011 and were logged in under Katahdin Analytical Services work order number SE6227 for a hardcopy due date of October 14, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6227-1	DSY-SD-AI26-0012
SE6227-2	DSY-SD-AI26-1224
SE6227-3	DSY-SD-AI26-2448
SE6227-4	DSY-SD-AG26-0012
SE6227-5	DSY-SD-AG26-1224
SE6227-6	DSY-SD-AG26-2448
SE6227-7	DSY-SD-DUP11-092611
SE6227-8	DSY-SD-AC24-0012
SE6227-9	DSY-SD-AC24-1224
SE6227-10	DSY-SD-AC24-2448
SE6227-11	DSY-SD-AE24-0012
SE6227-12	DSY-SD-AE24-1224
SE6227-13	DSY-SD-AE24-2448
SE6227-14	DSY-SD-RB04-092611

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-9 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste

and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The samples were spiked only with the 8270-SCAN surrogates and only the 8270-SCAN LCS/LCSD were extracted. The report package for SIM analysis does not have a Form 2 for surrogates or a Form 3 for a LCS/LCSD with one exception. The method blank WG98304-1 and LCS/LCSD WG98304-2 and 3, associated with the aqueous sample SE6227-14, were spiked with surrogates. There is a Form 2 for the method blank and LCS/LCSD and a Form 3 for the LCS/LCSD.

Samples SE6227-3, 5, 9, 11, 12 and 13 were manually integrated for the internal standards chrysene-d12 and/or perylene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1, 2, 4, 9, 10, 11, 12 and 13 and method blank WG100237-1 had high and/or low responses for the internal standards acenaphthene-d10, phenanthrene-d10, chrysene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard. All of the CV's and the associated QC samples had acceptable internal standard responses. This indicates that the failing internal standard responses in the samples are likely due to a matrix effect. Therefore, these samples were not reanalyzed.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCSD WG98304-3 had a high recovery for the spiked target analyte benzo(a)pyrene that was high and outside of the laboratory established acceptance limits. Since the LCS WG98304-2 was acceptable, no further action was taken.

8082 Analysis

The reported percent recovery acceptance limits for the surrogates, as well as spike recoveries for LCS/LCSD's and MS/MSD's, are based on laboratory established acceptance limits.

Samples SE6227-5, 6, 9, and 12, were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1 through 13 had low recoveries for TCX and DCB on one or both channels, which were outside the laboratory established acceptance limits. The sample extracts were very discolored. Therefore, the low recoveries of surrogates are likely due to a matrix effect. Therefore, the samples were not reextracted.

Sample SE6227-14 and the method blank WG98765-1 had low recoveries for DCB on channel A and/or B, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channels, no further action was taken.

The opening calibration verification (CV) (file 7EJ386) had high responses for TCX and Aroclor 1016 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for TCX and Aroclor 1016 were acceptable on channel B, the associated samples were not reanalyzed.

The closing CVs (files 7EJ398, and 7EJ497) had high responses for TCX on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for TCX were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (7EJ500) had a high response Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1254 was acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EJ481) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG98765-2 had a low recovery for Aroclor 1260 that was outside laboratory established acceptance limits. The LCS also had low recoveries for DCB on both channels, which were outside the laboratory established acceptance limits. Since the associated LCSD had acceptable recoveries, no further action was taken.

8270C SCAN Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All soil samples and associated QC were subjected to the GPC sample clean-up process.

Samples SE6227-1 and 7 were manually integrated the target analytes benzo(b)fluoranthene and benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1, 3, 5, 7, 8, 9, 10 and 12 had responses for one or two internal standards, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard.

DoD QSM Version 4.1 Table F-4 mentions that the tailing factor for the analytes benzidine and pentachlorophenol should not exceed 2 for method 8270. The tune (files UD702, and UD706) had tailing factors greater than 2% for benzidine and pentachlorophenol. Many of the soil samples from this project caused significant tailing on the instrument. Maintenance was performed several times on the instrument and sometimes could not achieve the tailing criteria. Pentachlorophenol is an acid and all of the target analytes were PAHs. For these reasons, the associated samples were not reanalyzed.

In the initial calibration analyzed on the U instrument on 10/25/10 the target analyte indeno(1,2,3-cd)pyrene failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990 respectively. This compound was calibrated using the average model.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCSD WG98302-3 had five spiked target analytes with recoveries that were low and outside of the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 10 target analytes is no analytes. Since the LCS WG98302-2 was acceptable, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-9 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6227-14 was digested for ICP analysis on 10/04/11 (QC Batch BJ04ICW1) in accordance with USEPA Method 3010A.
Solid-matrix Katahdin Sample Numbers SE6227-(1-13) were digested for ICP analysis on 10/10/11 (QC Batch BJ10ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6227-5 was prepared in duplicate and with a matrix-spiked aliquot. The measured

zinc (5.802 mg/Kgdrywt) concentration of the preparation blank in this batch exceeds the project acceptance limit (> ½ LOQ). However, because the measured zinc concentrations of Katahdin Sample Numbers SE6227-8 and10 are greater than ten times that of the preparation blank, no corrective action was necessary. Solid-matrix Katahdin Sample Number SE6227-9 was redigested for ICP analysis on 10/13/11 (QC Batch BJ13ICS1) in accordance with USEPA Method 3050B. This redigestate is identified on sample preparation and analysis run logs and throughout the raw data by the suffix "R" appended to the Katahdin Sample Number, e.g. "SE6227-009R". This redigestate was successfully analyzed for zinc.

ICP analyses of SDG DSY-9 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Numbers SE6227-5 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6227-5 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in post-digestion spike of SE6227-5 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6227-5 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-9 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recovery, relative to the TOC (1) result for the unspiked sample, for the matrix spike (41%) aliquot of Katahdin Sample No. SE6227-11 is outside the laboratory's acceptance limits of 75% - 125%. The matrix spike recovery relative to the TOC(2) result for the unspiked sample is within the laboratory's acceptance limits.

The relative percent difference (46%) between duplicate TOC(1) analyses of Katahdin Sample No. SE6227-11 is greater the laboratory's acceptance limit of 20%. The relative percent difference between duplicate TOC(2) analyses of this sample is within the laboratory's acceptance limit.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Jennifer O'Brien per 11·10·11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )
Address	**City**	**State**	**Zip Code**
		SEE PAGE ONE	
Purchase Order #	**Proj. Name / No.** CTO WE61, Derek Harshbarger		**Katahdin Quote #**
Bill (if different than above)		**Address**	
Sampler (Print / Sign) Michael Horton / SE6223 / SE6226			**Copies To:**

LAB USE ONLY WORK ORDER #: SE6226 / SE6227

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N — DAH	Filt. ☐Y ☐N — PCB	Filt. ☐Y ☐N — Metals (Pb)	Filt. ☐Y ☐N — TOC	Filt. ☐Y ☐N — Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AG28-2448	9/26/11 1106	SED	2	X	X	X							
	DSY-SD-DUP10-092611	/ —		2	X	X	X							
	DSY-SD-AG24-0012	/ 1145		3	X	X	X	X						
	DSY-SD-AG24-1224	/ 1148		2	X	X	X							
	DSY-SD-AG24-2448	/ 1151		2	X	X	X							
	DSY-SD-AI24-0012	/ 1200		3 6	X	X	X	X						
	DSY-SD-AI24-1224	/ 1203		2	X	X	X							
	DSY-SD-AI24-2448	/ 1206		2	X	X	X							
	DSY-SD-AI26-0012	/ 1305		3	X	X	X	X						
	DSY-SD-AI26-1224	/ 1308		2	X	X	X							
	DSY-SD-AI26-2448	/ 1311		2	X	X	X							
	DSY-SD-AG26-0012	/ 1320		3	X	X	X	X						
	DSY-SD-AG26-1224	/ 1323		2	X	X	X							
	DSY-SD-AG26-2448	/ 1326		2	X	X	X							
	DSY-SD-DUP611-092611	/ —		3	X	X	X	X						
	DSY-SD-AC24-0012	↓ / 1415	↓	2	X	X	X (MJH)		X					

COMMENTS

AI24-0012 is designated as Lab QC

~~AG26-1224 is DUP11~~ MJH

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9/27/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES

600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code
SEE PAGE ONE		SEE PAGE ONE	

Purchase Order # SEE PAGE ONE | Proj. Name / No. CTO WE61, Dereck for Shipyard | Katahdin Quote #

Bill (If different than above) | Address

Sampler (Print / Sign) Michael Horton / [signature] | Copies To:

LAB USE ONLY | WORK ORDER #: SE6227

KATAHDIN PROJECT NUMBER ___

REMARKS: ___

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ___

TEMP'C ___ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AC24-1224	9/26/11 / 1418	SED	2	X	X			X					
	DSY-SD-AC24-2448	/ 1421		2	X	X			X					
	DSY-SD-~~AE~~ MS/MSD AE24-0012	/ 1430		3	X	X	X	X						
	DSY-SD-AE24-1224	/ 1433		2	X	X		X						
	DSY-SD-AE24-2448	/ 1436	↓	2	X	X		X						
	DSY-SD-~~RB01~~ RB04-092611	↓ / 1625	AQ	5	X	X			X					
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/27/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS

ORIGINAL

Client: Tetra Tech	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6225/6226/6227	KIMS Review By:	Received By: GN
SDG #:	Cooler: 1 of 5	Date/Time Rec.: 9-27-11 / 16:20

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?					
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.3
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begun cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace:					
Aqueous: No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?					
Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Tetra Tech	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GW	Delivered By: KAS
KAS Work Order#: SE6225/6226/6227	KIMS Review By:	Received By: GW
SDG #:	Cooler: 2 of 5	Date/Time Rec.: 9-27-11/1620

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓ GW	✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: Aqueous: No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

AMM10

Client: Tetra Tech	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6225/6226/6227	KIMS Review By:	Received By: GN
SDG #:	Cooler: 3 of 5	Date/Time Rec.: 9-27-11/16:20

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

0000011

Client: Tetra Tech	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GW	Delivered By: KAS
KAS Work Order#: 5E6225/6226/6227	KIMS Review By:	Received By: GW
SDG #:	Cooler: 4 of 5	Date/Time Rec.: 9-27-11 / 1620

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 5.9
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?	X GW			✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace:					
Aqueous: No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?					
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Tetra Tech	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6225/6226/8227	KIMS Review By:	Received By: GN
SDG #:	Cooler: 5 of 5	Date/Time Rec.: 9-27-11/16:20

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.5
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for meta analysis.
6. Volatiles free of headspace:				✓	
Aqueous: No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?	✓				
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

RB04 on chain bottles were each marked RB04, RB05, RB06, RB07, RB08 separately. Logged in as RB04

0000013

HOLDTIME

SDG DSY-9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE24-0012	SE6227-011	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-DUP11-092611	SE6227-007	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-0012	SE6227-008	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-1224	SE6227-002	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-0012	SE6227-001	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-2448	SE6227-006	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-1224	SE6227-005	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-0012	SE6227-004	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-2448	SE6227-003	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AE24-1224	SE6227-012	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-2448	SE6227-010	NM	09/26/2011	10/10/2011	10/13/2011	14	3	17
M	MG/KG	DSY-SD-AC24-2448	SE6227-010	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-1224	SE6227-009R	NM	09/26/2011	10/13/2011	10/14/2011	17	1	18
M	MG/KG	DSY-SD-AC24-1224	SE6227-009	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-0012	SE6227-008	NM	09/26/2011	10/10/2011	10/13/2011	14	3	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE24-2448	SE6227-013	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	UG/L	DSY-SD-RB04-092611	SE6227-014	NM	09/26/2011	10/04/2011	10/04/2011	8	0	8
TDS	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TOC	UG/GD	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/10/2011	10/10/2011	14	0	14
TOC	UG/GD	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
TOC	UG/GD	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TOC	UG/GD	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
TOC	UG/GD	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
OS	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/05/2011	4	5	9
OS	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/05/2011	4	5	9
SIM	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	11/02/2011	4	33	37
SIM	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	11/02/2011	4	33	37
PCB	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/07/2011	10/18/2011	11	11	22
PCB	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/13/2011	4	13	17
PCB	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/07/2011	10/18/2011	11	11	22
PCB	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/13/2011	4	13	17

NAVSTA NEWPORT
SOIL DATA
DSY-9

FRACTION	CHEMICAL	DSY-SD-AG26-0012	UNITS	DSY-SD-DUP11-092611	RPD	D
OS	BENZO(A)ANTHRACENE	ND	UG/KG	240 J	200.00	240.00
OS	BENZO(B)FLUORANTHENE	ND	UG/KG	480 J	200.00	480.00
OS	BENZO(K)FLUORANTHENE	ND	UG/KG	260 J	200.00	260.00
OS	CHRYSENE	250 J	UG/KG	380 J	41.27	130.00
OS	FLUORANTHENE	ND	UG/KG	310 J	200.00	310.00
OS	PYRENE	490 J	UG/KG	990	67.57	500.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SOIL DATA
DSY-9

FRACTION	CHEMICAL	DSY-SD-AG26-0012	UNITS	DSY-SD-DUP11-092611	RPD	D
PAH	BENZO(A)PYRENE	170 J	UG/KG	280	48.89	110.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: UD680 DFTPP Injection Date: 10/04/11

Instrument ID: GCMS-U DFTPP Injection Time: 0407

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.2
68	Less than 2.0% of mass 69	0.3 (0.8)1
69	Less than 100.0% of mass 198	40.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	55.5
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	3.7
441	0.0 - 100.0% of mass 443	12.2 (83.2)2
442	40.0 - 100.0% of mass 198	75.7
443	17.0 - 23.0% of mass 442	14.7 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1004	U7701	10/04/11	0427
02		SSTD010U1004	U7702	10/04/11	0512
03		SSTD025U1004	U7703	10/04/11	0557
04		SSTD075U1004	U7704	10/04/11	0642
05		SSTD100U1004	U7705	10/04/11	0727
06		SSTD125U1004	U7706	10/04/11	0812
07		IND CHECK	U7707	10/04/11	0857
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Katahdin Analytical Services A0000027

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-U Calibration Date(s): 10/04/11 10/04/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0427 0812

LAB FILE ID: RF10: U7702 RF25: U7703 RF50: U7701
RF75: U7704 RF100: U7705 RF125: U7706

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	0.996	1.014	0.998	0.891	0.824	0.825	AVRG	0.92461841	9.640	30.000
Pyrene	1.143	1.217	1.261	1.188	1.143	1.233	AVRG	1.19737364	4.038	15.000
Benzo(a)anthracene	0.952	1.005	1.013	0.956	0.925	0.942	AVRG	0.96555759	3.673	15.000
Chrysene	0.992	0.971	0.964	0.907	0.866	0.828	AVRG	0.92152717	7.055	15.000
Benzo(b)fluoranthene	0.993	1.030	1.075	1.028	1.024	1.127	AVRG	1.04603470	4.546	15.000
Benzo(k)fluoranthene	1.163	1.140	1.150	1.106	1.032	1.107	AVRG	1.11637116	4.243	15.000
Benzo(a)pyrene	0.909	0.962	0.999	0.930	0.925	0.959	AVRG	0.94733098	3.437	30.000
Indeno(1,2,3-cd)pyrene	0.834	0.617	0.653	0.572	0.628	0.582	AVRG	0.64756300	14.811	15.000
Dibenzo(a,h)anthracene	0.580	0.678	0.727	0.624	0.669	0.624	AVRG	0.65044082	7.909	15.000
Benzo(g,h,i)perylene	0.707	0.746	0.760	0.634	0.686	0.594	AVRG	0.68786762	9.381	15.000
Nitrobenzene-D5	0.332	0.356	0.361	0.328	0.326	0.333	AVRG	0.33938111	4.484	15.000
2-Fluorobiphenyl	1.164	1.183	1.162	1.080	1.025	1.024	AVRG	1.10645773	6.552	15.000
Terphenyl-D14	0.715	0.763	0.786	0.768	0.740	0.794	AVRG	0.76101261	3.870	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: UD681 DFTPP Injection Date: 10/04/11

Instrument ID: GCMS-U DFTPP Injection Time: 1419

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.0
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	39.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	3.7
441	0.0 - 100.0% of mass 443	12.3 (80.5)2
442	40.0 - 100.0% of mass 198	78.8
443	17.0 - 23.0% of mass 442	15.2 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1004	U7713	10/04/11	1440
02	WG98302-BLANK	WG98302-1	U7721	10/04/11	2049
03	WG98302-LCS	WG98302-2	U7722	10/04/11	2133
04	WG98302-LCSD	WG98302-3	U7723	10/04/11	2217
05	DSY-SD-RB04-092611	SE6227-14	U7726	10/05/11	0028
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-U Calibration Date: 10/04/11 Time: 1440

Lab File ID: U7713 Init. Calib. Date(s): 10/04/11 10/04/11

Init. Calib. Times: 0427 0812

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.9250000	0.9853500	0.01	6.52	20.01	AVRG
Pyrene	1.1980000	1.2525000	0.01	4.55	20.00	AVRG
Benzo(a)anthracene	0.9660000	1.0315000	0.01	6.78	20.00	AVRG
Chrysene	0.9210000	0.9815800	0.01	6.58	20.00	AVRG
Benzo(b)fluoranthene	1.0460000	1.1476000	0.01	9.71	20.00	AVRG
Benzo(k)fluoranthene	1.1160000	1.1466000	0.01	2.74	20.00	AVRG
Benzo(a)pyrene	0.9470000	1.0235000	0.01	8.08	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.6480000	0.6490600	0.01	0.16	20.00	AVRG
Dibenzo(a,h)anthracene	0.6500000	0.7103300	0.01	9.28	20.00	AVRG
Benzo(g,h,i)perylene	0.6880000	0.7434200	0.01	8.06	20.00	AVRG
Nitrobenzene-D5	0.3390000	0.3647300	0.01	7.59	20.00	AVRG
2-Fluorobiphenyl	1.1060000	1.1716000	0.01	5.93	20.00	AVRG
Terphenyl-D14	0.7610000	0.8072600	0.01	6.08	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98302-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: U7721 Lab Sample ID: WG98302-1

Instrument ID: GCMS-U Date Extracted: 09/30/11

Matrix: (soil/water) WATER Date Analyzed: 10/04/11

Level: (low/med) LOW Time Analyzed: 2049

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98302-LCS	WG98302-2	U7722	10/04/11	2133
02	WG98302-LCSD	WG98302-3	U7723	10/04/11	2217
03	DSY-SD-RB04-092611	SE6227-14	U7726	10/05/11	0028
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98302-1
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98302

Analysis Date: 04-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 07-nov-2011 14:09

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		64.3						
2-Fluorobiphenyl		70.3						
Terphenyl-d14		88.7						

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: UD702 DFTPP Injection Date: 10/25/11

Instrument ID: GCMS-U DFTPP Injection Time: 1119

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.1
68	Less than 2.0% of mass 69	0.2 (0.6)1
69	Less than 100.0% of mass 198	38.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	51.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.3
365	1.0 - 100.0% of mass 198	2.9
441	0.0 - 100.0% of mass 443	12.9 (79.3)2
442	40.0 - 100.0% of mass 198	82.3
443	17.0 - 23.0% of mass 442	16.3 (19.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1025	U8126	10/25/11	1141
02		SSTD010U1025	U8127	10/25/11	1227
03		SSTD025U1025	U8128	10/25/11	1312
04		SSTD075U1025	U8129	10/25/11	1357
05		SSTD100U1025	U8130	10/25/11	1442
06		SSTD125U1025	U8131	10/25/11	1526
07		8270C IND CHEC	U8132	10/25/11	1610
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Katahdin Analytical Services A0000029

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-U Calibration Date(s): 10/25/11 10/25/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1141 1526

LAB FILE ID: RF10: U8127 RF25: U8128 RF50: U8126
RF75: U8129 RF100: U8130 RF125: U8131

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2	
Fluoranthene	0.860	0.775	0.846	0.890	0.731	0.737	AVRG	0.80656737	8.384	30.000	
Pyrene	1.520	1.610	1.653	1.662	1.694	1.629	AVRG	1.62798568	3.717	15.000	
Benzo(a)anthracene	0.887	0.858	0.991	0.973	0.932	0.895	AVRG	0.92260621	5.636	15.000	
Chrysene	1.089	1.012	0.987	0.959	0.925	0.892	AVRG	0.97753632	7.097	15.000	
Benzo(b)fluoranthene	0.891	0.950	1.060	1.018	1.050	1.058	AVRG	1.00460854	6.893	15.000	
Benzo(k)fluoranthene	1.399	1.282	1.257	1.382	1.271	1.235	AVRG	1.30443893	5.261	15.000	
Benzo(a)pyrene	0.946	0.939	1.032	1.028	0.997	0.981	AVRG	0.98727119	4.004	30.000	
Indeno(1,2,3-cd)pyrene	0.562	0.700	0.564	0.818	0.800	0.759	AVRG	0.70060794	16.262	15.000	<-
Dibenzo(a,h)anthracene	0.493	0.537	0.652	0.634	0.622	0.607	AVRG	0.59079488	10.511	15.000	
Benzo(g,h,i)perylene	0.499	0.613	0.712	0.679	0.686	0.631	AVRG	0.63698012	12.072	15.000	
Nitrobenzene-D5	0.339	0.301	0.340	0.335	0.316	0.299	AVRG	0.32159244	5.927	15.000	
2-Fluorobiphenyl	1.293	1.164	1.209	1.171	1.035	1.004	AVRG	1.14603273	9.486	15.000	
Terphenyl-D14	0.820	0.845	0.882	0.904	0.901	0.891	AVRG	0.87386128	3.862	15.000	

FORM VI SV

FORM 5

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: UD706 DFTPP Injection Date: 10/29/11

Instrument ID: GCMS-U DFTPP Injection Time: 1034

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.1
68	Less than 2.0% of mass 69	0.2 (0.6)1
69	Less than 100.0% of mass 198	37.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	19.4
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	11.9 (77.0)2
442	40.0 - 100.0% of mass 198	79.9
443	17.0 - 23.0% of mass 442	15.5 (19.4)3

1-Value is % mass 69 2-Value is % mass 443

3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U1029	U8235	10/29/11	1054
02	WG98721-BLANK	WG98721-1	U8236	10/29/11	1138
03	WG98721-LCS	WG98721-2	U8237	10/29/11	1222
04	WG98721-LCSD	WG98721-3	U8238	10/29/11	1305
05	DSY-SD-AI26-0012	SE6227-1	U8239	10/29/11	1349
06	DSY-SD-AI26-1224	SE6227-2	U8240	10/29/11	1433
07	DSY-SD-AI26-2448	SE6227-3	U8241	10/29/11	1517
08	DSY-SD-AG26-0012	SE6227-4	U8242	10/29/11	1600
09	DSY-SD-AG26-1224	SE6227-5	U8243	10/29/11	1644
10	DSY-SD-AG26-2448	SE6227-6	U8244	10/29/11	1728
11	DSY-SD-DUP11-092611	SE6227-7	U8245	10/29/11	1812
12	DSY-SD-AC24-0012	SE6227-8	U8246	10/29/11	1855
13	DSY-SD-AC24-1224	SE6227-9	U8247	10/29/11	1939
14	DSY-SD-AC24-2448	SE6227-10	U8248	10/29/11	2023
15	DSY-SD-AE24-0012	SE6227-11	U8249	10/29/11	2107
16	DSY-SD-AE24-1224	SE6227-12	U8250	10/29/11	2150
17	DSY-SD-AE24-2448	SE6227-13	U8251	10/29/11	2234
18					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-U Calibration Date: 10/29/11 Time: 1054

Lab File ID: U8235 Init. Calib. Date(s): 10/25/11 10/25/11

Init. Calib. Times: 1141 1526

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Fluoranthene	0.8060000	0.9056800	0.01	12.37	20.01	AVRG
Pyrene	1.6280000	1.5400000	0.01	-5.40	20.00	AVRG
Benzo(a)anthracene	0.9230000	0.9136000	0.01	-1.02	20.00	AVRG
Chrysene	0.9770000	0.9700600	0.01	-0.71	20.00	AVRG
Benzo(b)fluoranthene	1.0040000	0.9074100	0.01	-9.62	20.00	AVRG
Benzo(k)fluoranthene	1.3040000	1.2293000	0.01	-5.73	20.00	AVRG
Benzo(a)pyrene	0.9870000	0.9565300	0.01	-3.09	20.01	AVRG
Indeno(1,2,3-cd)pyrene	0.7000000	0.7719000	0.01	10.27	20.00	AVRG
Dibenzo(a,h)anthracene	0.5910000	0.5859500	0.01	-0.85	20.00	AVRG
Benzo(g,h,i)perylene	0.6370000	0.6468100	0.01	1.54	20.00	AVRG
Nitrobenzene-D5	0.3220000	0.3340400	0.01	3.74	20.00	AVRG
2-Fluorobiphenyl	1.1460000	1.0703000	0.01	-6.60	20.00	AVRG
Terphenyl-D14	0.8740000	0.8602000	0.01	-1.58	20.00	AVRG

FORM VII PEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98721-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: U8236 Lab Sample ID: WG98721-1

Instrument ID: GCMS-U Date Extracted: 10/06/11

Matrix: (soil/water) SOIL Date Analyzed: 10/29/11

Level: (low/med) LOW Time Analyzed: 1138

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98721-LCS	WG98721-2	U8237	10/29/11	1222
02	WG98721-LCSD	WG98721-3	U8238	10/29/11	1305
03	DSY-SD-AI26-0012	SE6227-1	U8239	10/29/11	1349
04	DSY-SD-AI26-1224	SE6227-2	U8240	10/29/11	1433
05	DSY-SD-AI26-2448	SE6227-3	U8241	10/29/11	1517
06	DSY-SD-AG26-0012	SE6227-4	U8242	10/29/11	1600
07	DSY-SD-AG26-1224	SE6227-5	U8243	10/29/11	1644
08	DSY-SD-AG26-2448	SE6227-6	U8244	10/29/11	1728
09	DSY-SD-DUP11-092611	SE6227-7	U8245	10/29/11	1812
10	DSY-SD-AC24-0012	SE6227-8	U8246	10/29/11	1855
11	DSY-SD-AC24-1224	SE6227-9	U8247	10/29/11	1939
12	DSY-SD-AC24-2448	SE6227-10	U8248	10/29/11	2023
13	DSY-SD-AE24-0012	SE6227-11	U8249	10/29/11	2107
14	DSY-SD-AE24-1224	SE6227-12	U8250	10/29/11	2150
15	DSY-SD-AE24-2448	SE6227-13	U8251	10/29/11	2234
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COMMENTS:

FORM IVSV

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98721-1
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 06-OCT-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 07-nov-2011 14:09

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		61.8	%					
2-Fluorobiphenyl		69.0	%					
Terphenyl-d14		69.0	%					

600 Technology Way
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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-9

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-AI26-0012	SE6227-1	68.0		51.4		76.5		0
DSY-SD-AC24-2448	SE6227-10	57.5		47.6		91.0		0
DSY-SD-AE24-0012	SE6227-11	55.2		37.0		56.4		0
DSY-SD-AE24-1224	SE6227-12	55.3		45.0		59.9		0
DSY-SD-AE24-2448	SE6227-13	54.7		46.2		91.5		0
DSY-SD-AI26-1224	SE6227-2	46.9		32.2		61.0		0
DSY-SD-AI26-2448	SE6227-3	43.2		37.1		57.1		0
DSY-SD-AG26-0012	SE6227-4	58.0		46.4		70.3		0
DSY-SD-AG26-1224	SE6227-5	51.1		39.5		65.0		0
DSY-SD-AG26-2448	SE6227-6	63.6		55.0		81.4		0
DSY-SD-DUP11-092611	SE6227-7	61.3		42.2		81.4		0
DSY-SD-AC24-0012	SE6227-8	50.2		34.7		56.2		0
DSY-SD-AC24-1224	SE6227-9	79.4		63.6		106.		0
Method Blank Sample	WG98721-1	69.0		61.8		69.0		0
Laboratory Control S	WG98721-2	71.1		71.1		75.5		0
Laboratory Control S	WG98721-3	73.1		72.9		79.1		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-9

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB04-092611	SE6227-14	73.5		67.3		89.8		0
Method Blank Sample	WG98302-1	70.3		64.3		88.7		0
Laboratory Control S	WG98302-2	74.0		62.3		89.2		0
Laboratory Control S	WG98302-3	53.7		48.2		79.1		0

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98302-2
LCSD ID: WG98302-3
Project:
SDG: DSY-9
Report Date: 07-nov-2011 14:09

Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98302

Analysis Date: 04-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	37.8	75.6	29.1	58.2*	ug/L	26	30	66-109
Benzo(a)pyrene	50.0	43.1	86.2	34.3	68.6	ug/L	23	30	63-118
Benzo(b)fluoranthene	50.0	39.0	78.0	32.5	65.0	ug/L	18	30	60-108
Benzo(k)fluoranthene	50.0	42.9	85.8	32.6	65.2	ug/L	27	30	59-125
Benzo(g,h,i)perylene	50.0	36.4	72.8	26.0	52.0*	ug/L	33*	30	58-115
Chrysene	50.0	42.2	84.4	33.3	66.6*	ug/L	24	30	68-114
Dibenzo(a,h)anthracene	50.0	37.8	75.6	26.9	53.8*	ug/L	34*	30	61-111
Fluoranthene	50.0	43.8	87.6	33.8	67.6	ug/L	26	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	33.4	66.8	23.1	46.2*	ug/L	36*	30	55-111
Pyrene	50.0	44.2	88.4	35.0	70.0	ug/L	23	30	58-135
Nitrobenzene-d5			62.3		48.2				41-91
2-Fluorobiphenyl			74.0		53.7				43-90
Terphenyl-d14			89.2		79.1				36-156

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98721-2
LCSD ID: WG98721-3
Project:
SDG: DSY-9
Report Date: 08-nov-2011 13:26

Received Date: 06-OCT-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1110	66.5	1130	67.7	ug/Kgdrywt	2	30	40-100
Benzo(a)pyrene	1670	1260	75.4	1330	79.6	ug/Kgdrywt	5	30	40-100
Benzo(b)fluoranthene	1670	1130	67.7	1260	75.4	ug/Kgdrywt	11	30	40-100
Benzo(g,h,i)perylene	1670	849.	50.8	946.	56.6	ug/Kgdrywt	11	30	40-100
Benzo(k)fluoranthene	1670	1270	76.0	1300	77.8	ug/Kgdrywt	2	30	40-100
Chrysene	1670	1280	76.6	1330	79.6	ug/Kgdrywt	4	30	40-100
Dibenzo(a,h)anthracene	1670	910.	54.5	924.	55.3	ug/Kgdrywt	2	30	40-100
Fluoranthene	1670	1430	85.6	1420	85.0	ug/Kgdrywt	1	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1050	62.9	1080	64.7	ug/Kgdrywt	3	30	40-100
Pyrene	1670	1190	71.2	1240	74.2	ug/Kgdrywt	4	30	40-100
Nitrobenzene-d5			71.1		72.9				24-81
2-Fluorobiphenyl			71.1		73.1				29-83
Terphenyl-d14			75.5		79.1				24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): U7701 Date Analyzed: 10/04/11

Instrument ID: GCMS-U Time Analyzed: 0427

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		236342		8.22		858274		11.03		493968		15.14	
UPPER LIMIT		472684		8.72		1716548		11.53		987936		15.64	
LOWER LIMIT		118171		7.72		429137		10.53		246984		14.64	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD050U1004		283480		8.22		1032187		11.03		597952		15.15	
02	WG98302-BLANK	WG98302-1		270909		8.22		1012228		11.02		566392		15.13	
03	WG98302-LCS	WG98302-2		261055		8.22		955988		11.03		550237		15.13	
04	WG98302-LCSD	WG98302-3		272468		8.22		985222		11.02		553315		15.13	
05	DSY-SD-RB04-092611	SE6227-14		261659		8.22		943731		11.03		538939		15.14	
06															
07															
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15															
16															
17															
18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): U7701 Date Analyzed: 10/04/11

Instrument ID: GCMS-U Time Analyzed: 0427

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		805443	18.65	652225	24.97	512256	28.10
UPPER LIMIT		1610886	19.15	1304450	25.47	1024512	28.60
LOWER LIMIT		402722	18.15	326113	24.47	256128	27.60
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1004	959863	18.67	776192	24.97	595906	28.10
02	WG98302-BLANK	WG98302-1	955215	18.65	795666	24.96	547926	28.11
03	WG98302-LCS	WG98302-2	918986	18.65	760953	24.97	537033	28.10
04	WG98302-LCSD	WG98302-3	941661	18.65	755594	24.96	488518	28.10
05	DSY-SD-RB04-092611	SE6227-14	873695	18.64	741946	24.96	563914	28.10
06								
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): U8126 Date Analyzed: 10/25/11

Instrument ID: GCMS-U Time Analyzed: 1141

		IS1 (DCB) AREA	#	RT	#	IS2 (NPT) AREA	#	RT	#	IS3 (ANT) AREA	#	RT	#
12 HOUR STD		345398		7.78		1227291		10.62		606486		14.73	
UPPER LIMIT		690796		8.28		2454582		11.12		1212972		15.23	
LOWER LIMIT		172699		7.28		613646		10.12		303243		14.23	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD050U1029		354044		7.73		1203136		10.57		624441		14.67	
02	WG98721-BLANK	WG98721-1		363122		7.73		1312207		10.57		645882		14.66	
03	WG98721-LCS	WG98721-2		411365		7.74		1406295		10.57		696817		14.66	
04	WG98721-LCSD	WG98721-3		415629		7.74		1395154		10.57		694762		14.66	
05	DSY-SD-AI26-0012	SE6227-1		443569		7.73		1655959		10.57		756817		14.66	
06	DSY-SD-AI26-1224	SE6227-2		455066		7.74		1652685		10.57		751222		14.66	
07	DSY-SD-AI26-2448	SE6227-3		467663		7.73		1680371		10.57		784560		14.67	
08	DSY-SD-AG26-0012	SE6227-4		476809		7.73		1718303		10.57		839688		14.66	
09	DSY-SD-AG26-1224	SE6227-5		491034		7.73		1756654		10.57		785656		14.67	
10	DSY-SD-AG26-2448	SE6227-6		470451		7.73		1720453		10.57		793311		14.67	
11	DSY-SD-DUP11-092611	SE6227-7		485676		7.73		1738501		10.57		837671		14.66	
12	DSY-SD-AC24-0012	SE6227-8		453208		7.73		1624013		10.57		759863		14.66	
13	DSY-SD-AC24-1224	SE6227-9		478904		7.74		1730145		10.57		737756		14.67	
14	DSY-SD-AC24-2448	SE6227-10		412819		7.74		1492919		10.56		668129		14.66	
15	DSY-SD-AE24-0012	SE6227-11		465524		7.74		1682802		10.56		779738		14.66	
16	DSY-SD-AE24-1224	SE6227-12		523087		7.74		1821927		10.57		808936		14.68	
17	DSY-SD-AE24-2448	SE6227-13		456063		7.74		1673690		10.56		800868		14.66	
18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): U8126 Date Analyzed: 10/25/11

Instrument ID: GCMS-U Time Analyzed: 1141

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		738113	18.23	389502	24.49	246423	27.64
UPPER LIMIT		1476226	18.73	779004	24.99	492846	28.14
LOWER LIMIT		369057	17.73	194751	23.99	123212	27.14
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050U1029	840089	18.16	511171	24.42	347484	27.55
02	WG98721-BLANK	WG98721-1	1107187	18.15	695890	24.42	467342	27.55
03	WG98721-LCS	WG98721-2	955660	18.15	611614	24.42	352974	27.56
04	WG98721-LCSD	WG98721-3	945527	18.16	565774	24.42	311972	27.57
05	DSY-SD-AI26-0012	SE6227-1	986882	18.16	304475	24.43	122663*	27.60
06	DSY-SD-AI26-1224	SE6227-2	1003767	18.16	390846	24.43	154578	27.59
07	DSY-SD-AI26-2448	SE6227-3	984540	18.17	242313	24.44	96789*	27.60
08	DSY-SD-AG26-0012	SE6227-4	1163008	18.16	387688	24.43	166790	27.57
09	DSY-SD-AG26-1224	SE6227-5	888544	18.17	193853*	24.44	79655*	27.60
10	DSY-SD-AG26-2448	SE6227-6	1076714	18.16	328686	24.43	143316	27.57
11	DSY-SD-DUP11-092611	SE6227-7	1055034	18.16	284767	24.43	108852*	27.59
12	DSY-SD-AC24-0012	SE6227-8	1037438	18.15	306604	24.43	110706*	27.59
13	DSY-SD-AC24-1224	SE6227-9	759404	18.17	136020*	24.44	59348*	27.60
14	DSY-SD-AC24-2448	SE6227-10	890365	18.15	289352	24.43	94136*	27.60
15	DSY-SD-AE24-0012	SE6227-11	1049781	18.15	294254	24.43	151712	27.57
16	DSY-SD-AE24-1224	SE6227-12	908194	18.17	203495	24.43	101223*	27.59
17	DSY-SD-AE24-2448	SE6227-13	1150701	18.15	338049	24.43	123233	27.58
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U102911.b\U8235.D
Report Date: 29-Oct-2011 12:02

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U102911.b\U8235.D
Lab Smp Id: SSTD050U1029
Inj Date : 29-OCT-2011 10:54 MS Autotune Date: 27-JUL-1998 22:19
Operator : JCG Inst ID: gcms-u.i
Smp Info : SSTD050U1029
Misc Info : SW846 8270C
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U102911.b\U8270C08.m
Meth Date : 29-Oct-2011 11:32 cgomez Quant Type: ISTD
Cal Date : 25-OCT-2011 15:26 Cal File: U8131.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	2.051	2.051	(0.265)	159422	50.0000	64.0	
	2 N-Nitrosodimethylamine	42	2.486	2.486	(0.322)	209737	50.0000	54.1	
	3 Pyridine	79	2.496	2.496	(0.323)	645941	50.0000	58.2	
	4 Ethyl Methacrylate	69	3.221	3.221	(0.417)	448472	50.0000	56.0	
	5 2-Picoline	93	3.821	3.821	(0.494)	576352	50.0000	50.0	
	6 N-Nitrosomethylethylamine	88	4.111	4.111	(0.532)	217203	50.0000	45.5	
	7 Methyl Methanesulfonate	80	4.763	4.763	(0.616)	291968	50.0000	49.4	
$	8 2-Fluorophenol	112	5.125	5.125	(0.663)	595519	50.0000	55.3	
	9 N-Nitrosodiethylamine	102	5.529	5.529	(0.715)	263744	50.0000	54.2	
	10 Ethyl Methanesulfonate	79	6.264	6.264	(0.810)	411957	50.0000	53.9	
	11 Benzaldehyde	77	6.843	6.843	(0.885)	85227	50.0000	74.3	
	12 Aniline	93	7.082	7.082	(0.916)	686195	50.0000	50.9	
	13 Pentachloroethane	117	7.102	7.102	(0.918)	200796	50.0000	49.4	
$	14 Phenol-D6	99	7.206	7.206	(0.932)	646003	50.0000	52.8	
	15 Phenol	94	7.226	7.226	(0.934)	666698	50.0000	50.9	
	16 Bis(2-Chloroethyl)ether	93	7.299	7.299	(0.944)	495965	50.0000	52.5	
	17 2-Chlorophenol	128	7.320	7.320	(0.946)	538104	50.0000	49.6	
	18 1,3-Dichlorobenzene	146	7.589	7.589	(0.981)	571119	50.0000	48.2	
*	19 1,4-Dichlorobenzene-D4	152	7.734	7.734	(1.000)	354044	40.0000		
	20 1,4-Dichlorobenzene	146	7.765	7.765	(1.004)	587853	50.0000	49.6	

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U102911.b\U8235.D
Report Date: 29-Oct-2011 12:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
21	1,2-Dichlorobenzene	146	8.075	8.075	(1.044)	559778	50.0000	49.6	
22	Benzyl alcohol	108	8.189	8.189	(1.059)	354854	50.0000	52.3	
23	2,2'-Oxybis(1-chloropropane)	45	8.479	8.479	(1.096)	701682	50.0000	60.0(M)	M9
24	Bis(2-Chloroisopropyl)ether	45	8.479	8.479	(1.096)	706246	50.0000	60.4	
25	2-Methylphenol	108	8.562	8.562	(1.107)	506401	50.0000	54.4	
26	Acetophenone	105	8.707	8.707	(0.824)	639707	50.0000	48.9	
27	N-Nitrosopyrrolidine	100	8.748	8.748	(1.131)	266527	50.0000	56.8(M)	M9
28	o-Toluidine	106	8.779	8.779	(1.135)	619499	50.0000	47.5	
29	N-Nitroso-di-n-propylamine	70	8.800	8.800	(1.138)	302357	50.0000	46.0	
30	Hexachloroethane	117	8.789	8.789	(1.136)	199540	50.0000	44.3	
31	N-Nitrosomorpholine	56	8.820	8.820	(1.141)	252288	50.0000	52.7	
32	3&4-Methylphenol	108	8.914	8.914	(1.153)	523172	50.0000	51.3	
$ 33	Nitrobenzene-D5	82	9.017	9.017	(0.853)	502369	50.0000	51.9	
34	Nitrobenzene	77	9.058	9.058	(0.857)	488415	50.0000	50.2	
35	N-Nitrosopiperidine	114	9.421	9.421	(0.891)	266778	50.0000	54.9	
36	Isophorone	82	9.638	9.638	(0.912)	907787	50.0000	52.1	
37	2-Nitrophenol	139	9.773	9.773	(0.925)	294909	50.0000	54.4	
38	2,4-Dimethylphenol	107	10.052	10.052	(0.951)	426066	50.0000	46.2	
39	O,O,O-Triethylphosphorothioat	198	10.187	10.187	(0.964)	193083	50.0000	47.8	
40	Bis(2-Chloroethoxy)methane	93	10.238	10.238	(0.969)	587749	50.0000	52.8	
41	2,4-Dichlorophenol	162	10.394	10.394	(0.983)	402832	50.0000	51.7	
42	1,2,4-Trichlorobenzene	180	10.476	10.476	(0.991)	458433	50.0000	49.5	
43	Benzoic acid	122	10.601	10.601	(1.003)	126631	50.0000	44.9(H)	
* 44	Naphthalene-D8	136	10.570	10.570	(1.000)	1203136	40.0000		
45	Naphthalene	128	10.621	10.621	(1.005)	1302312	50.0000	48.5	
46	Hexachloropropene	213	10.818	10.818	(1.024)	255119	50.0000	46.1	
47	2,6-Dichlorophenol	162	10.870	10.870	(1.028)	389045	50.0000	51.1	
48	4-Chloroaniline	127	10.880	10.880	(1.029)	515801	50.0000	48.8	
49	Hexachlorobutadiene	225	10.963	10.963	(1.037)	227028	50.0000	47.8	
50	N-Nitroso-Di-N-Butylamine	84	11.749	11.749	(1.112)	317098	50.0000	49.4(H)	
51	p-Phenylenediamine	108	11.874	11.874	(1.123)	149567	50.0000	44.7	
52	Caprolactam	113	11.874	11.874	(1.123)	147653	50.0000	65.7	
53	Isosafrole	162	12.163	12.163	(1.151)	351499	50.0000	50.9	
54	4-Chloro-3-Methylphenol	107	12.205	12.205	(1.155)	359968	50.0000	51.1	
55	2-Methylnaphthalene	142	12.257	12.257	(1.160)	1022138	50.0000	46.1	
56	1-Methylnaphthalene	142	12.464	12.464	(1.179)	813256	50.0000	49.7	
58	Hexachlorocyclopentadiene	237	12.629	12.629	(0.861)	194192	50.0000	40.4	
59	1,2,4,5-Tetrachlorobenzene	216	12.650	12.650	(0.862)	397387	50.0000	47.6	
60	Safrole	104	12.847	12.847	(0.876)	25591	50.0000	42.0	
61	2,4,6-Trichlorophenol	196	13.023	13.023	(0.888)	279286	50.0000	50.6(H)	
62	2,4,5-Trichlorophenol	196	13.157	13.157	(0.897)	280989	50.0000	50.8	
$ 63	2-Fluorobiphenyl	172	13.188	13.188	(0.899)	835418	50.0000	46.7	
64	Diethyl Adipate	111	13.405	13.405	(0.914)	200059	50.0000	39.2	
65	2-Chloronaphthalene	162	13.385	13.385	(0.913)	1093970	50.0000	47.4(H)	
66	1,1'-Biphenyl	154	13.395	13.395	(0.913)	731705	50.0000	36.8	
67	1-Chloronaphthalene	162	13.416	13.416	(0.915)	621478	50.0000	38.8	
68	Diphenylether	170	13.675	13.675	(0.932)	528321	50.0000	47.5	
69	2-Nitroaniline	65	13.757	13.757	(0.938)	218752	50.0000	56.9	
70	1,4-Naphthoquinone	158	13.892	13.892	(0.947)	166353	50.0000	40.9	
71	1,4-Dinitrobenzene	75	14.151	14.151	(0.965)	146948	50.0000	56.0(H)	
72	Dimethyl Phthalate	163	14.275	14.275	(0.973)	840647	50.0000	51.4	
73	1,3-Dinitrobenzene	168	14.327	14.327	(0.977)	119935	50.0000	51.4(H)	
74	Acenaphthylene	152	14.316	14.316	(0.976)	1200882	50.0000	47.7	
75	2,6-Dinitrotoluene	165	14.389	14.389	(0.981)	198559	50.0000	52.8	

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U102911.b\U8235.D
Report Date: 29-Oct-2011 12:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
76	1,2-Dinitrobenzene	50	14.482	14.482	(0.987)	97460	50.0000	54.1	
* 77	Acenaphthene-D10	164	14.668	14.668	(1.000)	624441	40.0000		
78	Acenaphthene	153	14.741	14.741	(1.005)	740413	50.0000	47.6	
79	3-Nitroaniline	138	14.761	14.761	(1.006)	231339	50.0000	62.0	
80	2,4-Dinitrophenol	184	15.051	15.051	(1.026)	75774	50.0000	65.1	
81	Pentachlorobenzene	250	15.061	15.061	(1.027)	352599	50.0000	51.9	
82	Dibenzofuran	168	15.165	15.165	(1.034)	1034241	50.0000	50.1	
83	2,4-Dinitrotoluene	165	15.331	15.331	(1.045)	251558	50.0000	58.8	
84	1-Naphthylamine	143	15.393	15.393	(1.049)	756032	50.0000	55.1	
85	2,3,5,6-Tetrachlorophenol	232	15.444	15.444	(1.053)	214748	50.0000	58.1(H)	
86	4-Nitrophenol	139	15.507	15.507	(1.057)	137313	50.0000	70.1	
87	2,3,4,6-Tetrachlorophenol	232	15.548	15.548	(1.060)	224339	50.0000	60.4	
88	2-Naphthylamine	143	15.610	15.610	(1.064)	687825	50.0000	60.0	
89	Diethylphthalate	149	15.962	15.962	(1.088)	698361	50.0000	47.2	
90	Fluorene	166	15.972	15.972	(1.089)	758567	50.0000	48.6	
91	4-Chlorophenyl-phenylether	204	16.076	16.076	(1.096)	389508	50.0000	49.9	
92	0,0-diethyl-o-2-pyrazinylphos	107	16.138	16.138	(1.100)	158899	50.0000	60.7(H)	
93	5-Nitro-O-Toluidine	152	16.159	16.159	(1.102)	234876	50.0000	61.2	
94	4-Nitroaniline	138	16.221	16.221	(1.106)	189450	50.0000	67.1	
95	4,6-Dinitro-2-Methylphenol	198	16.272	16.272	(0.896)	126185	50.0000	54.8	
96	N-Nitrosodiphenylamine	169	16.397	16.397	(0.903)	648579	50.0000	48.6	
97	N-Nitrosodiphenylamine/DPA	169	16.397	16.397	(0.903)	648579	50.0000	48.6	
98	1,2-Diphenylhydrazine	77	16.438	16.438	(0.905)	891955	50.0000	49.0	
99	Azobenzene	77	16.438	16.438	(0.905)	877068	50.0000	48.4	
$ 100	2,4,6-Tribromophenol	330	16.562	16.562	(1.129)	156558	50.0000	64.0	
101	Sulfotepp	97	16.925	16.925	(0.932)	125439	50.0000	48.4	
102	Diallate	86	17.121	17.121	(0.943)	286652	50.0000	53.4	
103	Phorate	75	17.132	17.132	(0.944)	494794	50.0000	54.6(H)	
104	4-Bromophenyl-phenylether	248	17.214	17.214	(0.948)	231215	50.0000	49.5	
105	Hexachlorobenzene	284	17.235	17.235	(0.949)	262022	50.0000	50.4	
106	1,3,5-Trinitrobenzene	213	17.339	17.339	(0.955)	41202	50.0000	61.2	
107	Phenacetin	108	17.339	17.339	(0.955)	329929	50.0000	56.9	
108	Dimethoate	87	17.556	17.556	(0.967)	281982	50.0000	67.0	
109	Pentachloronitrobenzene	237	17.784	17.784	(0.979)	88793	50.0000	50.1	
110	Atrazine	200	17.815	17.815	(0.981)	152487	50.0000	50.4	
111	Pentachlorophenol	266	17.815	17.815	(0.981)	127778	50.0000	59.8	
112	4-Aminobiphenyl	169	17.866	17.866	(0.984)	528655	50.0000	54.7	
113	Pronamide	173	18.146	18.146	(0.999)	276269	50.0000	51.1	
* 114	Phenanthrene-D10	188	18.156	18.156	(1.000)	840089	40.0000		
115	Phenanthrene	178	18.208	18.208	(1.003)	1033665	50.0000	49.6(H)	
116	Dinoseb	211	18.353	18.353	(1.011)	144611	50.0000	56.1	
117	Anthracene	178	18.332	18.332	(1.010)	1052411	50.0000	49.8	
118	Disulfoton	88	18.374	18.374	(1.012)	442914	50.0000	57.9	
119	Carbazole	167	18.829	18.829	(1.037)	936190	50.0000	57.6	
120	Methyl Parathion	109	19.243	19.243	(1.060)	240384	50.0000	61.9	
121	Di-n-butylphthalate	149	19.874	19.874	(1.095)	1226460	50.0000	56.2	
122	4-Nitroquinoline-1-Oxide	190	20.195	20.195	(1.112)	50577	50.0000	66.8	
123	Ethyl Parathion	291	20.216	20.216	(1.113)	61668	50.0000	60.9	
124	Methapyrilene	97	20.485	20.485	(1.128)	140173	50.0000	71.0(M)	M9
125	Isodrin	193	20.599	20.599	(1.135)	131774	50.0000	54.8	
127	Fluoranthene	202	21.013	21.013	(1.157)	951066	50.0000	56.1	
128	Pyrene	202	21.520	21.520	(0.881)	984001	50.0000	47.3	
129	Benzidine	184	21.572	21.572	(0.883)	174879	50.0000	81.9	
$ 130	Terphenyl-D14	244	22.069	22.069	(0.904)	549634	50.0000	49.2	

Internal Std. Reference

Data File: \\target_server\GG\chem\gcms-u.i\U102911.b\U8235.D
Report Date: 29-Oct-2011 12:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
131	Aramite	185	22.389	22.389	(0.917)	64241	50.0000	59.7	
132	p-Dimethylaminoazobenzene	225	22.441	22.441	(0.919)	163798	50.0000	54.9	
133	Chlorobenzilate	251	22.596	22.596	(0.925)	238082	50.0000	51.6	
134	Kepone	272	23.248	23.248	(0.952)	1240	50.0000	13.3(a)	
135	Famphur	218	23.186	23.186	(0.950)	21430	50.0000	11.9(a)	
136	3,3'-Dimethylbenzidine	212	23.280	23.280	(0.953)	116654	50.0000	59.2	
137	Butylbenzylphthalate	149	23.383	23.383	(0.958)	403001	50.0000	51.7	
138	Bis(2-ethylhexyl)adipate	129	23.735	23.735	(0.972)	389249	50.0000	52.6	
139	2-Acetylaminofluorene	181	23.901	23.901	(0.979)	182341	50.0000	49.8	
140	Benzo(a)anthracene 5	228	24.397	24.397	(0.999)	583761	50.0000	49.5(H)	
* 141	Chrysene-D12	240	24.418	24.418	(1.000)	511171	40.0000		
142	Chrysene 5	228	24.480	24.480	(1.003)	619835	50.0000	49.6	
143	3,3'-Dichlorobenzidine	252	24.490	24.490	(1.003)	172393	50.0000	58.4	
144	bis(2-Ethylhexyl)phthalate	149	24.863	24.863	(1.018)	554485	50.0000	54.2	
145	Di-n-octylphthalate	149	26.333	26.333	(0.956)	765015	50.0000	49.7	
146	7,12-Dimethylbenz(A)Anthracen	256	26.767	26.767	(0.971)	214980	50.0000	45.6	
147	Benzo(b)fluoranthene 6	252	26.788	26.788	(0.972)	394139	50.0000	45.2	
148	Benzo(k)fluoranthene 6	252	26.840	26.840	(0.974)	533936	50.0000	47.1	
149	Benzo(a)pyrene 4	252	27.430	27.430	(0.995)	415472	50.0000	48.4	
* 150	Perylene-D12	264	27.554	27.554	(1.000)	347484	40.0000		
151	3-Methylcholanthrene	268	28.165	28.165	(1.022)	153650	50.0000	49.7	
152	Dibenz(a,j)acridine	279	29.283	29.283	(1.063)	205084	50.0000	46.4	
153	Indeno(1,2,3-cd)pyrene 6	276	29.562	29.562	(1.073)	335281	50.0000	55.1	
154	Dibenzo(a,h)anthracene 4	278	29.624	29.624	(1.075)	254511	50.0000	49.6	
155	Benzo(g,h,i)perylene 4	276	30.080	30.080	(1.092)	280945	50.0000	50.8	
M 156	Total PAHs	100				12463335	850.000	836	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD898 DFTPP Injection Date: 10/22/11

Instrument ID: GCMS-G DFTPP Injection Time: 1133

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.9
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	37.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.9
365	1.0 - 100.0% of mass 198	3.5
441	0.0 - 100.0% of mass 443	10.4 (73.2)2
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	14.1 (19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1022	G3461	10/22/11	1153
02		SSTD8.00G1022	G3462	10/22/11	1243
03		SSTD5.00G1022	G3463	10/22/11	1327
04		SSTD2.00G1022	G3464	10/22/11	1411
05		SSTD0.50G1022	G3465	10/22/11	1456
06		SSTD0.20G1022	G3466	10/22/11	1540
07		SIM IND CHECK	G3467	10/22/11	1624
08					
09					
10					
11					
12					
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16					
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18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date(s): 10/22/11 10/22/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1153 1540

LAB FILE ID: RF0.2: G3466 RF0.5: G3465 RF1: G3461
RF2: G3464 RF5: G3463 RF8: G3462

								COEFFICENTS		%RSD	MAX %RSD
COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	A0	A1	OR R^2	OR R^2
Benzo(a)pyrene	9512	26679	46723	75148	297310	453990	LINR	-9.91e-002	0.90832682	0.99983	0.99000
2-Methylnaphthalene-D10	1.498	1.126	1.144	1.091	1.048	1.054	AVRG		1.16015036	14.653	15.000
Fluorene-D10	0.723	0.907	0.971	0.940	0.973	0.955	AVRG		0.91171703	10.473	15.000
Pyrene-D10	13172	33245	63561	115210	397950	614650	LINR	-0.1346602	0.93387204	0.99870	0.99000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD902 DFTPP Injection Date: 10/26/11

Instrument ID: GCMS-G DFTPP Injection Time: 0847

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.3
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Less than 100.0% of mass 198	40.2
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	57.0
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.8
365	1.0 - 100.0% of mass 198	3.1
441	0.0 - 100.0% of mass 443	9.1 (71.4)2
442	40.0 - 100.0% of mass 198	67.2
443	17.0 - 23.0% of mass 442	12.8 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1026	G3549	10/26/11	0906
02	WG100237-BLANK	WG100237-1	G3551	10/26/11	1036
03					
04					
05					
06					
07					
08					
09					
10					
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12					
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15					
16					
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18					
19					
20					

FORM V SV

Katahdin Analytical Services A0000062

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date: 10/26/11 Time: 0906

Lab File ID: G3549 Init. Calib. Date(s): 10/22/11 10/22/11

Init. Calib. Times: 1153 1540

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzo(a)pyrene	0.9596500	1.0000000	1.1437000	0.01	-4.04	20.01	LINR
2-Methylnaphthalene-D10	1.1600000	1.0876000	1.0876000	0.01	-6.24	20.00	AVRG
Fluorene-D10	0.9120000	0.8707000	0.8707000	0.01	-4.53	20.00	AVRG
Pyrene-D10	0.8934900	1.0000000	1.0721000	0.01	-10.65	20.00	LINR

FORM VII PEST

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100237-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: G3551 Lab Sample ID: WG100237-1

Instrument ID: GCMS-G Date Extracted: 10/06/11

Matrix: (soil/water) SOIL Date Analyzed: 10/26/11

Level: (low/med) LOW Time Analyzed: 1036

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-AI26-0012	SE6227-1	G3676	11/01/11	1724
02	DSY-SD-AI26-1224	SE6227-2	G3677	11/01/11	1809
03	DSY-SD-AI26-2448	SE6227-3	G3678	11/01/11	1853
04	DSY-SD-AG26-0012	SE6227-4	G3679	11/01/11	1938
05	DSY-SD-AG26-1224	SE6227-5	G3680	11/01/11	2022
06	DSY-SD-AG26-2448	SE6227-6	G3681	11/01/11	2106
07	DSY-SD-DUP11-092611	SE6227-7	G3682	11/01/11	2150
08	DSY-SD-AC24-0012	SE6227-8	G3683	11/01/11	2234
09	DSY-SD-AC24-1224	SE6227-9	G3684	11/01/11	2318
10	DSY-SD-AC24-2448	SE6227-10	G3685	11/02/11	0002
11	DSY-SD-AE24-0012	SE6227-11	G3686	11/02/11	0045
12	DSY-SD-AE24-1224	SE6227-12	G3687	11/02/11	0129
13	DSY-SD-AE24-2448	SE6227-13	G3688	11/02/11	0213
14					
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COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000060

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG100237-1
Client ID: Method Blank Sample
Project:
SDG: DSY-8

Sample Date:
Received Date: 01-NOV-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 26-OCT-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 07-nov-2011 15:52

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD908 DFTPP Injection Date: 10/31/11

Instrument ID: GCMS-G DFTPP Injection Time: 1051

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.9
68	Less than 2.0% of mass 69	0.5 (1.1)1
69	Less than 100.0% of mass 198	42.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.1
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	12.9 (77.5)2
442	40.0 - 100.0% of mass 198	87.2
443	17.0 - 23.0% of mass 442	16.6 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1031	G3647	10/31/11	1112
02		SSTD8.00G1031	G3648	10/31/11	1201
03		SSTD5.00G1032	G3649	10/31/11	1245
04		SSTD2.00G1033	G3650	10/31/11	1329
05		SSTD0.50G1034	G3651	10/31/11	1413
06		SSTD0.20G1035	G3652	10/31/11	1458
07		SIM IND CHECK	G3653	10/31/11	1542
08					
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12					
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16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date(s): 10/31/11 10/31/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1112 1458

LAB FILE ID: RF0.2: G3652 RF0.5: G3651 RF1: G3647
RF2: G3650 RF5: G3649 RF8: G3648

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.023	0.965	0.999	1.034	0.932	1.066	AVRG	1.00333471	4.836	15.000
2-Methylnaphthalene-D10	0.943	0.929	0.989	1.029	0.878	0.971	AVRG	0.95661042	5.464	15.000
Fluorene-D10	0.708	0.734	0.843	0.898	0.825	0.953	AVRG	0.82683421	11.335	15.000
Pyrene-D10	0.903	0.981	0.961	1.016	0.870	1.025	AVRG	0.95936644	6.448	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD910 DFTPP Injection Date: 11/01/11

Instrument ID: GCMS-G DFTPP Injection Time: 1610

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.8
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Less than 100.0% of mass 198	42.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	55.9
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	25.4
365	1.0 - 100.0% of mass 198	4.5
441	0.0 - 100.0% of mass 443	13.5 (74.5)2
442	40.0 - 100.0% of mass 198	93.3
443	17.0 - 23.0% of mass 442	18.1 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1101	G3675	11/01/11	1638
02	DSY-SD-AI26-0012	SE6227-1	G3676	11/01/11	1724
03	DSY-SD-AI26-1224	SE6227-2	G3677	11/01/11	1809
04	DSY-SD-AI26-2448	SE6227-3	G3678	11/01/11	1853
05	DSY-SD-AG26-0012	SE6227-4	G3679	11/01/11	1938
06	DSY-SD-AG26-1224	SE6227-5	G3680	11/01/11	2022
07	DSY-SD-AG26-2448	SE6227-6	G3681	11/01/11	2106
08	DSY-SD-DUP11-092611	SE6227-7	G3682	11/01/11	2150
09	DSY-SD-AC24-0012	SE6227-8	G3683	11/01/11	2234
10	DSY-SD-AC24-1224	SE6227-9	G3684	11/01/11	2318
11	DSY-SD-AC24-2448	SE6227-10	G3685	11/02/11	0002
12	DSY-SD-AE24-0012	SE6227-11	G3686	11/02/11	0045
13	DSY-SD-AE24-1224	SE6227-12	G3687	11/02/11	0129
14	DSY-SD-AE24-2448	SE6227-13	G3688	11/02/11	0213
15					
16					
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19					
20					

FORM V SV

Katahdin Analytical Services A0000064

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date: 11/01/11 Time: 1638

Lab File ID: G3675 Init. Calib. Date(s): 10/31/11 10/31/11

Init. Calib. Times: 1112 1458

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.0030000	0.9897400	0.01	-1.32	20.01	AVRG
2-Methylnaphthalene-D10	0.9560000	0.9465200	0.01	-0.99	20.00	AVRG
Fluorene-D10	0.8270000	0.8742900	0.01	5.72	20.00	AVRG
Pyrene-D10	0.9590000	1.0186000	0.01	6.21	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD911 DFTPP Injection Date: 11/02/11

Instrument ID: GCMS-G DFTPP Injection Time: 0601

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.7 (1.6)1
69	Less than 100.0% of mass 198	42.5
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	57.2
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	13.3 (76.3)2
442	40.0 - 100.0% of mass 198	90.3
443	17.0 - 23.0% of mass 442	17.5 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1102	G3691	11/02/11	0619
02		SSTD8.00G1102	G3692	11/02/11	0703
03		SSTD5.00G1102	G3693	11/02/11	0746
04		SSTD2.00G1102	G3694	11/02/11	0831
05		SSTD0.50G1102	G3695	11/02/11	0915
06		SSTD0.20G1102	G3696	11/02/11	1000
07		SIM IND CHECK	G3697	11/02/11	1045
08					
09					
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20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date(s): 11/02/11 11/02/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0619 1000

LAB FILE ID: RF0.2: G3696 RF0.5: G3695 RF1: G3691
RF2: G3694 RF5: G3693 RF8: G3692

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.620	1.399	1.287	1.098	1.207	1.178	AVRG	1.29808638	14.471	15.000
2-Methylnaphthalene-D10	1.192	1.243	1.194	1.027	1.139	1.106	AVRG	1.15011689	6.680	15.000
Fluorene-D10	1.002	0.968	1.136	0.953	1.100	1.068	AVRG	1.03794548	7.181	15.000
Pyrene-D10	1.245	1.208	1.434	1.143	1.321	1.283	AVRG	1.27238392	7.894	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: GD912 DFTPP Injection Date: 11/02/11

Instrument ID: GCMS-G DFTPP Injection Time: 1129

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.9
68	Less than 2.0% of mass 69	0.3 (0.8)1
69	Less than 100.0% of mass 198	41.3
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	57.0
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	4.8
441	0.0 - 100.0% of mass 443	14.6 (79.5)2
442	40.0 - 100.0% of mass 198	98.4
443	17.0 - 23.0% of mass 442	18.4 (18.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1102	G3698	11/02/11	1148
02	WG98304-BLANK	WG98304-1RA	G3703	11/02/11	1535
03	DSY-SD-RB04-092611	SE6227-14	G3705	11/02/11	1704
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date: 11/02/11 Time: 1148

Lab File ID: G3698 Init. Calib. Date(s): 11/02/11 11/02/11

Init. Calib. Times: 0619 1000

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.2980000	1.3335000	0.01	2.74	20.01	AVRG
2-Methylnaphthalene-D10	1.1500000	1.1912000	0.01	3.58	20.00	AVRG
Fluorene-D10	1.0380000	1.0656000	0.01	2.66	20.00	AVRG
Pyrene-D10	1.2720000	1.2907000	0.01	1.47	20.00	AVRG

FORM VII PEST

FORM 4

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98304-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: N1870 Lab Sample ID: WG98304-1

Instrument ID: GCMS-N Date Extracted: 09/30/11

Matrix: (soil/water) WATER Date Analyzed: 10/08/11

Level:(low/med) LOW Time Analyzed: 0929

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG98304-LCS	WG98304-2	N1871	10/08/11	1011
02	WG98304-LCSD	WG98304-3	N1872	10/08/11	1054
03					
04					
05					
06					
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30					

COMMENTS:

Katahdin Analytical Services A0000058

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98304-1
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98304

Analysis Date: 08-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 07-nov-2011 16:25

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		65.9	%					
Fluorene-D10		72.8	%					
Pyrene-D10		78.6	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: ND132 DFTPP Injection Date: 10/07/11

Instrument ID: GCMS-N DFTPP Injection Time: 0838

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.1
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Less than 100.0% of mass 198	33.3
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	40.0 - 60.0% of mass 198	55.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.0 (72.0)2
442	40.0 - 100.0% of mass 198	92.3
443	17.0 - 23.0% of mass 442	18.1 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00N1007	N1845	10/07/11	0901
02		SSTD8.00N1007	N1846	10/07/11	0953
03		SSTD5.00N1007	N1847	10/07/11	1036
04		SSTD2.00N1007	N1848	10/07/11	1118
05		SSTD0.50N1007	N1849	10/07/11	1201
06		SSTD0.20N1007	N1850	10/07/11	1244
07		SIM IND CHECK	N1851	10/07/11	1326
08					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-N Calibration Date(s): 10/07/11 10/07/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0901 1244

LAB FILE ID: RF0.2: N1850 RF0.5: N1849 RF1: N1845
RF2: N1848 RF5: N1847 RF8: N1846

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	0.896	1.025	1.190	1.119	1.193	1.231	AVRG	1.10916559	11.461	15.000
2-Methylnaphthalene-D10	1.247	1.166	1.207	1.132	1.123	1.126	AVRG	1.16663739	4.359	15.000
Fluorene-D10	0.754	0.955	0.994	0.955	0.947	0.940	AVRG	0.92426933	9.256	15.000
Pyrene-D10	1.366	1.234	1.182	1.048	0.966	0.985	AVRG	1.13026462	13.952	15.000

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: ND134 DFTPP Injection Date: 10/08/11

Instrument ID: GCMS-N DFTPP Injection Time: 0821

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.8
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	37.9
70	Less than 2.0% of mass 69	0.1 (0.1)1
127	40.0 - 60.0% of mass 198	59.0
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.7
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	14.4 (75.6)2
442	40.0 - 100.0% of mass 198	97.9
443	17.0 - 23.0% of mass 442	19.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00N1008	N1869	10/08/11	0839
02	WG98304-BLANK	WG98304-1	N1870	10/08/11	0929
03	WG98304-LCS	WG98304-2	N1871	10/08/11	1011
04	WG98304-LCSD	WG98304-3	N1872	10/08/11	1054
05					
06					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-N Calibration Date: 10/08/11 Time: 0839

Lab File ID: N1869 Init. Calib. Date(s): 10/07/11 10/07/11

Init. Calib. Times: 0901 1244

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.1090000	0.9882100	0.01	-10.89	20.01	AVRG
2-Methylnaphthalene-D10	1.1670000	1.1888000	0.01	1.87	20.00	AVRG
Fluorene-D10	0.9240000	0.9390400	0.01	1.63	20.00	AVRG
Pyrene-D10	1.1300000	1.0276000	0.01	-9.06	20.00	AVRG

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98304-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID: G3703 Lab Sample ID: WG98304-1RA

Instrument ID: GCMS-G Date Extracted: 09/30/11

Matrix: (soil/water) WATER Date Analyzed: 11/02/11

Level: (low/med) LOW Time Analyzed: 1535

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DSY-SD-RB04-092611	SE6227-14	G3705	11/02/11	1704
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
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27					
28					
29					
30					

COMMENTS:

FORM IVSV

Katahdin Analytical Services A0000059

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98304-1RA
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98304

Analysis Date: 02-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 07-nov-2011 16:08

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		62.6	%					
Fluorene-D10		64.2	%					
Pyrene-D10		75.3	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-9

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB04-092611	SE6227-14	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG98304-1	65.9		72.8		78.6		0
Method Blank Sample	WG98304-1RA	62.6		64.2		75.3		0
Laboratory Control S	WG98304-2	58.6		65.9		76.0		0
Laboratory Control S	WG98304-3	64.8		73.0		80.5		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98304-2
LCSD ID: WG98304-3
Project:
SDG: DSY-9
Report Date: 07-nov-2011 15:52

Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98304

Analysis Date: 08-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.93	96.5	1.99	99.5*	ug/L	3	30	63-98
2-Methylnaphthalene-D10			58.6		64.8				43-92
Fluorene-D10			65.9		73.0				29-101
Pyrene-D10			76.0		80.5				53-166

600 Technology Way
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http://www.katahdinlab.com

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3461 Date Analyzed: 10/22/11

Instrument ID: GCMS-G Time Analyzed: 1153

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		31419	9.08	109849	12.03	58198	16.34
UPPER LIMIT		62838	9.62	219698	12.57	116396	16.88
LOWER LIMIT		15710	8.54	54925	11.49	29099	15.80
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1026	37998	9.04	121817	12.02	67276	16.32
02	WG100237-BLANK	WG100237-1	42491	9.06	146608	12.03	80918	16.32
03								
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IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3461 Date Analyzed: 10/22/11

Instrument ID: GCMS-G Time Analyzed: 1153

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		86135		19.96		40046		26.58		30827		29.91	
UPPER LIMIT		172270		20.50		80092		27.12		61654		30.45	
LOWER LIMIT		43068		19.42		20023		26.04		15414		29.37	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1026		95324		19.95		57044		26.58		41999		29.90	
02	WG100237-BLANK	WG100237-1		124911		19.95		90435*		26.57		65677*		29.89	
03															
04															
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20															

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000078

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3647 Date Analyzed: 10/31/11

Instrument ID: GCMS-G Time Analyzed: 1112

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		51871	8.98	167195	11.94	81378	16.25
UPPER LIMIT		103742	9.52	334390	12.48	162756	16.79
LOWER LIMIT		25936	8.44	83598	11.40	40689	15.71
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1101	43763	8.95	150922	11.91	76988	16.22
02	DSY-SD-AI26-0012	SE6227-1	34394	8.95	117982	11.91	67082	16.22
03	DSY-SD-AI26-1224	SE6227-2	32993	8.95	121745	11.91	66554	16.22
04	DSY-SD-AI26-2448	SE6227-3	33373	8.95	122651	11.91	75336	16.23
05	DSY-SD-AG26-0012	SE6227-4	32364	8.95	119073	11.91	66085	16.22
06	DSY-SD-AG26-1224	SE6227-5	36909	8.95	141581	11.91	86314	16.23
07	DSY-SD-AG26-2448	SE6227-6	36909	8.95	136119	11.91	85957	16.22
08	DSY-SD-DUP11-092611	SE6227-7	37421	8.95	125524	11.91	70123	16.22
09	DSY-SD-AC24-0012	SE6227-8	33836	8.95	126199	11.91	71035	16.22
10	DSY-SD-AC24-1224	SE6227-9	39995	8.95	143670	11.92	98327	16.24
11	DSY-SD-AC24-2448	SE6227-10	37452	8.96	141362	11.92	74119	16.22
12	DSY-SD-AE24-0012	SE6227-11	36473	8.95	136745	11.91	72383	16.22
13	DSY-SD-AE24-1224	SE6227-12	40488	8.95	152309	11.92	97468	16.23
14	DSY-SD-AE24-2448	SE6227-13	39912	8.96	138776	11.92	73630	16.22
15								
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18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3647 Date Analyzed: 10/31/11

Instrument ID: GCMS-G Time Analyzed: 1112

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		117814	19.87	72005	26.49	54895	29.81
UPPER LIMIT		235628	20.41	144010	27.03	109790	30.35
LOWER LIMIT		58907	19.33	36003	25.95	27448	29.27
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1101	122123	19.84	67552	26.44	46231	29.76
02	DSY-SD-AI26-0012	SE6227-1	102284	19.84	33064*	26.44	23908*	29.80
03	DSY-SD-AI26-1224	SE6227-2	109800	19.84	43562	26.46	27142*	29.76
04	DSY-SD-AI26-2448	SE6227-3	102709	19.85	39668	26.46	36490	29.79
05	DSY-SD-AG26-0012	SE6227-4	112355	19.84	34621*	26.44	21454*	29.76
06	DSY-SD-AG26-1224	SE6227-5	121697	19.85	55746	26.47	44217	29.79
07	DSY-SD-AG26-2448	SE6227-6	119116	19.85	59842	26.46	40289	29.78
08	DSY-SD-DUP11-092611	SE6227-7	118188	19.84	50810	26.46	31722	29.78
09	DSY-SD-AC24-0012	SE6227-8	121109	19.84	52871	26.46	29852	29.78
10	DSY-SD-AC24-1224	SE6227-9	8998*	19.46	52477	26.50	31161	29.84
11	DSY-SD-AC24-2448	SE6227-10	113782	19.84	53227	26.46	24775*	29.78
12	DSY-SD-AE24-0012	SE6227-11	142422	19.84	35473*	26.46	23598*	29.78
13	DSY-SD-AE24-1224	SE6227-12	238923*	19.87	63101	26.49	35534	29.80
14	DSY-SD-AE24-2448	SE6227-13	115569	19.85	38040	26.46	15780*	29.78
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		36243		8.92		123776		11.87		61148		16.18	
UPPER LIMIT		72486		9.46		247552		12.41		122296		16.72	
LOWER LIMIT		18122		8.38		61888		11.33		30574		15.64	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1102		42716		8.91		142171		11.87		72570	16.18
02	WG98304-BLANK	WG98304-1RA		37591		8.91		138794		11.88		68807	16.18
03	DSY-SD-RB04-092611	SE6227-14		39883		8.91		131844		11.88		73186	16.18
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19													
20													

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): G3691 Date Analyzed: 11/02/11

Instrument ID: GCMS-G Time Analyzed: 0619

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		83246		19.80		43673		26.39		30900		29.71	
UPPER LIMIT		166492		20.34		87346		26.93		61800		30.25	
LOWER LIMIT		41623		19.26		21837		25.85		15450		29.17	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD1.00G1102		19.80		63635		26.40		42955		29.71	
02	WG98304-BLANK	WG98304-1RA		19.80		54063		26.40		37119		29.71	
03	DSY-SD-RB04-092611	SE6227-14		19.80		67861		26.40		50027		29.71	
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IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): N1845 Date Analyzed: 10/07/11

Instrument ID: GCMS-N Time Analyzed: 0901

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		31357	8.91	87950	12.32	35504	17.26
UPPER LIMIT		62714	9.45	175900	12.86	71008	17.80
LOWER LIMIT		15679	8.37	43975	11.78	17752	16.72
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00N1008	30869	8.91	96815	12.31	39262	17.25
02	WG98304-BLANK	WG98304-1	30852	8.93	97048	12.38	40795	17.27
03	WG98304-LCS	WG98304-2	28373	8.93	91267	12.31	38194	17.25
04	WG98304-LCSD	WG98304-3	30636	8.91	99582	12.31	42492	17.25
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20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-9

Lab File ID (Standard): N1845 Date Analyzed: 10/07/11

Instrument ID: GCMS-N Time Analyzed: 0901

		IS4(PHN) AREA #	IS4(PHN) RT #	IS5(CRY) AREA #	IS5(CRY) RT #	IS6(PRY) AREA #	IS6(PRY) RT #
12 HOUR STD		51380	21.01	31239	27.38	24392	30.53
UPPER LIMIT		102760	21.55	62478	27.92	48784	31.07
LOWER LIMIT		25690	20.47	15620	26.84	12196	29.99
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00N1008	51679	21.02	31666	27.40	23378	30.54
02	WG98304-BLANK	WG98304-1	62286	21.06	35166	27.44	23284	30.59
03	WG98304-LCS	WG98304-2	52384	21.01	33626	27.37	24673	30.56
04	WG98304-LCSD	WG98304-3	60312	21.01	36549	27.37	25359	30.56
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19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0658000	1.0000000	32100000	0.001	6.58	20.00	2RDR
(2)	1.0970000	1.0000000	19280000	0.001	9.70	20.00	2RDR
(3)	0.8812600	1.0000000	45680000	0.001	-11.87	20.00	2RDR
(4)	0.9684200	1.0000000	28902000	0.001	-3.16	20.00	2RDR
(5)	0.8576800	1.0000000	23536000	0.001	-14.23	20.00	2RDR
Average %D: -2.600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000153

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9705700	1.0000000	3399000.0	0.001	-2.94	20.00	2RDR
(2)	1.0071000	1.0000000	5842700.0	0.001	0.71	20.00	2RDR
(3)	1.0262000	1.0000000	10245000	0.001	2.62	20.00	2RDR
(4)	1.0064000	1.0000000	5347400.0	0.001	0.64	20.00	2RDR
(5)	0.9700600	1.0000000	4751700.0	0.001	-2.99	20.00	2RDR
Average %D: -0.390							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9965300	1.0000000	6853900.0	0.001	-0.35	20.00	2RDR
(2)	1.0256000	1.0000000	8164500.0	0.001	2.56	20.00	2RDR
(3)	1.1584000	1.0000000	6365500.0	0.001	15.84	20.00	2RDR
(4)	0.9072000	1.0000000	4974600.0	0.001	-9.28	20.00	2RDR
(5)	0.9577900	1.0000000	5124100.0	0.001	-4.22	20.00	2RDR
Average %D: 0.9100							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.09 TCX: 4.33

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	10/13/11	2017	17.10	4.32
02	WG98322-BLAN	WG98322-1	10/13/11	2200	17.10	4.32
03	WG98322-LCS	WG98322-2	10/13/11	2226	17.09	4.32
04	WG98322-LCSD	WG98322-3	10/13/11	2251	17.10	4.32
05	DSY-SD-RB04-	SE6227-14	10/13/11	2317	17.09	4.32
06		AR1660 1.0	10/14/11	0125	17.09	4.33
07		AR1660 1.0	10/16/11	1120	17.09	4.33
08	WG98765-BLAN	WG98765-1	10/16/11	1541	17.10	4.33
09	WG98765-LCS	WG98765-2	10/16/11	1607	17.10	4.33
10	WG98765-LCSD	WG98765-3	10/16/11	1632	17.09	4.33
11		AR1660 2.5	10/16/11	1816	17.09	4.32
12		AR1660 1.0	10/17/11	0040	17.09	4.33
13		AR1254 1.0	10/17/11	0157		
14	DSY-SD-AI26-	SE6227-1	10/17/11	0456	17.09	4.33
15	DSY-SD-AI26-	SE6227-2	10/17/11	0522	17.09	4.33
16	DSY-SD-AI26-	SE6227-3	10/17/11	0547	17.09	4.33
17	DSY-SD-AG26-	SE6227-4	10/17/11	0613	17.09	4.33
18		AR1660 2.5	10/17/11	0730	17.09	4.33
19		AR1254 1.0	10/17/11	0848		
20		AR1660 1.0	10/17/11	1757	17.09	4.33

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000156

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/13/11 Time: 2017

Lab File ID: 7EJ386 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2942400	0.2500000	4145700.0	0.001	17.70	20.00	2RDR
(2)	0.2720100	0.2500000	6322200.0	0.001	8.80	20.00	2RDR
(3)	0.2718200	0.2500000	11050000	0.001	8.73	20.00	2RDR
(4)	0.2796400	0.2500000	6013300.0	0.001	11.86	20.00	2RDR
(5)	0.2794400	0.2500000	5451600.0	0.001	11.78	20.00	2RDR
Average %D: 11.760							
Aroclor-1260	0.2575500	0.2500000	7112200.0	0.001	3.02	20.00	2RDR
(2)	0.2620400	0.2500000	8539600.0	0.001	4.82	20.00	2RDR
(3)	0.2678400	0.2500000	6059500.0	0.001	7.14	20.00	2RDR
(4)	0.2552500	0.2500000	5644700.0	0.001	2.10	20.00	2RDR
(5)	0.2608400	0.2500000	5614600.0	0.001	4.34	20.00	2RDR
Average %D: 4.2800							
Decachlorobiphenyl	5.08e-003	5.e-003	95969000	0.001	1.60	20.00	2RDR
Tetrachloro-m-xylene	5.63e-003	5.e-003	242020000	0.001	12.60	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/14/11 Time: 0125

Lab File ID: 7EJ398 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0156000	1.0000000	3543500.0	0.001	1.56	20.00	2RDR	
(2)	1.0533000	1.0000000	6038900.0	0.001	5.33	20.00	2RDR	
(3)	1.0581000	1.0000000	10964000	0.001	5.81	20.00	2RDR	
(4)	1.0280000	1.0000000	5656800.0	0.001	2.80	20.00	2RDR	
(5)	1.0506000	1.0000000	5162600.0	0.001	5.06	20.00	2RDR	
Average %D: 4.1100								
Aroclor-1260	1.0249000	1.0000000	7200000.0	0.001	2.49	20.00	2RDR	
(2)	1.0080000	1.0000000	8568400.0	0.001	0.80	20.00	2RDR	
(3)	1.0447000	1.0000000	6215500.0	0.001	4.47	20.00	2RDR	
(4)	0.9931000	1.0000000	5668800.0	0.001	-0.69	20.00	2RDR	
(5)	1.4132000	1.0000000	8111700.0	0.001	41.32	20.00	2RDR	<-
Average %D: 9.6800								
Decachlorobiphenyl	1.82e-002	2.e-002	87179000	0.001	-9.00	20.00	2RDR	
Tetrachloro-m-xylene	2.29e-002	2.e-002	248560000	0.001	14.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1120

Lab File ID: 7EJ451 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8876000	1.0000000	3100200.0	0.001	-11.24	20.00	2RDR
(2)	1.1113000	1.0000000	6367300.0	0.001	11.13	20.00	2RDR
(3)	1.0872000	1.0000000	11265000	0.001	8.72	20.00	2RDR
(4)	1.0707000	1.0000000	5893800.0	0.001	7.07	20.00	2RDR
(5)	1.0617000	1.0000000	5217200.0	0.001	6.17	20.00	2RDR
Average %D: 4.3700							
Aroclor-1260	1.0838000	1.0000000	7616000.0	0.001	8.38	20.00	2RDR
(2)	1.0944000	1.0000000	9313700.0	0.001	9.44	20.00	2RDR
(3)	1.1037000	1.0000000	6573200.0	0.001	10.37	20.00	2RDR
(4)	1.0843000	1.0000000	6195300.0	0.001	8.43	20.00	2RDR
(5)	1.0939000	1.0000000	6243500.0	0.001	9.39	20.00	2RDR
Average %D: 9.2000							
Decachlorobiphenyl	2.1e-002	2.e-002	101140000	0.001	5.00	20.00	2RDR
Tetrachloro-m-xylene	2.18e-002	2.e-002	236910000	0.001	9.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1816

Lab File ID: 7EJ466 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.3053000	2.5000000	3190300.0	0.001	-7.79	20.00	2RDR
(2)	2.3172000	2.5000000	5247000.0	0.001	-7.31	20.00	2RDR
(3)	2.2830000	2.5000000	9423300.0	0.001	-8.68	20.00	2RDR
(4)	2.2157000	2.5000000	4896500.0	0.001	-11.37	20.00	2RDR
(5)	2.1835000	2.5000000	4298600.0	0.001	-12.66	20.00	2RDR
Average %D: -9.564							
Aroclor-1260	2.2049000	2.5000000	6210600.0	0.001	-11.80	20.00	2RDR
(2)	2.2190000	2.5000000	7611200.0	0.001	-11.24	20.00	2RDR
(3)	2.2591000	2.5000000	5443000.0	0.001	-9.64	20.00	2RDR
(4)	2.1930000	2.5000000	5041000.0	0.001	-12.28	20.00	2RDR
(5)	2.2229000	2.5000000	5153000.0	0.001	-11.08	20.00	2RDR
Average %D: -11.20							
Decachlorobiphenyl	4.2e-002	5.e-002	81182000	0.001	-16.00	20.00	2RDR
Tetrachloro-m-xylene	4.77e-002	5.e-002	208160000	0.001	-4.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0040

Lab File ID: 7EJ481 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8574800	1.0000000	2995800.0	0.001	-14.25	20.00	2RDR
(2)	1.0688000	1.0000000	6126500.0	0.001	6.88	20.00	2RDR
(3)	1.0204000	1.0000000	10573000	0.001	2.04	20.00	2RDR
(4)	0.9955400	1.0000000	5476800.0	0.001	-0.45	20.00	2RDR
(5)	0.9579400	1.0000000	4706000.0	0.001	-4.21	20.00	2RDR
Average %D: -2.000							
Aroclor-1260	1.0012000	1.0000000	7032900.0	0.001	0.12	20.00	2RDR
(2)	1.0139000	1.0000000	8619200.0	0.001	1.39	20.00	2RDR
(3)	1.0412000	1.0000000	6194400.0	0.001	4.12	20.00	2RDR
(4)	0.9887500	1.0000000	5643600.0	0.001	-1.12	20.00	2RDR
(5)	1.0296000	1.0000000	5868200.0	0.001	2.96	20.00	2RDR
Average %D: 1.5000							
Decachlorobiphenyl	1.86e-002	2.e-002	89368000	0.001	-7.00	20.00	2RDR
Tetrachloro-m-xylene	2.15e-002	2.e-002	233220000	0.001	7.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0157

Lab File ID: 7EJ484 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9631300	1.0000000	3900300.0	0.001	-3.69	20.00	2RDR
(2)	0.9665900	1.0000000	6380000.0	0.001	-3.34	20.00	2RDR
(3)	0.9530200	1.0000000	7136100.0	0.001	-4.70	20.00	2RDR
(4)	0.9820000	1.0000000	9263600.0	0.001	-1.80	20.00	2RDR
(5)	1.0423000	1.0000000	5881900.0	0.001	4.23	20.00	2RDR
Average %D: -1.860							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0730

Lab File ID: 7EJ497 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.5656000	2.5000000	3545100.0	0.001	2.62	20.00	2RDR
(2)	2.5003000	2.5000000	5651900.0	0.001	0.01	20.00	2RDR
(3)	2.4707000	2.5000000	10188000	0.001	-1.17	20.00	2RDR
(4)	2.4010000	2.5000000	5307200.0	0.001	-3.96	20.00	2RDR
(5)	2.3869000	2.5000000	4699900.0	0.001	-4.52	20.00	2RDR
Average %D: -1.404							
Aroclor-1260	2.3970000	2.5000000	6752200.0	0.001	-4.12	20.00	2RDR
(2)	2.3934000	2.5000000	8214300.0	0.001	-4.26	20.00	2RDR
(3)	2.4597000	2.5000000	5933400.0	0.001	-1.61	20.00	2RDR
(4)	2.4007000	2.5000000	5521500.0	0.001	-3.97	20.00	2RDR
(5)	2.4361000	2.5000000	5658700.0	0.001	-2.56	20.00	2RDR
Average %D: -3.304							
Decachlorobiphenyl	4.6e-002	5.e-002	88782000	0.001	-8.00	20.00	2RDR
Tetrachloro-m-xylene	5.16e-002	5.e-002	225670000	0.001	3.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0848

Lab File ID: 7EJ500 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1018000	1.0000000	4462500.0	0.001	10.18	20.00	2RDR
(2)	1.1217000	1.0000000	7405300.0	0.001	12.17	20.00	2RDR
(3)	1.0927000	1.0000000	8192700.0	0.001	9.27	20.00	2RDR
(4)	1.1080000	1.0000000	10478000	0.001	10.80	20.00	2RDR
(5)	1.1762000	1.0000000	6661800.0	0.001	17.62	20.00	2RDR
Average %D: 12.010							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1757

Lab File ID: 7EJ513 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.7731400	1.0000000	2703200.0	0.001	-22.69	20.00	2RDR	<-
(2)	1.1173000	1.0000000	6401000.0	0.001	11.73	20.00	2RDR	
(3)	1.0631000	1.0000000	11016000	0.001	6.31	20.00	2RDR	
(4)	1.0387000	1.0000000	5716500.0	0.001	3.87	20.00	2RDR	
(5)	1.0183000	1.0000000	5003400.0	0.001	1.83	20.00	2RDR	
Average %D: 0.2100								
Aroclor-1260	1.0682000	1.0000000	7505700.0	0.001	6.82	20.00	2RDR	
(2)	1.0782000	1.0000000	9173600.0	0.001	7.82	20.00	2RDR	
(3)	1.1027000	1.0000000	6567000.0	0.001	10.27	20.00	2RDR	
(4)	1.0751000	1.0000000	6142200.0	0.001	7.51	20.00	2RDR	
(5)	1.1032000	1.0000000	6297400.0	0.001	10.32	20.00	2RDR	
Average %D: 8.5500								
Decachlorobiphenyl	2.08e-002	2.e-002	99790000	0.001	4.00	20.00	2RDR	
Tetrachloro-m-xylene	2.21e-002	2.e-002	240210000	0.001	10.50	20.00	2RDR	

FORM VII PEST

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.09 TCX: 4.33

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1254 1.0	10/17/11	1915		
02	DSY-SD-AG26-	SE6227-5	10/17/11	2032	17.09	4.33
03	DSY-SD-AG26-	SE6227-6	10/17/11	2057	17.09	4.33
04	DSY-SD-DUP11	SE6227-7	10/17/11	2123	17.09	4.33
05	DSY-SD-AC24-	SE6227-8	10/17/11	2149	17.09	4.33
06	DSY-SD-AC24-	SE6227-9	10/17/11	2214	17.09	4.33
07	DSY-SD-AC24-	SE6227-10	10/17/11	2240	17.09	4.33
08	DSY-SD-AE24-	SE6227-11	10/17/11	2306	17.09	4.33
09	DSY-SD-AE24-	SE6227-12	10/17/11	2331	17.09	4.33
10		AR1660 0.25	10/18/11	0022	17.09	4.33
11		AR1254 1.0	10/18/11	0139		
12	DSY-SD-AE24-	SE6227-13	10/18/11	0204	17.09	4.33
13		AR1660 1.0	10/18/11	0646	17.08	4.33
14		AR1254 1.0	10/18/11	0804		
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1915

Lab File ID: 7EJ516 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9229200	1.0000000	3737300.0	0.001	-7.71	20.00	2RDR
(2)	0.9348700	1.0000000	6170200.0	0.001	-6.51	20.00	2RDR
(3)	0.9007800	1.0000000	6740800.0	0.001	-9.92	20.00	2RDR
(4)	0.9081800	1.0000000	8551900.0	0.001	-9.18	20.00	2RDR
(5)	0.9796600	1.0000000	5517100.0	0.001	-2.03	20.00	2RDR
Average %D: -7.070							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0022

Lab File ID: 7EJ528 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2400300	0.2500000	3388700.0	0.001	-3.99	20.00	2RDR
(2)	0.2430800	0.2500000	5657000.0	0.001	-2.77	20.00	2RDR
(3)	0.2188000	0.2500000	8824900.0	0.001	-12.48	20.00	2RDR
(4)	0.2164200	0.2500000	4609200.0	0.001	-13.43	20.00	2RDR
(5)	0.2215400	0.2500000	4310700.0	0.001	-11.38	20.00	2RDR
Average %D: -8.800							
Aroclor-1260	0.2265900	0.2500000	6236600.0	0.001	-9.36	20.00	2RDR
(2)	0.2202600	0.2500000	7099200.0	0.001	-11.90	20.00	2RDR
(3)	0.2333100	0.2500000	5225600.0	0.001	-6.68	20.00	2RDR
(4)	0.2329800	0.2500000	5131000.0	0.001	-6.81	20.00	2RDR
(5)	0.2320200	0.2500000	4948200.0	0.001	-7.19	20.00	2RDR
Average %D: -8.400							
Decachlorobiphenyl	4.67e-003	5.e-003	88119000	0.001	-6.60	20.00	2RDR
Tetrachloro-m-xylene	4.89e-003	5.e-003	209500000	0.001	-2.20	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0139

Lab File ID: 7EJ531 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9534900	1.0000000	3861200.0	0.001	-4.65	20.00	2RDR
(2)	0.9734200	1.0000000	6425200.0	0.001	-2.66	20.00	2RDR
(3)	0.9263300	1.0000000	6934200.0	0.001	-7.37	20.00	2RDR
(4)	0.9403400	1.0000000	8862000.0	0.001	-5.97	20.00	2RDR
(5)	1.0039000	1.0000000	5658400.0	0.001	0.39	20.00	2RDR
Average %D: -4.050							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8264500	1.0000000	2888200.0	0.001	-17.36	20.00	2RDR
(2)	1.1661000	1.0000000	6677000.0	0.001	16.61	20.00	2RDR
(3)	1.1096000	1.0000000	11498000	0.001	10.96	20.00	2RDR
(4)	1.0682000	1.0000000	5880300.0	0.001	6.82	20.00	2RDR
(5)	1.0515000	1.0000000	5167200.0	0.001	5.15	20.00	2RDR
Average %D: 4.4400							
Aroclor-1260	1.1030000	1.0000000	7751500.0	0.001	10.30	20.00	2RDR
(2)	1.1154000	1.0000000	9495100.0	0.001	11.54	20.00	2RDR
(3)	1.1417000	1.0000000	6803700.0	0.001	14.17	20.00	2RDR
(4)	1.1010000	1.0000000	6291700.0	0.001	10.10	20.00	2RDR
(5)	1.1315000	1.0000000	6462800.0	0.001	13.15	20.00	2RDR
Average %D: 11.850							
Decachlorobiphenyl	2.08e-002	2.e-002	99996000	0.001	4.00	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	258390000	0.001	19.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0804

Lab File ID: 7EJ546 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9935100	1.0000000	4023400.0	0.001	-0.65	20.00	2RDR
(2)	0.9926500	1.0000000	6552400.0	0.001	-0.74	20.00	2RDR
(3)	0.9645800	1.0000000	7223600.0	0.001	-3.54	20.00	2RDR
(4)	0.9857500	1.0000000	9299800.0	0.001	-1.42	20.00	2RDR
(5)	1.0447000	1.0000000	5895600.0	0.001	4.47	20.00	2RDR
Average %D: -0.380							

FORM 4

PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98765-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Lab Sample ID: WG98765-1 Lab File ID: 7EJ460

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3545

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/07/11

Date Analyzed (1): 10/16/11 Date Analyzed (2): 10/16/11

Time Analyzed (1): 1541 Time Analyzed (2): 1541

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98765-LCS	WG98765-2	7EJ461	10/16/11	10/16/11
02	WG98765-LCSD	WG98765-3	7EJ462	10/16/11	10/16/11
03	DSY-SD-AI26-0012	SE6227-1	7EJ491	10/17/11	10/17/11
04	DSY-SD-AI26-1224	SE6227-2	7EJ492	10/17/11	10/17/11
05	DSY-SD-AI26-2448	SE6227-3	7EJ493	10/17/11	10/17/11
06	DSY-SD-AG26-0012	SE6227-4	7EJ494	10/17/11	10/17/11
07	DSY-SD-AG26-1224	SE6227-5	7EJ519	10/17/11	10/17/11
08	DSY-SD-AG26-2448	SE6227-6	7EJ520	10/17/11	10/17/11
09	DSY-SD-DUP11-092611	SE6227-7	7EJ521	10/17/11	10/17/11
10	DSY-SD-AC24-0012	SE6227-8	7EJ522	10/17/11	10/17/11
11	DSY-SD-AC24-1224	SE6227-9	7EJ523	10/17/11	10/17/11
12	DSY-SD-AC24-2448	SE6227-10	7EJ524	10/17/11	10/17/11
13	DSY-SD-AE24-0012	SE6227-11	7EJ525	10/17/11	10/17/11
14	DSY-SD-AE24-1224	SE6227-12	7EJ526	10/17/11	10/17/11
15	DSY-SD-AE24-2448	SE6227-13	7EJ532	10/18/11	10/18/11
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG98765-1
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		68.8	%					
Decachlorobiphenyl		60.7	%					

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG98322-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Lab Sample ID: WG98322-1 Lab File ID: 7EJ390

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 09/30/11

Date Analyzed (1): 10/13/11 Date Analyzed (2): 10/13/11

Time Analyzed (1): 2200 Time Analyzed (2): 2200

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG98322-LCS	WG98322-2	7EJ391	10/13/11	10/13/11
02	WG98322-LCSD	WG98322-3	7EJ392	10/13/11	10/13/11
03	DSY-SD-RB04-092611	SE6227-14	7EJ393	10/13/11	10/13/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS:

FORM IVPCB

Report of Analytical Results

Client:
Lab ID: WG98322-1
Client ID: Method Blank Sample
Project:
SDG: DSY-9

Sample Date:
Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98322

Analysis Date: 13-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.25	ug/L	1	.5	0.50	0.15	0.25
Aroclor-1221	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1232	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Aroclor-1242	U	0.25	ug/L	1	.5	0.50	0.18	0.25
Aroclor-1248	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1254	U	0.25	ug/L	1	.5	0.50	0.082	0.25
Aroclor-1260	U	0.25	ug/L	1	.5	0.50	0.17	0.25
Tetrachloro-M-Xylene		99.1	%					
Decachlorobiphenyl		95.2	%					

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FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98765-BLANK	WG98765-1	58	69	51*	61			1
02	WG98765-LCS	WG98765-2	59	59	51*	54*			2
03	WG98765-LCSD	WG98765-3	76	67	66	65			0
04	DSY-SD-AI26-0012	SE6227-1	33*	30*	28*	28*			4
05	DSY-SD-AI26-1224	SE6227-2	14*	14*	17*	19*			4
06	DSY-SD-AI26-2448	SE6227-3	36*	42*	40*	49*			4
07	DSY-SD-AG26-0012	SE6227-4	35*	33*	28*	30*			4
08	DSY-SD-AG26-1224	SE6227-5	23*	23*	31*	37*			4
09	DSY-SD-AG26-2448	SE6227-6	27*	33*	31*	47*			4
10	DSY-SD-DUP11-092611	SE6227-7	10*	11*	48*	49*			4
11	DSY-SD-AC24-0012	SE6227-8	36*	33*	26*	30*			4
12	DSY-SD-AC24-1224	SE6227-9	29*	38*	32*	47*			4
13	DSY-SD-AC24-2448	SE6227-10	48*	49*	53*	60			3
14	DSY-SD-AE24-0012	SE6227-11	26*	24*	21*	22*			4
15	DSY-SD-AE24-1224	SE6227-12	21*	25*	35*	42*			4
16	DSY-SD-AE24-2448	SE6227-13	30*	27*	24*	23*			4
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000108

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG98322-BLANK	WG98322-1	99	91	95	81			0
02	WG98322-LCS	WG98322-2	97	89	83	70			0
03	WG98322-LCSD	WG98322-3	102	93	89	74			0
04	DSY-SD-RB04-092611	SE6227-14	98	97	50	43*			1
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

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ANALYTICAL SERVICES

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98322-2
LCSD ID: WG98322-3
Project:
SDG: DSY-9
Report Date: 07-NOV-11

Received Date: 30-SEP-11
Extract Date: 30-SEP-11
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG98322

Analysis Date: 13-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	5.00	5.10	102.	5.26	105.	ug/L	3	30	65-112
Aroclor-1260	5.00	4.33	86.6	4.55	91.0	ug/L	5	30	62-104
Tetrachloro-M-Xylene			97.0		102.				62-111
Decachlorobiphenyl			83.0		89.0				44-135

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG98765-2
LCSD ID: WG98765-3
Project:
SDG: DSY-9
Report Date: 07-NOV-11

Received Date: 07-OCT-11
Extract Date: 07-OCT-11
Extracted By: JMS
Extraction Method: SW846 3545
Lab Prep Batch: WG98765

Analysis Date: 16-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	89.4	53.5	116.	69.5	ug/Kgdrywt	32	50	53-123
Aroclor-1260	167.	87.0	52.1*	101.	60.5	ug/Kgdrywt	30	50	58-120
Tetrachloro-M-Xylene			59.4		76.0				56-115
Decachlorobiphenyl			54.6*		66.4				59-124

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FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #	
01		AR1660 0.25	10/13/11	2017	13.33	3.82	
02	WG98322-BLAN	WG98322-1	10/13/11	2200	13.33	3.82	
03	WG98322-LCS	WG98322-2	10/13/11	2226	13.33	3.83	
04	WG98322-LCSD	WG98322-3	10/13/11	2251	13.33	3.83	
05	DSY-SD-RB04-	SE6227-14	10/13/11	2317	13.33	3.83	
06		AR1660 1.0	10/14/11	0125	13.33	3.83	
07		AR1660 1.0	10/16/11	1120	13.33	3.83	
08	WG98765-BLAN	WG98765-1	10/16/11	1541	13.33	3.83	
09	WG98765-LCS	WG98765-2	10/16/11	1607	13.33	3.83	
10	WG98765-LCSD	WG98765-3	10/16/11	1632	13.34	3.83	
11		AR1660 2.5	10/16/11	1816	13.33	3.83	
12		AR1660 1.0	10/17/11	0040	13.33	3.83	
13		AR1254 1.0	10/17/11	0157			
14	DSY-SD-AI26-	SE6227-1	10/17/11	0456	13.33	3.83	
15	DSY-SD-AI26-	SE6227-2	10/17/11	0522	13.33	3.83	
16	DSY-SD-AI26-	SE6227-3	10/17/11	0547	13.33	3.83	
17	DSY-SD-AG26-	SE6227-4 ✓	10/17/11	0613	13.33	3.83	NP
18		AR1660 2.5	10/17/11	0730	13.33	3.83	
19		AR1254 1.0	10/17/11	0848			
20		AR1660 1.0	10/17/11	1757	13.33	3.83	

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000154

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/13/11 Time: 2017

Lab File ID: 7EJ386 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3595900	0.2500000	45662000	0.001	43.84	20.00	2RDR	<-
(2)	0.3441200	0.2500000	25545000	0.001	37.65	20.00	2RDR	<-
(3)	0.3577400	0.2500000	65281000	0.001	43.10	20.00	2RDR	<-
(4)	0.3390200	0.2500000	38177000	0.001	35.61	20.00	2RDR	<-
(5)	0.3185900	0.2500000	31353000	0.001	27.44	20.00	2RDR	<-
Average %D: 37.520								
Aroclor-1260	0.2921100	0.2500000	53398000	0.001	16.84	20.00	2RDR	
(2)	0.2899600	0.2500000	65863000	0.001	15.98	20.00	2RDR	
(3)	0.2977300	0.2500000	50045000	0.001	19.09	20.00	2RDR	
(4)	0.2766000	0.2500000	47218000	0.001	10.64	20.00	2RDR	
(5)	0.2972000	0.2500000	35185000	0.001	18.88	20.00	2RDR	
Average %D: 16.280								
Decachlorobiphenyl	5.7e-003	5.e-003	639070000	0.001	14.00	20.00	2RDR	
Tetrachloro-m-xylene	7.6e-003	5.e-003	1.72e+009	0.001	52.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/14/11 Time: 0125

Lab File ID: 7EJ398 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3567000	1.0000000	43243000	0.001	35.67	20.00	2RDR	<-
(2)	1.1500000	1.0000000	21535000	0.001	15.00	20.00	2RDR	
(3)	1.3234000	1.0000000	66035000	0.001	32.34	20.00	2RDR	<-
(4)	1.1618000	1.0000000	34430000	0.001	16.18	20.00	2RDR	
(5)	1.0300000	1.0000000	27280000	0.001	3.00	20.00	2RDR	
Average %D: 20.440								
Aroclor-1260	0.9571900	1.0000000	48217000	0.001	-4.28	20.00	2RDR	
(2)	0.9848000	1.0000000	64027000	0.001	-1.52	20.00	2RDR	
(3)	1.1008000	1.0000000	52537000	0.001	10.08	20.00	2RDR	
(4)	0.9655700	1.0000000	45742000	0.001	-3.44	20.00	2RDR	
(5)	1.1497000	1.0000000	35891000	0.001	14.97	20.00	2RDR	
Average %D: 3.1600								
Decachlorobiphenyl	2.01e-002	2.e-002	603080000	0.001	0.50	20.00	2RDR	
Tetrachloro-m-xylene	2.61e-002	2.e-002	1.53e+009	0.001	30.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1120

Lab File ID: 7EJ451 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3161000	1.0000000	41965000	0.001	31.61	20.00	2RDR	<-
(2)	1.1550000	1.0000000	21628000	0.001	15.50	20.00	2RDR	
(3)	1.2227000	1.0000000	60797000	0.001	22.27	20.00	2RDR	<-
(4)	1.1352000	1.0000000	33624000	0.001	13.52	20.00	2RDR	
(5)	1.0760000	1.0000000	28546000	0.001	7.60	20.00	2RDR	
Average %D: 18.100								
Aroclor-1260	1.1450000	1.0000000	58186000	0.001	14.50	20.00	2RDR	
(2)	1.1601000	1.0000000	75934000	0.001	16.01	20.00	2RDR	
(3)	1.2545000	1.0000000	60343000	0.001	25.45	20.00	2RDR	<-
(4)	1.1506000	1.0000000	54986000	0.001	15.06	20.00	2RDR	
(5)	1.2980000	1.0000000	40711000	0.001	29.80	20.00	2RDR	<-
Average %D: 20.160								
Decachlorobiphenyl	2.4e-002	2.e-002	726290000	0.001	20.00	20.00	2RDR	
Tetrachloro-m-xylene	2.29e-002	2.e-002	1.34e+009	0.001	14.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/16/11 Time: 1816

Lab File ID: 7EJ466 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	2.6618000	2.5000000	33416000	0.001	6.47	20.00	2RDR
(2)	2.5359000	2.5000000	18686000	0.001	1.44	20.00	2RDR
(3)	2.5494000	2.5000000	52344000	0.001	1.98	20.00	2RDR
(4)	2.3473000	2.5000000	28187000	0.001	-6.11	20.00	2RDR
(5)	2.0577000	2.5000000	22338000	0.001	-17.69	20.00	2RDR
Average %D: -2.784							
Aroclor-1260	2.0260000	2.5000000	42283000	0.001	-18.96	20.00	2RDR
(2)	2.1308000	2.5000000	56489000	0.001	-14.77	20.00	2RDR
(3)	2.2267000	2.5000000	44346000	0.001	-10.93	20.00	2RDR
(4)	2.0523000	2.5000000	40339000	0.001	-17.91	20.00	2RDR
(5)	2.3398000	2.5000000	30220000	0.001	-6.41	20.00	2RDR
Average %D: -13.79							
Decachlorobiphenyl	4.03e-002	5.e-002	497960000	0.001	-19.40	20.00	2RDR
Tetrachloro-m-xylene	5.28e-002	5.e-002	1.26e+009	0.001	5.60	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0040

Lab File ID: 7EJ481 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1610000	1.0000000	37073000	0.001	16.10	20.00	2RDR	
(2)	1.0483000	1.0000000	19646000	0.001	4.83	20.00	2RDR	
(3)	1.0380000	1.0000000	51222000	0.001	3.80	20.00	2RDR	
(4)	0.8887000	1.0000000	26158000	0.001	-11.13	20.00	2RDR	
(5)	0.8064700	1.0000000	21142000	0.001	-19.35	20.00	2RDR	
Average %D: -1.150								
Aroclor-1260	0.7892900	1.0000000	39352000	0.001	-21.07	20.00	2RDR	<-
(2)	0.8293400	1.0000000	53436000	0.001	-17.07	20.00	2RDR	
(3)	0.9154500	1.0000000	43190000	0.001	-8.46	20.00	2RDR	
(4)	0.7987700	1.0000000	37458000	0.001	-20.12	20.00	2RDR	<-
(5)	0.9202200	1.0000000	28496000	0.001	-7.98	20.00	2RDR	
Average %D: -14.94								
Decachlorobiphenyl	1.55e-002	2.e-002	458640000	0.001	-22.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.17e-002	2.e-002	1.26e+009	0.001	8.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0157

Lab File ID: 7EJ484 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9222800	1.0000000	37627000	0.001	-7.77	20.00	2RDR
(2)	0.9536400	1.0000000	47647000	0.001	-4.64	20.00	2RDR
(3)	0.9459000	1.0000000	30825000	0.001	-5.41	20.00	2RDR
(4)	0.9631600	1.0000000	34387000	0.001	-3.68	20.00	2RDR
(5)	1.0752000	1.0000000	39590000	0.001	7.52	20.00	2RDR
Average %D: -2.800							

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0730

Lab File ID: 7EJ497 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF2.5000 or AMOUNT	CCAL RRF2.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	3.1001000	2.5000000	38700000	0.001	24.00	20.00	2RDR	<-
(2)	3.0080000	2.5000000	22025000	0.001	20.32	20.00	2RDR	<-
(3)	3.0695000	2.5000000	63595000	0.001	22.78	20.00	2RDR	<-
(4)	2.9326000	2.5000000	35337000	0.001	17.30	20.00	2RDR	
(5)	2.8161000	2.5000000	30924000	0.001	12.64	20.00	2RDR	
Average %D: 19.412								
Aroclor-1260	2.6047000	2.5000000	55058000	0.001	4.19	20.00	2RDR	
(2)	2.7264000	2.5000000	72304000	0.001	9.06	20.00	2RDR	
(3)	2.8015000	2.5000000	56696000	0.001	12.06	20.00	2RDR	
(4)	2.5949000	2.5000000	51655000	0.001	3.80	20.00	2RDR	
(5)	2.9323000	2.5000000	38482000	0.001	17.29	20.00	2RDR	
Average %D: 9.2800								
Decachlorobiphenyl	4.95e-002	5.e-002	618740000	0.001	-1.00	20.00	2RDR	
Tetrachloro-m-xylene	6.1e-002	5.e-002	1.47e+009	0.001	22.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 0848

Lab File ID: 7EJ500 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1409000	1.0000000	47003000	0.001	14.09	20.00	2RDR	
(2)	1.1920000	1.0000000	60382000	0.001	19.20	20.00	2RDR	
(3)	1.2093000	1.0000000	40068000	0.001	20.93	20.00	2RDR	<-
(4)	1.2351000	1.0000000	44611000	0.001	23.51	20.00	2RDR	<-
(5)	1.3629000	1.0000000	51121000	0.001	36.29	20.00	2RDR	<-
Average %D: 22.810								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1757

Lab File ID: 7EJ513 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2650000	1.0000000	40358000	0.001	26.50	20.00	2RDR	<-
(2)	1.2157000	1.0000000	22753000	0.001	21.57	20.00	2RDR	<-
(3)	1.1055000	1.0000000	54713000	0.001	10.55	20.00	2RDR	
(4)	1.0516000	1.0000000	31090000	0.001	5.16	20.00	2RDR	
(5)	0.9291700	1.0000000	24508000	0.001	-7.08	20.00	2RDR	
Average %D: 11.340								
Aroclor-1260	0.9790200	1.0000000	49373000	0.001	-2.10	20.00	2RDR	
(2)	0.9908600	1.0000000	64440000	0.001	-0.91	20.00	2RDR	
(3)	1.0834000	1.0000000	51659000	0.001	8.34	20.00	2RDR	
(4)	0.9986200	1.0000000	47390000	0.001	-0.14	20.00	2RDR	
(5)	1.0984000	1.0000000	34232000	0.001	9.84	20.00	2RDR	
Average %D: 3.0100								
Decachlorobiphenyl	1.99e-002	2.e-002	597160000	0.001	-0.50	20.00	2RDR	
Tetrachloro-m-xylene	2.21e-002	2.e-002	1.29e+009	0.001	10.50	20.00	2RDR	

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1254 1.0	10/17/11	1915		
02	DSY-SD-AG26-	SE6227-5	10/17/11	2032	13.34	3.83
03	DSY-SD-AG26-	SE6227-6	10/17/11	2057	13.33	3.83
04	DSY-SD-DUP11	SE6227-7	10/17/11	2123	13.34	3.83
05	DSY-SD-AC24-	SE6227-8	10/17/11	2149	13.33	3.83
06	DSY-SD-AC24-	SE6227-9	10/17/11	2214	13.33	3.83
07	DSY-SD-AC24-	SE6227-10	10/17/11	2240	13.33	3.83
08	DSY-SD-AE24-	SE6227-11	10/17/11	2306	13.33	3.83
09	DSY-SD-AE24-	SE6227-12	10/17/11	2331	13.33	3.83
10		AR1660 0.25	10/18/11	0022	13.34	3.83
11		AR1254 1.0	10/18/11	0139		
12	DSY-SD-AE24-	SE6227-13	10/18/11	0204	13.33	3.83
13		AR1660 1.0	10/18/11	0646	13.33	3.83
14		AR1254 1.0	10/18/11	0804		
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/17/11 Time: 1915

Lab File ID: 7EJ516 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8660300	1.0000000	35221000	0.001	-13.40	20.00	2RDR
(2)	0.9001800	1.0000000	44805000	0.001	-9.98	20.00	2RDR
(3)	0.9104000	1.0000000	29586000	0.001	-8.96	20.00	2RDR
(4)	0.9680200	1.0000000	34569000	0.001	-3.20	20.00	2RDR
(5)	1.0231000	1.0000000	37520000	0.001	2.31	20.00	2RDR
Average %D: -6.650							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0022

Lab File ID: 7EJ528 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2647600	0.2500000	33352000	0.001	5.90	20.00	2RDR
(2)	0.2695300	0.2500000	19856000	0.001	7.81	20.00	2RDR
(3)	0.2197000	0.2500000	37222000	0.001	-12.12	20.00	2RDR
(4)	0.2325200	0.2500000	25323000	0.001	-6.99	20.00	2RDR
(5)	0.2167400	0.2500000	20305000	0.001	-13.30	20.00	2RDR
Average %D: -3.720							
Aroclor-1260	0.2228400	0.2500000	39024000	0.001	-10.86	20.00	2RDR
(2)	0.2274300	0.2500000	48627000	0.001	-9.03	20.00	2RDR
(3)	0.2404200	0.2500000	38804000	0.001	-3.83	20.00	2RDR
(4)	0.2303100	0.2500000	38203000	0.001	-7.88	20.00	2RDR
(5)	0.2666900	0.2500000	31380000	0.001	6.68	20.00	2RDR
Average %D: -5.000							
Decachlorobiphenyl	4.43e-003	5.e-003	485310000	0.001	-11.40	20.00	2RDR
Tetrachloro-m-xylene	5.49e-003	5.e-003	1.23e+009	0.001	9.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0139

Lab File ID: 7EJ531 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9325700	1.0000000	38068000	0.001	-6.74	20.00	2RDR
(2)	0.9551300	1.0000000	47727000	0.001	-4.49	20.00	2RDR
(3)	0.9610600	1.0000000	31355000	0.001	-3.89	20.00	2RDR
(4)	1.0395000	1.0000000	37252000	0.001	3.95	20.00	2RDR
(5)	1.0911000	1.0000000	40225000	0.001	9.11	20.00	2RDR
Average %D: -0.410							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3368000	1.0000000	42616000	0.001	33.68	20.00	2RDR	<-
(2)	1.2505000	1.0000000	23397000	0.001	25.05	20.00	2RDR	<-
(3)	1.1700000	1.0000000	58060000	0.001	17.00	20.00	2RDR	
(4)	1.0804000	1.0000000	31961000	0.001	8.04	20.00	2RDR	
(5)	0.9378400	1.0000000	24746000	0.001	-6.22	20.00	2RDR	
Average %D: 15.510								
Aroclor-1260	0.9655200	1.0000000	48658000	0.001	-3.45	20.00	2RDR	
(2)	0.9873200	1.0000000	64198000	0.001	-1.27	20.00	2RDR	
(3)	1.0827000	1.0000000	51622000	0.001	8.27	20.00	2RDR	
(4)	0.9683400	1.0000000	45880000	0.001	-3.17	20.00	2RDR	
(5)	1.0657000	1.0000000	33176000	0.001	6.57	20.00	2RDR	
Average %D: 1.3900								
Decachlorobiphenyl	1.86e-002	2.e-002	556320000	0.001	-7.00	20.00	2RDR	
Tetrachloro-m-xylene	2.39e-002	2.e-002	1.39e+009	0.001	19.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-9

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0804

Lab File ID: 7EJ546 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9323200	1.0000000	38057000	0.001	-6.77	20.00	2RDR
(2)	0.9770200	1.0000000	48893000	0.001	-2.30	20.00	2RDR
(3)	0.9865400	1.0000000	32246000	0.001	-1.35	20.00	2RDR
(4)	1.0281000	1.0000000	36822000	0.001	2.81	20.00	2RDR
(5)	1.1109000	1.0000000	41015000	0.001	11.09	20.00	2RDR
Average %D: 0.7000							

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
C24-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-9 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	106		
Aroclor-1254	2	6.51	6.45	6.59	130		
	3	6.88	6.82	6.96	137		
COLUMN 1	4	7.72	7.66	7.80	196		
	5	8.19	8.14	8.28	194	152	
	1	6.41	6.34	6.48	158		
	2	7.39	7.32	7.46	175		
	3	7.67	7.60	7.74	164		
COLUMN 2	4	8.50	8.44	8.58	140		
	5	10.22	10.16	10.30	220	171	11.8
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A E24-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-11 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	73.1		
Aroclor-1254	2	6.52	6.45	6.59	145		
	3	6.89	6.82	6.96	154		
COLUMN 1	4	7.73	7.66	7.80	464		
	5	8.21	8.14	8.28	596	286	
	1	6.42	6.34	6.48	56.5		
	2	7.39	7.32	7.46	58.6		
	3	7.68	7.60	7.74	122		
COLUMN 2	4	8.51	8.44	8.58	161		
	5	10.23	10.16	10.30	593	198	36.4
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A E24-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-12 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	123		
Aroclor-1254	2	6.52	6.45	6.59	136		
	3	6.88	6.82	6.96	146		
COLUMN 1	4	7.72	7.66	7.80	134		
	5	8.20	8.14	8.28	135	135	
	1	6.41	6.34	6.48	192		
	2	7.39	7.32	7.46	167		
	3	7.67	7.60	7.74	140		
COLUMN 2	4	8.50	8.44	8.58	153		
	5	10.22	10.16	10.30	150	160	16.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A G26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-5 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	77.8		
Aroclor-1254	2	6.53	6.45	6.59	198		
	3	6.88	6.82	6.96	135		
COLUMN 1	4	7.73	7.66	7.80	112		
	5	8.20	8.14	8.28	139	132	
	1	6.41	6.34	6.48	80.4		
	2	7.39	7.32	7.46	89.2		
	3	7.68	7.60	7.74	99.7		
COLUMN 2	4	8.51	8.44	8.58	103		
	5	10.23	10.16	10.30	124	99.1	28.5
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A G26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-6 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	33.7		
Aroclor-1254	2	6.52	6.45	6.59	49.4		
	3	6.89	6.82	6.96	64.2		
COLUMN 1	4	7.78	7.66	7.80	69.7		
	5	8.20	8.14	8.28	56.4	54.7	
	1	6.41	6.34	6.48	27.6		
	2	7.39	7.32	7.46	25.3		
	3	7.68	7.60	7.74	26.8		
COLUMN 2	4	8.51	8.44	8.58	33.8		
	5	10.23	10.16	10.30	43.8	31.4	54.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

Katahdin Analytical Services A0000094

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A I26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-2 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	46.5		
Aroclor-1254	2	6.53	6.45	6.59	67.4		
	3	6.88	6.81	6.95	71.7		
COLUMN 1	4	7.73	7.66	7.80	45.2		
	5	8.20	8.14	8.28	84.0	63.0	
	1	6.42	6.34	6.48	20.2		
	2	7.39	7.32	7.46	25.4		
	3	7.68	7.61	7.75	31.0		
COLUMN 2	4	8.51	8.44	8.58	38.3		
	5	10.23	10.16	10.30	45.7	32.1	65.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A I26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-9

Lab Sample ID: SE6227-3 Date(s) Analyzed: 10/17/11 10/17/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.19	6.12	6.26	50.5		
Aroclor-1254	2	6.52	6.45	6.59	73.5		
	3	6.88	6.81	6.95	103		
COLUMN 1	4	7.77	7.66	7.80	114		
	5	8.19	8.14	8.28	89.8	86.2	
	1	6.41	6.34	6.48	49.2		
	2	7.39	7.32	7.46	55.5		
	3	7.68	7.61	7.75	67.3		
COLUMN 2	4	8.51	8.44	8.58	70.5		
	5	10.22	10.16	10.30	82.2	64.9	28.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

TETRA TECH **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT	JOB NUMBER		
NAVSTA Newport	SDG - DSY-9		
SUBJECT			
Sample Calculation			
BASED ON	DRAWING NUMBER		
BY	CHECKED BY	APPROVED BY	DATE
Ann Cognetti			December 1, 2011

I. SVOC; Sample DSY-SD-AC24-0012; Cpyrene

$$\frac{106980}{306604} * 1 * \frac{1\,mL}{31.5g} * \frac{40\,ug/mL}{1.62798568} * 1000 * \frac{1}{0.34} = 800.5\,ug/kg$$

II. PAH; Sample DSY-SD-DUP11-092611; Benzo(a)pyrene

$$\frac{132344}{31722} * \frac{1\,mL}{31.4g} * \frac{0.80\,ug}{1.033471} * 1000 * \frac{1}{0.37} = 278.0\,ug/kg$$

Sample Calculation

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-8
Client ID: DSY-SD-AC24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG98721

Analysis Date: 29-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	690	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	U	690	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	U	690	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	300	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	360	690
Fluoranthene	U	690	ug/Kgdrywt	1	330	920	300	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene	J	800	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		34.7	%					
2-Fluorobiphenyl		50.2	%					
Terphenyl-d14		56.2	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Sample Calculation

Data File: \\target_server\GG\chem\gcms-u.i\U102911.b\U8246.D
Report Date: 07-Nov-2011 13:56

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-u.i\U102911.b\U8246.D
Lab Smp Id: SE6227-8 Client Smp ID: DSY-SD-AC24-0012
Inj Date : 29-OCT-2011 18:55 MS Autotune Date: 27-JUL-1998 22:19
Operator : JCG Inst ID: gcms-u.i
Smp Info : SE6227-8
Misc Info : WG100607,WG98721,U8126
Comment :
Method : \\target_server\GG\chem\gcms-u.i\U102911.b\U8270C08.m
Meth Date : 29-Oct-2011 12:03 cgomez Quant Type: ISTD
Cal Date : 25-OCT-2011 15:26 Cal File: U8131.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariabl

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03150	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	65.822	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW
* 19 1,4-Dichlorobenzene-D4	152	7.734	7.734	(1.000)	453208	40.0000		
$ 33 Nitrobenzene-D5	82	9.018	9.017	(0.853)	226290	17.3313	1610	
* 44 Naphthalene-D8	136	10.570	10.570	(1.000)	1624013	40.0000		
$ 63 2-Fluorobiphenyl	172	13.189	13.188	(0.900)	546454	25.1004	2330	
* 77 Acenaphthene-D10	164	14.658	14.668	(1.000)	759863	40.0000		
* 114 Phenanthrene-D10	188	18.146	18.156	(1.000)	1037438	40.0000		
128 Pyrene	202	21.541	21.520	(0.882)	106980	8.57303	796(a)	
$ 130 Terphenyl-D14	244	22.080	22.069	(0.904)	188336	28.1173	2610	
* 141 Chrysene-D12	240	24.429	24.418	(1.000)	306604	40.0000		
142 Chrysene	228	24.512	24.480	(1.003)	23878	3.18674	296(a)	
* 150 Perylene-D12	264	27.586	27.554	(1.000)	110706	40.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Sample Calculation

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-U Calibration Date(s): 10/25/11 10/25/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1141 1526

LAB FILE ID: RF10: U8127 RF25: U8128 RF50: U8126
RF75: U8129 RF100: U8130 RF125: U8131

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2	
Fluoranthene	0.860	0.775	0.846	0.890	0.731	0.737	AVRG	0.80656737	8.384	30.000	
Pyrene	1.520	1.610	1.653	1.662	1.694	1.629	AVRG	1.62798568	3.717	15.000	
Benzo(a)anthracene	0.887	0.858	0.991	0.973	0.932	0.895	AVRG	0.92260621	5.636	15.000	
Chrysene	1.089	1.012	0.987	0.959	0.925	0.892	AVRG	0.97753632	7.097	15.000	
Benzo(b)fluoranthene	0.891	0.950	1.060	1.018	1.050	1.058	AVRG	1.00460854	6.893	15.000	
Benzo(k)fluoranthene	1.399	1.282	1.257	1.382	1.271	1.235	AVRG	1.30443893	5.261	15.000	
Benzo(a)pyrene	0.946	0.939	1.032	1.028	0.997	0.981	AVRG	0.98727119	4.004	30.000	
Indeno(1,2,3-cd)pyrene	0.562	0.700	0.564	0.818	0.800	0.759	AVRG	0.70060794	16.262	15.000	<-
Dibenzo(a,h)anthracene	0.493	0.537	0.652	0.634	0.622	0.607	AVRG	0.59079488	10.511	15.000	
Benzo(g,h,i)perylene	0.499	0.613	0.712	0.679	0.686	0.631	AVRG	0.63698012	12.072	15.000	
Nitrobenzene-D5	0.339	0.301	0.340	0.335	0.316	0.299	AVRG	0.32159244	5.927	15.000	
2-Fluorobiphenyl	1.293	1.164	1.209	1.171	1.035	1.004	AVRG	1.14603273	9.486	15.000	
Terphenyl-D14	0.820	0.845	0.882	0.904	0.901	0.891	AVRG	0.87386128	3.862	15.000	

FORM VI SV

Sample Calculation

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6227-7
Client ID: DSY-SD-DUP11-092611
Project: NAVSTA Newport CTO WE(
SDG: DSY-9

Sample Date: 26-SEP-11
Received Date: 27-SEP-11
Extract Date: 06-OCT-11
Extracted By: KF
Extraction Method: SW846 3550
Lab Prep Batch: WG100237

Analysis Date: 01-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 37.
Report Date: 07-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		280	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Sample Calculation

Data File: \\target_server\GG\chem\gcms-g.i\G110111B.b\G3682.D
Report Date: 07-Nov-2011 16:03

Katahdin Analytical Services

Data file : \\target_server\GG\chem\gcms-g.i\G110111B.b\G3682.D
Lab Smp Id: SE6227-7 Client Smp ID: DSY-SD-DUP11-092611
Inj Date : 01-NOV-2011 21:50 MS Autotune Date: 15-JUN-2004 09:29
Operator : JCG Inst ID: gcms-g.i
Smp Info : SE6227-7
Misc Info : WG100618,WG100237,G3647
Comment :
Method : \\target_server\GG\chem\gcms-g.i\G110111B.b\gspsim21.m
Meth Date : 07-Nov-2011 15:12 gcms-g.i Quant Type: ISTD
Cal Date : 31-OCT-2011 14:58 Cal File: G3652.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tt-derecktor.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariabl

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03140	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	62.633	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW
* 7 1,4-Dichlorobenzene-D4	152	8.946	8.946	(1.000)	37421	0.80000		
* 20 Naphthalene-D8	136	11.906	11.906	(1.000)	125524	0.80000		
* 39 Acenaphthene-D10	164	16.220	16.220	(1.000)	70123	0.80000		
* 58 Phenanthrene-D10	188	19.840	19.839	(1.000)	118188	0.80000		
* 68 Chrysene-D12	240	26.458	26.443	(1.000)	50810	0.80000	(Q)	
75 Benzo(a)pyrene	252	29.639	29.638	(0.995)	132344	3.32650	284	
* 76 Perylene-D12	264	29.776	29.763	(1.000)	31722	0.80000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Sample Calculation

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-9

Instrument ID: GCMS-G Calibration Date(s): 10/31/11 10/31/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1112 1458

LAB FILE ID: RF0.2: G3652 RF0.5: G3651 RF1: G3647
RF2: G3650 RF5: G3649 RF8: G3648

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.023	0.965	0.999	1.034	0.932	1.066	AVRG	1.00333471	4.836	15.000
2-Methylnaphthalene-D10	0.943	0.929	0.989	1.029	0.878	0.971	AVRG	0.95661042	5.464	15.000
Fluorene-D10	0.708	0.734	0.843	0.898	0.825	0.953	AVRG	0.82683421	11.335	15.000
Pyrene-D10	0.903	0.981	0.961	1.016	0.870	1.025	AVRG	0.95936644	6.448	15.000

FORM VI SV

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport

Organic Data Validation, SDG DSG-14

2. DATE OF DOCUMENT: 11/28/11 DOCUMENT CONTROL No.: C-Navy-11-11- 4900 W

AUTHORS: **J. Cardinal** TtNUS JOB CHARGE No.: **112G02747** - SA.DV

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman							[signature]	11/28/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4900W

Date: November 28, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Jennifer Cardinal (no copy)

Subject: Tier II Organic Data Validation, SDG DSY-14
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-DUP18-093011	DSY-SD-DUP19-093011
	DSY-SD-O21-0012	DSY-SD-O21-1224
	DSY-SD-O21-2448	DSY-SD-S17-0012
	DSY-SD-S17-1224	DSY-SD-S17-2448
	DSY-SD-S21-0012	DSY-SD-S21-1224
	DSY-SD-S21-2448	DSY-SD-W09-0012
	DSY-SD-W09-1224	DSY-SD-W09-2448
	DSY-SD-W17-0012	DSY-SD-W17-1224
	DSY-SD-W17-2448	DSY-SD-W21-0012
	DSY-SD-W21-1224	DSY-SD-W21-2448

(Field Duplicate Pairs:
DSY-SD-W13-1224 [SDG DSY-13]/DSY-SD-DUP18-093011,
DSY-SD-W21-0012/DSY-SD-DUP19-093011,
DSY-SD-S21-2448/DSY-SD-DUP20-093011 [SDG DSY-16])

1/Rinsate Blank/DSY-SD-RB07-093011

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbon (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
- Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- * Initial and Continuing Calibrations
- * Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- * Laboratory Control Sample/Laboratory Control Sample Duplicate
- Field Duplicates
- * Analyte Identification/Quantitation
- * Percent Solids
- * Limits of Detection

* All criteria were met for this parameter

Laboratory Data Completeness

Sample DSY-SD-DUP18-093011 was listed on the chain-of-custody form with the suffix "-093010". The laboratory correctly logged in the sample with the suffix "-093011".

PAH

The LCS/LCSDs and MS/MSDs were spiked only with the scan mode analytes. The report does not include an LCS/LCSD or MS/MSD for the selective ion monitoring mode.

GPC aliquots of SIM samples DSY-SD-W17-0012, DSY-SD-W21-0012, and DSY-SD-O21-0012 were lost due to instrument malfunction. The samples were re-extracted outside of hold time (see Preservation and Technical Holding Times section below) and not put through GPC cleanup. These samples were not spiked with SIM surrogates. In addition, sample DSY-SD-RB07-093011 was also not spiked with the SIM surrogates. All of these samples were spiked with scan surrogates which met recovery criteria.

Preservation and Technical Holding Times

PAH

Due to instrument malfunction, samples DSY-SD-W17-0012, DSY-SD-W21-0012, and DSY-SD-O21-0012 were re-extracted 10 days beyond the 14-day technical holding time criterion. The positive and non-detected PAH results for these samples are estimated (J, UJ) due the exceeded holding time criterion due to possible sample degradation.

The method required holding time criterion was not met for samples DSY-SD-W17-0012, DSY-SD-W21-0012, and DSY-SD-O21-0012; therefore, the project accuracy goals may be impacted for benzo(a)pyrene and total HMWPAHs. The positive and non-detected results in the affected samples are usable as estimated values which may be biased low.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-DUP18-093011	DCB	45/54	59-124%	J	UJ
DSY-SD-W09-0012		32/41		J	UJ
DS-SD-W09-1224		32/41		J	UJ
DSY-SD-W09-2448		51/56		J	UJ
DSY-SD-W17-0012		30/37		J	UJ
DSY-SD-W17-2448		36/41		J	UJ
DSY-SD-W21-0012		35/45		J	UJ
DSY-SD-W21-1224		47/55		J	UJ
DSY-SD-W21-2448		45/54		J	UJ
DSY-SD-DUP19-093011		26/35		J	UJ
DSY-SD-S17-0012		35/38		J	UJ
DSY-SD-S17-1224		46/54		J	UJ
DSY-SD-S17-2448		48/56		J	UJ
DSY-SD-O21-0012		36/48		J	UJ
DSY-SD-O21-1224		35/49		J	UJ
DSY-SD-O21-2448		28/48		J	UJ
DSY-SD-S21-0012		29/50		J	UJ
DSY-SD-S21-1224		28/53		J	UJ

-Criterion met

Although the surrogate decachlorobiphenyl (DCB) recovered below of the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are more than an order of magnitude below the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor results in the affected samples are usable as estimated values that may be biased low.

Internal Standards

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Perylene-d12	159921	196795-787180	J	UJ	DSY-SD-W17-0012
Chrysene-d12	201438	325227-1301108	J	UJ	DSY-SD-W17-1224
Perylene-d12	83220	196795-787180			
	192534		J	UJ	DSY-SD-W21-1224
	148071		J	UJ	DSY-SD-S17-1224
	156994		J	UJ	DSY-SD-O21-0012
Chrysene-d12	227191	325227-1301108	J	UJ	DSY-SD-O21-2448
Perylene-d12	79847	196795-787180			
Chrysene-d12	311129	325227-1301108	J	UJ	DSY-SD-O21-1224
Perylene-d12	107780	196795-787180			
Chrysene-d12	288115	325227-1301108	J	UJ	DSY-SD-S21-0012
Perylene-d12	120248	196795-787180			
Chrysene-d12	243238	325227-1301108	J	UJ	DSY-SD-S21-1224
Perylene-d12	92155	196795-787180			

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAH

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-O21-2448 that were outside of the QC limits:

Analyte	MS/MSD % Rec.	%Rec. QC Limits	Action	
			(+)	NDs
Fluoranthene	-/33.9	40-100	J	

-Criterion met

Although the MSD percent recovery criteria were not met for fluoranthene, the project accuracy goals are not impacted since there are no PALs established for this compound for the sediment samples. The positive fluoranthene result in sample DSY-SD-O21-2448 is usable as an estimated value which may be biased low.

Field Duplicates

PCB

The following table summarizes the Aroclor detected in the field duplicate samples DSY-SD-W21-0012/DSY-SD-DUP19-093011 that did not meet the QC criteria of RPD <50%:

Aroclor	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Aroclor-1254	ND	120	200	J	UJ

The duplicate result is greater than 2x LOQ while the sample result is non-detect.

Although the field duplicate RPD criterion was not met for Aroclor-1254, the project precision goals are not impacted since the affected sample results are more than an order of magnitude below the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor-1254 results in samples DSY-SD-W21-0012 and DSY-SD-DUP19-093011 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAH

The PAL for benzo(a)pyrene was met.

All the samples were analyzed for PAHs by GC/MS in the full scan range. Samples with benzo(a)pyrene results below the LOQ were re-analyzed in the SIM mode to obtain lower reporting limits.

PCB

The total Aroclor PAL was met by the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exception. Samples DSY-SD-W17-0012, DSY-SD-W21-0012, and DSY-SD-O21-0012 were qualified as estimated due to holding time exceedances; the affected sample results may be biased low. PAH results were qualified as estimated in several samples due to a poor internal standard area response for chrysene-d_{12} and perylene-d_{12}. Although specific method criteria were not met in these instances, the affected results are usable as estimated values which may have a minor impact on data usability. In addition, fluoranthene was qualified as estimated in sample DSY-SD-O21-2448 due to a low MSD recovery. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to precision, sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. Select samples were qualified as estimated due to low surrogate recoveries. Although specific method criteria were not met in this instance, the affected results are usable as estimated values.

The project goals with respect to precision were met for the PCB data set. Aroclor-1254 was qualified as estimated in samples DSY-SD-W21-0012 and DSY-SD-DUP19-093011 due to poor field duplicate precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected result is usable as an estimated value.

The project goals with respect to sensitivity and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-14 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP18-093011			DSY-SD-DUP19-093011			DSY-SD-O21-0012			DSY-SD-O21-1224		
	LAB_ID	SE6442-1			SE6442-11			SE6442-15			SE6442-16		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.6			35.8			41.9			43.3		
	DUP_OF	DSY-SD-W13-1224			DSY-SD-W21-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	U		660	U		590	UJ	H	270	J	NP
BENZO(B)FLUORANTHENE		350	U		660	U		590	UJ	HN	340	J	NP
BENZO(G,H,I)PERYLENE		350	U		660	U		590	UJ	HN	510	UJ	N
BENZO(K)FLUORANTHENE		350	U		660	U		210	J	HNP	300	J	NP
CHRYSENE		350	U		660	U		590	UJ	H	340	J	NP
DIBENZO(A,H)ANTHRACENE		350	U		660	U		590	UJ	HN	510	UJ	N
FLUORANTHENE		350	U		660	U		270	J	H	280	J	P
INDENO(1,2,3-CD)PYRENE		350	U		660	U		590	UJ	HN	510	UJ	N
PYRENE		350	U		450	J		550	J	H	1300	J	N

PROJ_NO: 02747 SDG: DSY-14 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O21-2448			DSY-SD-S17-0012			DSY-SD-S17-1224			DSY-SD-S17-2448		
	LAB_ID	SE6442-17			SE6442-12			SE6442-13			SE6442-14		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.7			56.0			70.1			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		200	J	NP	410	U		340	U		340	U	
BENZO(B)FLUORANTHENE		370	UJ	N	410	U		340	UJ	N	340	U	
BENZO(G,H,I)PERYLENE		370	UJ	N	410	U		340	UJ	N	340	U	
BENZO(K)FLUORANTHENE		370	UJ	N	410	U		340	UJ	N	340	U	
CHRYSENE		220	J	NP	410	U		340	U		340	U	
DIBENZO(A,H)ANTHRACENE		370	UJ	N	410	U		340	UJ	N	340	U	
FLUORANTHENE		170	J	DP	410	U		340	U		340	U	
INDENO(1,2,3-CD)PYRENE		370	UJ	N	410	U		340	UJ	N	340	U	
PYRENE		1100	J	N	410	U		340	U		340	U	

PROJ_NO: 02747 SDG: DSY-14 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S21-0012			DSY-SD-S21-1224			DSY-SD-S21-2448			DSY-SD-W09-0012		
	LAB_ID	SE6442-18			SE6442-19			SE6442-20			SE6442-2		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	46.8			63.5			64.9			44.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		290	J	NP	380	UJ	N	360	U		210	J	P
BENZO(B)FLUORANTHENE		350	J	NP	380	UJ	N	360	U		290	J	P
BENZO(G,H,I)PERYLENE		480	UJ	N	380	UJ	N	360	U		500	U	
BENZO(K)FLUORANTHENE		340	J	NP	380	UJ	N	360	U		360	J	P
CHRYSENE		390	J	N	380	UJ	N	360	U		290	J	P
DIBENZO(A,H)ANTHRACENE		480	UJ	N	380	UJ	N	360	U		500	U	
FLUORANTHENE		260	J	P	380	U		360	U		250	J	P
INDENO(1,2,3-CD)PYRENE		480	UJ	N	380	UJ	N	360	U		500	U	
PYRENE		1500	J	N	440	J	NP	360	U		570	J	P

PROJ_NO: 02747 SDG: DSY-14 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W09-1224			DSY-SD-W09-2448			DSY-SD-W17-0012			DSY-SD-W17-1224		
	LAB_ID	SE6442-3			SE6442-4			SE6442-5			SE6442-6		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			61.9			38.5			55.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		410	U		390	U		260	J	HP	160	J	NP
BENZO(B)FLUORANTHENE		410	U		390	U		350	J	HNP	440	UJ	N
BENZO(G,H,I)PERYLENE		410	U		390	U		640	UJ	HN	440	UJ	N
BENZO(K)FLUORANTHENE		410	U		390	U		400	J	HNP	440	UJ	N
CHRYSENE		410	U		390	U		340	J	HP	280	J	N
DIBENZO(A,H)ANTHRACENE		410	U		390	U		640	UJ	HN	440	UJ	N
FLUORANTHENE		410	U		390	U		640	UJ	H	440	U	
INDENO(1,2,3-CD)PYRENE		410	U		390	U		640	UJ	HN	440	UJ	N
PYRENE		410	U		390	U		1100	J	H	1100	J	N

PROJ_NO: 02747 SDG: DSY-14 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W17-2448			DSY-SD-W21-0012			DSY-SD-W21-1224			DSY-SD-W21-2448		
	LAB_ID	SE6442-7			SE6442-8			SE6442-9			SE6442-10		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	64.8			36.7			56.3			64.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	U		670	UJ	H	420	U		340	U	
BENZO(B)FLUORANTHENE		350	U		670	UJ	H	420	UJ	N	340	U	
BENZO(G,H,I)PERYLENE		350	U		670	UJ	H	420	UJ	N	340	U	
BENZO(K)FLUORANTHENE		350	U		270	J	HP	170	J	NP	340	U	
CHRYSENE		350	U		670	UJ	H	420	U		340	U	
DIBENZO(A,H)ANTHRACENE		350	U		670	UJ	H	420	UJ	N	340	U	
FLUORANTHENE		350	U		670	UJ	H	420	U		340	U	
INDENO(1,2,3-CD)PYRENE		350	U		670	UJ	H	420	UJ	N	340	U	
PYRENE		350	U		590	J	HP	550	J	P	340	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB07-093011
SDG: DSY-14	LAB_ID	SE6442-21
FRACTION: OS	SAMP_DATE	9/30/2011
MEDIA: WATER	QC_TYPE	RB
	UNITS	UG/L
	PCT_SOLIDS	
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	7.1	U	
BENZO(B)FLUORANTHENE	7.1	U	
BENZO(G,H,I)PERYLENE	7.1	U	
BENZO(K)FLUORANTHENE	7.1	U	
CHRYSENE	7.1	U	
DIBENZO(A,H)ANTHRACENE	7.1	U	
FLUORANTHENE	7.1	U	
INDENO(1,2,3-CD)PYRENE	7.1	U	
PYRENE	7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP18-093011			DSY-SD-DUP19-093011			DSY-SD-O21-0012			DSY-SD-O21-1224		
SDG: DSY-14	LAB_ID	SE6442-1			SE6442-11			SE6442-15			SE6442-16		
FRACTION: PAH	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.6			35.8			41.9			43.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		49			220			130	J	H	200		

PROJ_NO: 02747 SDG: DSY-14 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O21-2448RA			DSY-SD-S17-0012			DSY-SD-S17-1224			DSY-SD-S17-2448		
	LAB_ID	SE6442-17			SE6442-12			SE6442-13			SE6442-14		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.7			56.0			70.1			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		140			61			14	U		13	U	

PROJ_NO: 02747 SDG: DSY-14 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S21-0012			DSY-SD-S21-1224			DSY-SD-S21-2448			DSY-SD-W09-0012		
	LAB_ID	SE6442-18			SE6442-19			SE6442-20			SE6442-2		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	46.8			63.5			64.9			44.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		240			70			23	J	P	230		

PROJ_NO: 02747 SDG: DSY-14 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W09-1224			DSY-SD-W09-2448			DSY-SD-W17-0012			DSY-SD-W17-1224		
	LAB_ID	SE6442-3			SE6442-4			SE6442-5			SE6442-6		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			61.9			38.5			55.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		31	J	P	9.2	J	P	240	J	H	150		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W17-2448			DSY-SD-W21-0012			DSY-SD-W21-1224			DSY-SD-W21-2448		
SDG: DSY-14	LAB_ID	SE6442-7			SE6442-8			SE6442-9			SE6442-10		
FRACTION: PAH	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	64.8			36.7			56.3			64.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		5.2	J	P	180	J	H	97			14	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB07-093011		
SDG: DSY-14	LAB_ID	SE6442-21		
FRACTION: PAH	SAMP_DATE	9/30/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	U	

PROJ_NO: 02747 SDG: DSY-14 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP18-093011			DSY-SD-DUP19-093011			DSY-SD-O21-0012			DSY-SD-O21-1224		
	LAB_ID	SE6442-1			SE6442-11			SE6442-15			SE6442-16		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.6			35.8			41.9			43.3		
	DUP_OF	DSY-SD-W13-1224			DSY-SD-W21-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	UJ	R	23	UJ	R	19	UJ	R	18	UJ	R
AROCLOR-1221		13	UJ	R	23	UJ	R	19	UJ	R	18	UJ	R
AROCLOR-1232		15	UJ	R	27	UJ	R	22	UJ	R	21	UJ	R
AROCLOR-1242		13	UJ	R	23	UJ	R	19	UJ	R	18	UJ	R
AROCLOR-1248		13	UJ	R	23	UJ	R	19	UJ	R	18	UJ	R
AROCLOR-1254		13	UJ	R	120	J	GR	19	UJ	R	18	UJ	R
AROCLOR-1260		13	UJ	R	23	UJ	R	19	UJ	R	18	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-O21-2448			DSY-SD-S17-0012			DSY-SD-S17-1224			DSY-SD-S17-2448		
SDG: DSY-14	LAB_ID	SE6442-17			SE6442-12			SE6442-13			SE6442-14		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.7			56.0			70.1			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	UJ	R	14	UJ	R	12	UJ	R	11	UJ	R
AROCLOR-1221		13	UJ	R	14	UJ	R	12	UJ	R	11	UJ	R
AROCLOR-1232		15	UJ	R	16	UJ	R	14	UJ	R	14	UJ	R
AROCLOR-1242		13	UJ	R	14	UJ	R	12	UJ	R	11	UJ	R
AROCLOR-1248		13	UJ	R	14	UJ	R	12	UJ	R	11	UJ	R
AROCLOR-1254		170	J	R	14	UJ	R	12	UJ	R	11	UJ	R
AROCLOR-1260		13	UJ	R	14	UJ	R	12	UJ	R	11	UJ	R

PROJ_NO: 02747 SDG: DSY-14 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S21-0012			DSY-SD-S21-1224			DSY-SD-S21-2448			DSY-SD-W09-0012		
	LAB_ID	SE6442-18			SE6442-19			SE6442-20			SE6442-2		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	46.8			63.5			64.9			44.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		16	UJ	R	13	J	R	12	U		17	UJ	R
AROCLOR-1221		16	UJ	R	13	J	R	12	U		17	UJ	R
AROCLOR-1232		19	UJ	R	16	J	R	14	U		20	UJ	R
AROCLOR-1242		16	UJ	R	13	J	R	12	U		17	UJ	R
AROCLOR-1248		16	UJ	R	13	J	R	12	U		17	UJ	R
AROCLOR-1254		430	J	R	230	J	R	12	U		17	UJ	R
AROCLOR-1260		16	UJ	R	13	J	R	12	U		17	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-W09-1224			DSY-SD-W09-2448			DSY-SD-W17-0012			DSY-SD-W17-1224		
SDG: DSY-14	LAB_ID	SE6442-3			SE6442-4			SE6442-5			SE6442-6		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			61.9			38.5			55.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		15	UJ	R	14	UJ	R	21	UJ	R	15	U	
AROCLOR-1221		15	UJ	R	14	UJ	R	21	UJ	R	15	U	
AROCLOR-1232		18	UJ	R	16	UJ	R	25	UJ	R	18	U	
AROCLOR-1242		15	UJ	R	14	UJ	R	21	UJ	R	15	U	
AROCLOR-1248		15	UJ	R	14	UJ	R	21	UJ	R	15	U	
AROCLOR-1254		15	UJ	R	14	UJ	R	21	UJ	R	450		
AROCLOR-1260		15	UJ	R	14	UJ	R	21	UJ	R	450		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W17-2448			DSY-SD-W21-0012			DSY-SD-W21-1224			DSY-SD-W21-2448		
SDG: DSY-14	LAB_ID	SE6442-7			SE6442-8			SE6442-9			SE6442-10		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	64.8			36.7			56.3			64.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	UJ	R	20	UJ	R	14	UJ	R	13	UJ	R
AROCLOR-1221		13	UJ	R	20	UJ	R	14	UJ	R	13	UJ	R
AROCLOR-1232		15	UJ	R	24	UJ	R	16	UJ	R	15	UJ	R
AROCLOR-1242		13	UJ	R	20	UJ	R	14	UJ	R	13	UJ	R
AROCLOR-1248		13	UJ	R	20	UJ	R	14	UJ	R	13	UJ	R
AROCLOR-1254		13	UJ	R	20	UJ	GR	80	J	R	13	UJ	R
AROCLOR-1260		13	UJ	R	20	UJ	R	14	UJ	R	13	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB07-093011		
SDG: DSY-14	LAB_ID	SE6442-21		
FRACTION: PCB	SAMP_DATE	9/30/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	U	
AROCLOR-1221		0.24	U	
AROCLOR-1232		0.24	U	
AROCLOR-1242		0.24	U	
AROCLOR-1248		0.24	U	
AROCLOR-1254		0.24	U	
AROCLOR-1260		0.24	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See Instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG DSY-17

2. DATE OF DOCUMENT: DOCUMENT CONTROL No.:

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Maffei							PDM	12-20-17
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4940W

Date: December 22, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-17
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-J24-0012	DSY-SD-J24-1224	DSY-SD-J26-0012
	DSY-SD-J26-1224	DSY-SD-J26-2448	DSY-SD-J28-0012
	DSY-SD-J28-1224	DSY-SD-J28-2448	DSY-SD-J30-0012
	DSY-SD-J30-1224	DSY-SD-J30-2448	DSY-SD-L26-0012
	DSY-SD-L28-0012	DSY-SD-L28-1224	DSY-SD-L28-2448
	DSY-SD-L30-0012	DSY-SD-L30-1224	DSY-SD-L30-2448
	DSY-SD-DUP24-100411		
	DSY-SD-DUP25-100411		

Field Duplicate Pairs: DSY-SD-J26-2448/DSY-SD-DUP24-100411
DSY-SD-L28-1224/SDY-SD-DUP25-100411

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 4, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
	•	Surrogate Compounds
	•	Internal Standards
	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
*	•	Compound Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter

Preservation and Technical Holding Times

PAH

The original extract for following samples was lost during the GPC cleanup procedure and re-extraction was required: DSY-SD-J28-0012, DSY-SD-J28-1224, DSY-SD-J28-2448, DSY-SD-J30-0012, DSY-SD-J30-1224, DSY-SD-J30-2448, DSY-SD-L30-0012, DSY-SD-L30-1224, and DSY-SD-DUP24-100411. The re-extraction of these samples was performed 9 days beyond the 14-day extraction holding time. The positive and non-detected PAH results for the affected sediment samples were qualified as estimated (J, UJ) due to possible sample degradation.

The extraction holding criterion was not met for select sediment samples; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected sediment samples are usable as estimated values, which may be biased low.

Initial and Continuing Calibrations

PAHs

The following table summarizes the compounds that did not meet the CC criterion of %D <20%:

Compound	%D	Action		Affected Sample
		(+)	NDs	
Benzo(b)fluoranthene	22.4	J	UJ	DSY-SD-J28-2448, DSY-SD-J30-0012
Indeno(1,2,3-cd)pyrene	36.2	J	UJ	

The %D was outside of the QC limits for benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene, consequently, the project accuracy goals may be impacted for the affected sediment samples. The positive and non-

detected benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene results in samples DSY-SD-J28-2448, DSY-SD-J30-0012 are usable as an estimated values.

Surrogate Compounds

PAH

The following sample had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
DSY-SD-L28-0012	Terphenyl-d14	142	24-136	J	
DSY-SD-J26-2448		138		J	

The surrogate terphenyl-d14 recovered above of the QC limits in the affected samples; consequently, the project accuracy goals may be impacted for the total HMWPAHs in the affected sediment samples. The positive PAH results in the affected samples are usable as estimated values which may be biased high.

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-J24-1224	DCB	36/50	59-124	J	UJ
DSY-SD-J26-0012		40/42		J	UJ
DSY-SD-DUP24-100411		38/54		J	UJ
DSY-SD-J26-1224		40/55		J	UJ
DSY-SD-J26-2448		29/40		J	UJ
DSY-SD-J28-0012		34/46		J	UJ
DSY-SD-J28-1224		34/52		J	UJ
DSY-SD-J28-2448		30/52		J	UJ
DSY-SD-J30-0012		21/32		J	UJ
DSY-SD-J30-1224		22/32		J	UJ
DSY-SD-L26-0012		-/137		J	

- Criterion met

The surrogate DCB recovered outside the QC limits in the affected samples, consequently, the project accuracy goals may be impacted for total PCBs. The positive and non-detected Aroclor results in the affected samples are usable as estimated values which may be biased low except for the positive Aroclor 1254 result in sample DSY-SD-L26-0012 which may be biased high.

Internal Standard

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Phenanthrene-d_{12}	1423553	348907-1395628	J		DSY-SD-J30-1224
Phenanthrene-d_{12}	1893298	429237-1716946	J		DSY-SD-J28-0012
Perylene-d_{12}	82555	15450-61800	J		DSY-SD-J30-2448*
Perylene-d_{12}	85196	196795-787180	J	UJ	DSY-SD-J24-1224
	95845		J	UJ	DSY-SD-J26-1224
	121835		J	UJ	DSY-SD-L28-1224
	125741		J	UJ	DSY-SD-L30-2448
	159599		J	UJ	DSY-SD-L28-2448
	98680		J	UJ	DSY-SD-J24-0012
	106093		J	UJ	DSY-SD-J26-0012
	71622		J	UJ	DSY-SD-J26-2448
	54357		J	UJ	DSY-SD-L28-0012
	153100		J	UJ	DSY-SD-DUP25-100411
	116127		J	UJ	DSY-SD-L26-0012
	155938		J	UJ	DSY-SD-DUP24-100411
	140005		J	UJ	DSY-SD-J28-0012
	64133		J	UJ	DSY-SD-L30-0012
	82722		J	UJ	DSY-SD-J28-1224
Perylene-d_{12}	67454	90225-360898	J	UJ	DSY-SD-J28-2448
	86237		J	UJ	DSY-SD-L30-1224
Chrysene-d_{12}	233657	325277-1301108	J	UJ	DSY-SD-J24-1224
	206129		J	UJ	DSY-SD-J24-0012
	229401		J	UJ	DSY-SD-J26-2448
	164285		J	UJ	DSY-SD-L28-0012
	250923		J	UJ	DSY-SD-L26-0012
	166814		J	UJ	DSY-SD-L30-0012
	244325		J	UJ	DSY-SD-J28-1224
Chrysene-d_{12}	146763	189805-759218	J	UJ	DSY-SD-J28-2448

* SIM analysis, benzo(a)pyrene only

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAH associated with phenanthrene-d_{10} is fluoranthene. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAHs

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-L30-0012 that were outside of the QC limits:

Compound	MS/MSD %Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action	
					(+)	NDs
Benzo(a)anthracene	-/30.3	40-100			J	
Fluoranthene	25.9/9.56	40-100	32	30	J	
Pyrene	-/10.4	40-100	34	30	J	

-Criterion met

Although the MS/MSD recoveries for benzo(a)anthracene, fluoranthene, and pyrene did not meet the QC limits, the project accuracy goals are not impacted since the PAL for the total HMWPAHs is much higher than the affected results. The positive benzo(a)anthracene, fluoranthene, and pyrene result in sample DSY-SD-L30-0012 are usable as an estimated values which may be biased low.

Although the RPD were above the maximum limit, the project precision goals are not impacted since the PAL for the total HMWPAHs is much higher than the affected results. The positive fluoranthene and pyrene result in sample DSY-SD-L30-0012 are usable as estimated values for which the bias is undetermined.

Field Duplicates

PAH

The following table summarizes the compounds detected in the field duplicate samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 that did not meet the QC criteria of RPD <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Pyrene	2200	510	125	J	
Benzo(a)pyrene	250	74	108	J	

Although the field duplicate RPD criterion was not met for pyrene, the project precision goals are not impacted since the pyrene results are much lower than the PAL established for the total HMWPAHs. The positive pyrene results in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 are usable as estimated values for which the bias is undetermined.

The field duplicate RPD criterion was not met for benzo(a)pyrene, consequently, the project precision goals may be impacted. The positive benzo(a)pyrene results in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 are usable as estimated values for which the bias is undetermined.

PCBs

The following table summarizes the Aroclor detected in the field duplicate samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 that did not meet the QC criteria of RPD <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Aroclor 1254	1300	80	177	J	

The field duplicate RPD criterion was not met for Aroclor 1254, consequently, the project precision goals may be impacted for the total PCBs. The positive Aroclor 1254 results in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 are usable as estimated values for which the bias is undetermined.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. The results for several sediment samples are estimated due to the exceeded extraction holding times; results may be biased low. The results for benzo(b)fluoranthene and indeno(1,2,3-cd)pyrene in select samples are estimated due to instrument calibration variability. Positive results were estimated in select samples due to high surrogate recovery; results may be biased high. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses for perylene-d_{12} and chrysene-d_{12}. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability for benzo(a)pyrene and the total HMW PAHs. In addition, the benzo(a)anthracene, fluoranthene, and pyrene results in sample DSY-SD-L30-0012 were qualified as estimated due to the low MS recovery. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exception. The positive benzo(a)pyrene result in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 were qualified as estimated due to poor field duplicate precision. Although specific method criteria were not met in this instance, the affected positive results are usable as estimated values which may have a minor impact on data usability. In addition, the pyrene results in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 were estimated due to poor field duplicate precision. Although specific QC criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set with the following exception. The Aroclor results in several samples were qualified as estimated due to low surrogate recoveries. Although specific method criteria were not met in this instance, the affected positive results are usable as estimated values which may have a minor impact on data usability for total PCBs.

The project goals with respect to precision were met for the PCB data set with the following exception. Aroclor 1254 results in samples DSY-SD-J26-2448 and DSY-SD-DUP24-100411 were estimated due to poor field duplicate precision. Although specific method criteria were not met in this instance, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to sensitivity and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-17 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP24-100411			DSY-SD-DUP25-100411			DSY-SD-J24-0012			DSY-SD-J24-1224		
	LAB_ID	SE6616-6			SE6616-19			SE6616-1			SE6616-2		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.4			68.6			62.6			70.3		
	DUP_OF	DSY-SD-J26-2448			DSY-SD-L28-1224								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		360	UJ	H	340	U		170	J	NP	320	UJ	N
BENZO(B)FLUORANTHENE		360	UJ	HN	340	UJ	N	390	UJ	N	320	UJ	N
BENZO(G,H,I)PERYLENE		360	UJ	HN	340	UJ	N	390	UJ	N	320	UJ	N
BENZO(K)FLUORANTHENE		360	UJ	HN	340	UJ	N	390	UJ	N	320	UJ	N
CHRYSENE		360	UJ	H	140	J	P	320	J	N	180	J	NP
DIBENZO(A,H)ANTHRACENE		360	UJ	HN	340	UJ	N	390	UJ	N	320	UJ	N
FLUORANTHENE		360	UJ	H	340	U		230	J	P	150	J	P
INDENO(1,2,3-CD)PYRENE		360	UJ	HN	340	UJ	N	390	UJ	N	320	UJ	N
PYRENE		510	J	GH	320	J	P	860	J	N	470	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-J26-0012			DSY-SD-J26-1224			DSY-SD-J26-2448			DSY-SD-J28-0012		
SDG: DSY-17	LAB_ID	SE6616-3			SE6616-4			SE6616-5			SE6616-7		
FRACTION: OS	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			40.0			56.6			44.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		380	J	P	1500			480	J	NPR	560	J	HP
BENZO(B)FLUORANTHENE		410	J	NP	1500	J	N	420	UJ	N	500	J	HNP
BENZO(G,H,I)PERYLENE		640	UJ	N	590	UJ	N	420	UJ	N	550	U	HN
BENZO(K)FLUORANTHENE		450	J	NP	1800	J	N	420	UJ	N	520	J	HNP
CHRYSENE		550	J	P	2000			560	J	NPR	620	J	HP
DIBENZO(A,H)ANTHRACENE		640	UJ	N	590	UJ	N	420	UJ	N	550	UJ	HN
FLUORANTHENE		640	U		450	J	P	430	J	NPR	720	J	HNP
INDENO(1,2,3-CD)PYRENE		640	UJ	N	590	UJ	N	420	UJ	N	550	UJ	HN
PYRENE		1300			4800			2200	J	GNR	3000	J	H

PROJ_NO: 02747 SDG: DSY-17 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J28-1224			DSY-SD-J28-2448			DSY-SD-J30-0012			DSY-SD-J30-0012-DL		
	LAB_ID	SE6616-8			SE6616-9			SE6616-10			SE6616-10DL		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.1			56.5			33.1			33.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		740	J	HNP	220	J	HNP				21000	J	DH
BENZO(B)FLUORANTHENE		570	J	HNP	440	UJ	CHN	11000	J	CH			
BENZO(G,H,I)PERYLENE		580	UJ	HN	440	UJ	HN	3000	J	H			
BENZO(K)FLUORANTHENE		570	J	HNP	170	J	HNP	7900	J	H			
CHRYSENE		820	J	HN	340	J	HNP				21000	J	H
DIBENZO(A,H)ANTHRACENE		580	UJ	HN	440	UJ	HN	1100	J	H			
FLUORANTHENE		1100	J	H	220	J	HP				53000	J	DH
INDENO(1,2,3-CD)PYRENE		580	UJ	HN	440	UJ	CHN	3700	J	CH			
PYRENE		4500	J	HN	650	J	HN				55000	J	DH

PROJ_NO: 02747 SDG: DSY-17 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J30-1224			DSY-SD-J30-2448			DSY-SD-L26-0012			DSY-SD-L28-0012		
	LAB_ID	SE6616-11			SE6616-12			SE6616-20			SE6616-16		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.3			60.8			52.1			48.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		960	J	H	350	J	HP	890	J	N	560	J	NPR
BENZO(B)FLUORANTHENE		910	J	H	420	J	HNP	590	J	NP	550	J	NPR
BENZO(G,H,I)PERYLENE		650	UJ	H	400	UJ	HN	300	J	NP	500	UJ	N
BENZO(K)FLUORANTHENE		730	J	HP	280	J	HNP	650	J	N	660	J	NPR
CHRYSENE		1100	J	H	340	J	HP	970	J	N	860	J	NR
DIBENZO(A,H)ANTHRACENE		650	UJ	H	400	UJ	HN	460	UJ	N	500	UJ	N
FLUORANTHENE		2700	J	HN	320	J	HP	990			290	J	PR
INDENO(1,2,3-CD)PYRENE		650	UJ	H	400	UJ	HN	420	J	NP	500	UJ	N
PYRENE		5400	J	H	2300	J	H	3100	J	N	2300	J	NR

PROJ_NO: 02747 SDG: DSY-17 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L28-1224			DSY-SD-L28-2448			DSY-SD-L30-0012			DSY-SD-L30-1224		
	LAB_ID	SE6616-17			SE6616-18			SE6616-13			SE6616-14		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.0			77.9			49.6			72.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		340	U		310	U		1000	J	DHN	130	UJ	H
BENZO(B)FLUORANTHENE		340	UJ	N	310	UJ	N	930	J	HN	340	UJ	HN
BENZO(G,H,I)PERYLENE		340	UJ	N	310	UJ	N	490	UJ	HN	340	UJ	HN
BENZO(K)FLUORANTHENE		340	UJ	N	310	UJ	N	1100	J	HN	340	UJ	HN
CHRYSENE		340	U		310	U		1000	J	HN	140	J	HP
DIBENZO(A,H)ANTHRACENE		340	UJ	N	310	UJ	N	490	UJ	HN	340	UJ	HN
FLUORANTHENE		340	U		310	U		980	J	DH	340	UJ	H
INDENO(1,2,3-CD)PYRENE		340	UJ	N	310	UJ	N	430	J	HNP	340	UJ	HN
PYRENE		310	J	P	310	U		5100	J	DHN	840	J	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-L30-2448
SDG: DSY-17	LAB_ID	SE6616-15
FRACTION: OS	SAMP_DATE	10/4/2011
MEDIA: SEDIMENT	QC_TYPE	NM
	UNITS	UG/KG
	PCT_SOLIDS	79.8
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	300	U	
BENZO(B)FLUORANTHENE	300	UJ	N
BENZO(G,H,I)PERYLENE	300	UJ	N
BENZO(K)FLUORANTHENE	300	UJ	N
CHRYSENE	300	U	
DIBENZO(A,H)ANTHRACENE	300	UJ	N
FLUORANTHENE	300	U	
INDENO(1,2,3-CD)PYRENE	300	UJ	N
PYRENE	300	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP24-100411			DSY-SD-DUP25-100411			DSY-SD-J24-0012			DSY-SD-J24-1224		
SDG: DSY-17	LAB_ID	SE6616-6			SE6616-19			SE6616-1			SE6616-2		
FRACTION: PAH	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.4			68.6			62.6			70.3		
	DUP_OF	DSY-SD-J26-2448			DSY-SD-L28-1224								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		74	J	GH	83			100			57		

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J26-0012			DSY-SD-J26-1224			DSY-SD-J26-2448			DSY-SD-J28-0012		
	LAB_ID	SE6616-3			SE6616-4			SE6616-5			SE6616-7		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			40.0			56.6			44.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		230			1000	J	N	250	J	G	350	J	H

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J28-1224			DSY-SD-J28-2448			DSY-SD-J30-0012			DSY-SD-J30-1224		
	LAB_ID	SE6616-8			SE6616-9			SE6616-10			SE6616-11		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.1			56.5			33.1			38.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		400	J	H	170	J	H	8800	J	H	580	J	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-J30-2448			DSY-SD-L26-0012			DSY-SD-L28-0012			DSY-SD-L28-1224		
SDG: DSY-17	LAB_ID	SE6616-12			SE6616-20			SE6616-16			SE6616-17		
FRACTION: PAH	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	60.8			52.1			48.0			70.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		240	J	HN	670	J	N	420			64		

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L28-2448			DSY-SD-L30-0012			DSY-SD-L30-1224			DSY-SD-L30-2448		
	LAB_ID	SE6616-18			SE6616-13			SE6616-14			SE6616-15		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.9			49.6			72.4			79.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		18	J	P	930	J	HN	140	J	H	12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP24-100411			DSY-SD-DUP25-100411			DSY-SD-J24-0012			DSY-SD-J24-1224		
SDG: DSY-17	LAB_ID	SE6616-6			SE6616-19			SE6616-1			SE6616-2		
FRACTION: PCB	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.4			68.6			62.6			70.3		
	DUP_OF	DSY-SD-J26-2448			DSY-SD-L28-1224								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	R	12	U		12	U		11	UJ	R
AROCLOR-1221		11	UJ	R	12	U		12	U		11	UJ	R
AROCLOR-1232		13	UJ	R	14	U		14	U		12	UJ	R
AROCLOR-1242		11	UJ	R	12	U		12	U		11	UJ	R
AROCLOR-1248		11	UJ	R	12	U		12	U		11	UJ	R
AROCLOR-1254		80	J	GR	110			1200			400	J	R
AROCLOR-1260		11	UJ	R	12	U		12	U		11	UJ	R

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J26-0012			DSY-SD-J26-1224			DSY-SD-J26-2448			DSY-SD-J28-0012		
	LAB_ID	SE6616-3			SE6616-4			SE6616-5			SE6616-7		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			40.0			56.6			44.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		23	UJ	R	21	UJ	R	14	UJ	R	19	UJ	R
AROCLOR-1221		23	UJ	R	21	UJ	R	14	UJ	R	19	UJ	R
AROCLOR-1232		27	UJ	R	25	UJ	R	17	UJ	R	22	UJ	R
AROCLOR-1242		23	UJ	R	21	UJ	R	14	UJ	R	19	UJ	R
AROCLOR-1248		23	UJ	R	21	UJ	R	14	UJ	R	19	UJ	R
AROCLOR-1254		180	J	R	160	J	R	1300	J	GR	180	J	R
AROCLOR-1260		23	UJ	R	21	UJ	R	14	UJ	R	19	UJ	R

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J28-1224			DSY-SD-J28-2448			DSY-SD-J30-0012			DSY-SD-J30-1224		
	LAB_ID	SE6616-8			SE6616-9			SE6616-10			SE6616-11		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.1			56.5			33.1			38.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		20	UJ	R	14	UJ	R	24	UJ	R	21	UJ	R
AROCLOR-1221		20	UJ	R	14	UJ	R	24	UJ	R	21	UJ	R
AROCLOR-1232		23	UJ	R	17	UJ	R	28	UJ	R	25	UJ	R
AROCLOR-1242		20	UJ	R	14	UJ	R	24	UJ	R	21	UJ	R
AROCLOR-1248		20	UJ	R	14	UJ	R	24	UJ	R	21	UJ	R
AROCLOR-1254		380	J	R	400	J	R	24	UJ	R	130	J	R
AROCLOR-1260		20	UJ	R	14	UJ	R	24	UJ	R	21	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-J30-2448			DSY-SD-L26-0012			DSY-SD-L28-0012			DSY-SD-L28-1224		
SDG: DSY-17	LAB_ID	SE6616-12			SE6616-20			SE6616-16			SE6616-17		
FRACTION: PCB	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	60.8			52.1			48.0			70.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	U		16	U		17	U		12	U	
AROCLOR-1221		13	U		16	U		17	U		12	U	
AROCLOR-1232		16	U		19	U		20	U		14	U	
AROCLOR-1242		13	U		16	U		17	U		12	U	
AROCLOR-1248		13	U		16	U		17	U		12	U	
AROCLOR-1254		160			1800	J	R	3600			120		
AROCLOR-1260		13	U		16	U		17	U		12	U	

PROJ_NO: 02747 SDG: DSY-17 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L28-2448			DSY-SD-L30-0012			DSY-SD-L30-1224			DSY-SD-L30-2448		
	LAB_ID	SE6616-18			SE6616-13			SE6616-14			SE6616-15		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.9			49.6			72.4			79.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		16	U		11	U		10	U	
AROCLOR-1221		11	U		16	U		11	U		10	U	
AROCLOR-1232		13	U		20	U		13	U		12	U	
AROCLOR-1242		32			16	U		11	U		10	U	
AROCLOR-1248		11	U		16	U		11	U		10	U	
AROCLOR-1254		11	U		270			220			10	U	
AROCLOR-1260		11	U		16	U		11	U		10	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Organic Data Validation, SDG ___DSY-4_____

2. DATE OF DOCUMENT: 11/17/11 DOCUMENT CONTROL No.: C-Navy-11-11-4679 W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/17/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4679W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-4
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-BB02-0012	DSY- SD-BB02-1224	DSY- SD-BB02-2448
	DSY-SD-BE28-0012	DSY-SD-BE28-1224	DSY-SD-BE28-2448
	DSY-SD-BE30-0012	DSY-SD-BE30-1224	DSY- SD-BE30-2448
	DSY-SD-BF06-0012	DSY- SD-BF23-0012	DSY-SD-BF23-1224
	DSY-SD-BF23-2448	DSY-SD-BG28-0012	DSY-SD-BG28-1224
	DSY-SD-BG28-2448	DSY-SD-BI26-0012	DSY-SD-BI26-1224
	DSY-SD-BI26-2448	DSY-SD-DUP03-092111	

Field Duplicate Pair: DSY-SD-BI26-1224/DSY-SD-DUP03-092111

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
- Initial and Continuing Calibrations
* • Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
- Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Laboratory Data Completeness

PCB

On November 16, 2011 the laboratory resubmitted the edited Form 8 pages since the original submittal was missing the last four digits of the sample IDs.

Initial and Continuing Calibrations

PAH

The following table summarizes the compounds that failed to meet the continuing calibration (CC) %D criteria of <20%:

Compound	%RSD	Action		Affected Sample
		(+)	NDs	
Dibenzo(a,h)anthracene	26.6		UJ	DSY-SD-BF23-2448
Benzo(g,h,i)perylene	22.3		UJ	

Although the %D was outside of the QC limits for dibenzo(a,h)anthracene and benzo(g,h,i)perylene, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limit (PAL) established for total PAHs. The non-detected results for dibenzo(a,h)anthracene and benzo(g,h,i)perylene in the affected samples are usable as estimated values.

PCB

The following table summarizes the Aroclors that did not meet the CC criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/2	Action (+)	Action NDs	Affected Samples
Aroclor 1016	44.3/26.8		UJ	DSY-SD-BI26-0012, DSY-SD-BI26-1224, DSY-SD-BI26-2448, DSY-SD-DUP03-092111, DSY-SD-BE30-0012, DSY-SD-BE30-1224, DSY-SD-BE30-2448, DSY-SD-BE28-0012, DSY-SD-BE28-1224, DSY-SD-BE28-2448, DSY-SD-BF23-0012, DSY-SD-BF23-1224, DSY-SD-BF23-2448, DSY-SD-BB02-0012, DSY-SD-BB02-1224, DSY-SD-BB02-2448, DSY-SD-BF06-0012
	47.8/27.8		UJ	

Although the %D was outside of the QC limits for Aroclor 1016, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor 1016 results in the affected samples are usable as estimated values.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action (+)	Action NDs
DSY-SD-BG28-1224	DCB	32/41	59-124%		UJ
DSY-SD-BI26-2448		43/47			UJ
DSY-SD-DUP03-092111		37/50			UJ
DSY-SD-BE30-1224		35/46			UJ
DSY-SD-BE30-2448		35/44			UJ
DSY-SD-BE28-2448		33/37			UJ
DSY-SD-BF23-0012		36/40			UJ
DSY-SD-BF23-1224		32/33			UJ
DSY-SD-BF23-2448		38/36			UJ
DSY-SD-BB02-0012		30/34			UJ
DSY-SD-BB02-1224		34/32			UJ
DSY-SD-BB02-2448		45/44			UJ

Although the surrogate decachlorobiphenyl (DCB) recovered below of the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor results in the affected samples are usable as estimated values which may be biased low.

Internal Standards

PAHs

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Phenanthrene-d_{10}	1185988	275837-1103346	J		DSY-SD-BG28-0012
	1137578		J		DSY-SD-BI26-0012
	1220644		J		DSY-SD-BI26-1224
	1256504		J		DSY-SD-DUP03-092111
	1226714		J		DSY-SD-BE30-1224
	1260292		J		DSY-SD-BF23-0012
	1236694		J		DSY-SD-BE30-2448
Perylene-d_{12}	44469	88704-354814	J		DSY-SD-BE30-0012
	79746		J	UJ	DSY-SD-BE28-0012
	70142		J	UJ	DSY-SD-BE28-1224
Perylene-d_{12}	157033	196795-787180	J	UJ	DSY-SD-BB02-0012
Chrysene-d_{12}	319623	325277-1301108	j		DSY-SD-BE30-1224DL

The internal standard areas for phenanthrene-d_{10}, chrysene-d_{12}, and perylene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAH fluoranthene is associated with phenanthrene-d_{10}. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for phenanthrene-d_{10}, chrysene-d_{12}, and perylene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAH

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-BG28-0012 that were outside of the QC limits:

Compound	MS/MSD % Rec.	%Rec QC Limits	MS/MSD RPD	RPD QC Limit	Action	
					(+)	NDs
Benzo(a)anthracene	-/-	40-100	38	30	J	
Benzo(a)pyrene	-/-	40-100	40	30	J	
Benzo(b)fluoranthene	-/113	40-100	50	30	J	

Compound	MS/MSD % Rec.	%Rec QC Limits	MS/MSD RPD	RPD QC Limit	Action	
					(+)	NDs
Chrysene	-/109	40-100	50	30	J	
Fluoranthene	-/-	40-100	34	30	J	
Pyrene	-/194	40-100	54	30	J	

-Criterion met

The MSD recovery criteria were not met for benzo(b)fluoranthene, chrysene, and pyrene; therefore, the project accuracy goals may be impacted. The positive benzo(b)fluoranthene, chrysene, and pyrene results in sample DSY-SD-BG28-0012 are usable as estimated values that may be biased high.

The MS/MSD RPD criteria were not met for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, and pyrene; therefore, the project precision goals may be impacted. The positive results for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, and pyrene in sample DSY-SD-BG28-0012 are usable as estimated valuesh.

Laboratory Control Sample/Laboratory Control Sample Duplicates

PAH

The following table summarizes the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action		Affected Samples
					(+)	NDs	
Indeno(1,2,3-cd)pyrene	-	-	37	30	J	UJ	All samples

- Criterion met

Although the RPD for indeno(1,2,3-cd)pyrene was above the QC limit, the project precision goals are not impacted since there are no PALs established for this compound for the sediment samples. The positive and non-detected indeno(1,2,3-cd)pyrene results in the affected samples are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs is calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses. The results for benzo(b)fluoranthene, chrysene, and pyrene in sample DSY-SD-BG28-0012 were qualified as estimated due to high MSD recoveries; results may be biased high. The data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, dibenzo(a,h)anthracene and benzo(g,h,i)perylene in sample DSY-SD-BF23-2448 was qualified as estimated due to instrument calibration variability. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exception. The results for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, and pyrene in sample DSY-SD-BG28-0012 were qualified as estimated due to MS/MSD imprecision. The data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, indeno(1,2,3-cd)pyrene results were estimated for all the samples due to poor laboratory precision with the LCS/LCSD analyses. Although specific QC criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. The non-detected Aroclor 1016 results in select samples were qualified as estimated due to instrument calibration variability. The non-detected Aroclor results in select samples were qualified as estimated due to low surrogate recoveries;

results may be biased low. Although specific method criteria were not met in these instances, the affected non-detected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BB02-1224			DSY-SD-BB02-2448			DSY-SD-BE28-0012		
SDG: DSY-4	LAB_ID	SE6159-17			SE6159-18			SE6159-19			SE6159-11		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			64.9			63.0			38.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		420	U		340	U		380	U		710	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		420	UJ	N	340	U		380	U		950	J	N
BENZO(G,H,I)PERYLENE		420	UJ	N	340	U		380	U		640	UJ	N
BENZO(K)FLUORANTHENE		190	J	NP	340	U		380	U		580	J	NP
CHRYSENE		170	J	P	340	U		380	U		990		
DIBENZO(A,H)ANTHRACENE		420	UJ	N	340	U		380	U		640	UJ	N
FLUORANTHENE		240	J	P	340	U		380	U		1200		
INDENO(1,2,3-CD)PYRENE		420	UJ	EN	340	UJ	E	380	UJ	E	640	UJ	EN
PYRENE		440	J	P	340	U		380	U		2600		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE28-1224			DSY-SD-BE28-2448			DSY-SD-BE30-0012			DSY-SD-BE30-0012DL		
SDG: DSY-4	LAB_ID	SE6159-12			SE6159-13			SE6159-8			SE6159-8DL		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.2			81.0			57.2			57.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1200			280	U					10000		
BENZO(A)PYRENE		940	J	N							9000		
BENZO(B)FLUORANTHENE		1400	J	N	280	U					10000		
BENZO(G,H,I)PERYLENE		370	UJ	N	280	U		6300	J	N			
BENZO(K)FLUORANTHENE		660	J	N	280	U		4400	J	N			
CHRYSENE		1400			280	U					12000		
DIBENZO(A,H)ANTHRACENE		370	UJ	N	280	U		1300	J	N			
FLUORANTHENE		1500			280	U					24000		
INDENO(1,2,3-CD)PYRENE		370	UJ	EN	280	UJ	E	6400	J	EN			
PYRENE		4500			280	U					34000		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE30-1224			DSY-SD-BE30-1224DL			DSY-SD-BE30-2448			DSY-SD-BF06-0012		
SDG: DSY-4	LAB_ID	SE6159-9			SE6159-9DL			SE6159-10			SE6159-20		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.9			71.9			75.1			68.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1800						290	J	P	310	U	
BENZO(A)PYRENE		1600											
BENZO(B)FLUORANTHENE		2300						380	J	P	310	U	
BENZO(G,H,I)PERYLENE		690						140	J	P	310	U	
BENZO(K)FLUORANTHENE		950						190	J	P	310	U	
CHRYSENE		1800						350	J	P	310	U	
DIBENZO(A,H)ANTHRACENE		250	J	P				300	U		310	U	
FLUORANTHENE		3100	J	N				720	J	N	180	J	P
INDENO(1,2,3-CD)PYRENE		880	J	E				300	UJ	E	310	UJ	E
PYRENE					7200	J	N	1300			220	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-0012			DSY-SD-BF23-1224			DSY-SD-BF23-2448			DSY-SD-BG28-0012		
SDG: DSY-4	LAB_ID	SE6159-14			SE6159-15			SE6159-16			SE6159-1		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	75.6			76.6			81.7			70.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		290	U		310	U		290	U		850	J	D
BENZO(A)PYRENE											810	J	D
BENZO(B)FLUORANTHENE		290	U		310	U		290	U		1300	J	D
BENZO(G,H,I)PERYLENE		290	U		310	U		290	UJ	C	380	J	P
BENZO(K)FLUORANTHENE		290	U		310	U		290	U		560		
CHRYSENE		290	U		310	U		290	U		1100	J	D
DIBENZO(A,H)ANTHRACENE		290	U		310	U		290	UJ	C	340	U	
FLUORANTHENE		180	J	NP	310	U		290	U		1300	J	DN
INDENO(1,2,3-CD)PYRENE		290	UJ	E	310	UJ	E	290	UJ	E	460	J	E
PYRENE		280	J	P	310	U		290	U		3000	J	M

PROJ_NO: 02747	NSAMPLE	DSY-SD-BG28-1224			DSY-SD-BG28-2448			DSY-SD-BI26-0012			DSY-SD-BI26-1224		
SDG: DSY-4	LAB_ID	SE6159-2			SE6159-3			SE6159-4			SE6159-5		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.0			82.1			60.9			74.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		270	U		650			590		
BENZO(A)PYRENE								580			580		
BENZO(B)FLUORANTHENE		300	U		270	U		830			900		
BENZO(G,H,I)PERYLENE		300	U		270	U		300	J	P	270	J	P
BENZO(K)FLUORANTHENE		300	U		97	J	P	370	J	P	350	J	P
CHRYSENE		300	U		120	J	P	690			670		
DIBENZO(A,H)ANTHRACENE		300	U		270	U		380	U		270	U	
FLUORANTHENE		160	J	P	250	J	P	1000	J	N	860	J	N
INDENO(1,2,3-CD)PYRENE		300	UJ	E	270	UJ	E	330	J	EP	280	J	EP
PYRENE		150	J	P	240	J	P	1700			1900		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BI26-2448			DSY-SD-DUP03-092111		
SDG: DSY-4	LAB_ID	SE6159-6			SE6159-7		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	86.8			75.0		
	DUP_OF				DSY-SD-DUP03-092111		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		260	U		350	J	P
BENZO(A)PYRENE							
BENZO(B)FLUORANTHENE		260	U		560		
BENZO(G,H,I)PERYLENE		260	U		180	J	P
BENZO(K)FLUORANTHENE		260	U		240	J	P
CHRYSENE		260	U		420		
DIBENZO(A,H)ANTHRACENE		260	U		290	U	
FLUORANTHENE		260	U		530	J	N
INDENO(1,2,3-CD)PYRENE		260	UJ	E	190	J	EP
PYRENE		260	U		1200		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BB02-1224			DSY-SD-BB02-2448			DSY-SD-BE28-0012		
SDG: DSY-4	LAB_ID	SE6159-17			SE6159-18			SE6159-19			SE6159-11		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			64.9			63.0			38.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		140			4.7	J	P	15	U		610		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE28-2448			DSY-SD-BE30-2448			DSY-SD-BF06-0012			DSY-SD-BF23-0012		
SDG: DSY-4	LAB_ID	SE6159-13			SE6159-10			SE6159-20			SE6159-14		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/21/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.0			75.1			68.0			75.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		5.2	J	P	250			87			79		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-1224			DSY-SD-BF23-2448			DSY-SD-BG28-1224			DSY-SD-BG28-2448		
SDG: DSY-4	LAB_ID	SE6159-15			SE6159-16			SE6159-2			SE6159-3		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.6			81.7			77.0			82.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		7.6	J	P	12	U		42			58		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BI26-2448			DSY-SD-DUP03-092111		
SDG: DSY-4	LAB_ID	SE6159-6			SE6159-7DL		
FRACTION: PAH	SAMP_DATE	9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	86.8			75.0		
	DUP_OF				DSY-SD-BI26-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		10	U		350		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BB02-1224			DSY-SD-BB02-2448			DSY-SD-BE28-0012		
SDG: DSY-4	LAB_ID	SE6159-17			SE6159-18			SE6159-19			SE6159-11		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.0			64.9			63.0			38.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		15	UJ	CR	12	UJ	CR	13	UJ	CR	22	UJ	C
AROCLOR-1221		15	UJ	R	12	UJ	R	13	UJ	R	22	U	
AROCLOR-1232		18	UJ	R	14	UJ	R	16	UJ	R	25	U	
AROCLOR-1242		15	UJ	R	12	UJ	R	13	UJ	R	22	U	
AROCLOR-1248		15	UJ	R	12	UJ	R	13	UJ	R	22	U	
AROCLOR-1254		15	UJ	R	12	UJ	R	13	UJ	R	22	U	
AROCLOR-1260		15	UJ	R	12	UJ	R	13	UJ	R	22	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE28-1224			DSY-SD-BE28-2448			DSY-SD-BE30-0012			DSY-SD-BE30-1224		
SDG: DSY-4	LAB_ID	SE6159-12			SE6159-13			SE6159-8			SE6159-9		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.2			81.0			57.2			71.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	C	10	UJ	CR	14	UJ	C	11	UJ	CR
AROCLOR-1221		12	U		10	UJ	R	14	U		11	UJ	R
AROCLOR-1232		14	U		12	UJ	R	17	U		13	UJ	R
AROCLOR-1242		12	U		10	UJ	R	14	U		11	UJ	R
AROCLOR-1248		12	U		10	UJ	R	14	U		11	UJ	R
AROCLOR-1254		12	U		10	UJ	R	14	U		11	UJ	R
AROCLOR-1260		12	U		10	UJ	R	14	U		11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE30-2448			DSY-SD-BF06-0012			DSY-SD-BF23-0012			DSY-SD-BF23-1224		
SDG: DSY-4	LAB_ID	SE6159-10			SE6159-20			SE6159-14			SE6159-15		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	75.1			68.0			75.6			76.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	CR	12	UJ	C	11	UJ	CR	11	UJ	CR
AROCLOR-1221		11	UJ	R	12	U		11	UJ	R	11	UJ	R
AROCLOR-1232		13	UJ	R	14	U		13	UJ	R	13	UJ	R
AROCLOR-1242		11	UJ	R	12	U		11	UJ	R	11	UJ	R
AROCLOR-1248		11	UJ	R	12	U		11	UJ	R	11	UJ	R
AROCLOR-1254		11	UJ	R	12	U		11	UJ	R	11	UJ	R
AROCLOR-1260		11	UJ	R	12	U		11	UJ	R	11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-2448			DSY-SD-BG28-0012			DSY-SD-BG28-1224			DSY-SD-BG28-2448		
SDG: DSY-4	LAB_ID	SE6159-16			SE6159-1			SE6159-2			SE6159-3		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.7			70.7			77.0			82.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	CR	12	U		11	UJ	R	9.8	U	
AROCLOR-1221		10	UJ	R	12	U		11	UJ	R	9.8	U	
AROCLOR-1232		12	UJ	R	14	U		13	UJ	R	11	U	
AROCLOR-1242		10	UJ	R	12	U		11	UJ	R	9.8	U	
AROCLOR-1248		10	UJ	R	12	U		11	UJ	R	9.8	U	
AROCLOR-1254		10	UJ	R	12	U		11	UJ	R	9.8	U	
AROCLOR-1260		10	UJ	R	12	U		11	UJ	R	9.8	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BI26-0012			DSY-SD-BI26-1224			DSY-SD-BI26-2448			DSY-SD-DUP03-092111		
SDG: DSY-4	LAB_ID	SE6159-4			SE6159-5			SE6159-6			SE6159-7		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	60.9			74.4			86.8			75.0		
	DUP_OF										DSY-SD-BI26-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	UJ	C	10	UJ	C	9.2	UJ	CR	11	UJ	CR
AROCLOR-1221		13	U		10	U		9.2	UJ	R	11	UJ	R
AROCLOR-1232		16	U		12	U		11	UJ	R	13	UJ	R
AROCLOR-1242		13	U		10	U		9.2	UJ	R	11	UJ	R
AROCLOR-1248		13	U		10	U		9.2	UJ	R	11	UJ	R
AROCLOR-1254		13	U		10	U		9.2	UJ	R	11	UJ	R
AROCLOR-1260		13	U		10	U		9.2	UJ	R	11	UJ	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport

Organic Data Validation, SDG D5Y - 13

2. DATE OF DOCUMENT: 11/25/11 DOCUMENT CONTROL No.: C-Navy-11-11-4899W

AUTHORS: **J. Cardinal** TtNUS JOB CHARGE No.: **112G02747**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/25/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4899W

Date: November 25, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Jennifer Cardinal (no copy)

Subject: Tier II Organic Data Validation, SDG DSY-13
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-DUP16-093011	DSY-SD-DUP17-093011
	DSY-SD-O09-0012	DSY-SD-O09-1224
	DSY-SD-O09-2448	DSY-SD-O13-0012
	DSY-SD-O13-1224	DSY-SD-O13-2448
	DSY-SD-O17-0012	DSY-SD-O17-1224
	DSY-SD-O17-2448	DSY-SD-S09-0012
	DSY-SD-S09-1224	DSY-SD-S09-2448
	DSY-SD-S13-0012	DSY-SD-S13-1224
	DSY-SD-S13-2448	DSY-SD-W13-0012
	DSY-SD-W13-1224	DSY-SD-W13-2448

(Field Duplicate Pairs: DSY-SD-S09-2448/DSY-SD-DUP16-093011,
DSY-SD-O13-0012/DSY-SD-DUP17-093011,
DSY-SD-W13-1224/DSY-SD-DUP18-093011 [SDG DSY-14])

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbon (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
• Initial and Continuing Calibrations
* • Blanks
• Surrogate Compounds
• Internal Standards
• Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
• Field Duplicates
* • Analyte Identification/Quantitation
* • Percent Solids
* • Limits of Detection

* All criteria were met for this parameter

Initial and Continuing Calibrations

PCB

The following table summarizes the Aroclor that failed to meet the continuing calibration (CC) criterion of %D <20:

Compound	%D Column 1	%D Column 2	Action		Affected Sample
			(+)	ND	
Aroclor-1254	22.170	-	J		DSY-SD-S13-1224

-Criterion met

Although the %D was outside of the QC limits for Aroclor-1254, the project accuracy goals were not impacted since the affected sample result is more than an order of magnitude below the PAL established for total PCBs in the sediment samples. The positive Aroclor-1254 result in sample DSY-SD-S13-1224 is usable as an estimated value.

Surrogate Compounds

PAH-SIM

The following sample had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
DSY-SD-S09-2448	Pyrene-d10	32.9	34-131		UJ

Although the surrogate pyrene-d10 recovered below of the QC limits in the affected sample, the project accuracy goals are not impacted since the affected sample result is more than an order of magnitude below the PAL established for benzo(a)pyrene the sediment samples. The benzo(a)pyrene in the affected sample is usable as estimated value which may be biased low.

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-O17-0012	Decachlorobiphenyl	55/-	59-124	J*	
DSY-SD-O13-0012		53/-		J*	
DSY-SD-S13-1224		32/37		J	UJ
DSY-SD-W13-2448		26/25		J	UJ

-Criterion met
*Estimate results reported from Column 1 only.

Although the surrogate decachlorobiphenyl (DCB) recovered below of the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are more than an order of magnitude below the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor results in the affected samples are usable as estimated values that may be biased low.

Internal Standards

PAH

The following table summarizes the PAH internal standard that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Sample
			(+)	NDs	
Perylene-d12	137294	196795-787180	J	UJ	DSY-SD-O17-1224

The internal standard area for perylene-d_{12} failed to meet the acceptable range for sample DSY-SD-O17-1224. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The affected PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

Although the QC criteria were not met for the internal standard area for perylene-d_{12} for the sample listed above, the project accuracy goals are not impacted since there are no PALs established for the affected

analytes. The affected positive and non-detected results in the affected sample are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAH

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-O17-2448 that were outside of the QC limits:

Analyte	RPD	RPD QC Limits	% Rec.	%Rec. QC Limits	Action	
					(+)	NDs
Benzo(g,h,i)perylene	32	30	29.0/-	40-100		UJ
Dibenzo(a,h)anthracene	34	30	32.5/-	40-100		UJ
Indeno(1,2,3-cd)pyrene	36	30	29.9/-	40-100		UJ

-Criterion met

Although the MS percent recovery criteria were not met for the PAH compounds listed above; therefore, the project accuracy goals are not impacted since there are no PALs established for these compounds for the sediment samples. The affected non-detected results in sample DSY-SD-O17-2448 are usable as estimated values which may be biased low.

Although the MS/MSD relative percent differences for the PAH compounds listed above did not meet the QC limits, the project precision goals are not impacted since there are no PALs established for these compounds for the sediment samples. The affected non-detected results in sample DSY-SD-O17-2448 are usable as estimated values for which the bias is indeterminate.

Field Duplicates

PCB

The following table summarizes the Aroclor detected in the field duplicate samples DSY-SD-O13-0012/DSY-SD-DUP17-093011 that did not meet the QC criteria;

Aroclor	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Aroclor-1254	74	ND	Not Calculated	J	UJ

The sample result is greater than 2x LOQ while the duplicate result is non-detect.

Although the field duplicate RPD criterion was not met for Aroclor-1254, the project precision goals are not impacted since the affected sample results are more than an order of magnitude below the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor-1254 results in samples DSY-SD-O13-0012 and DSY-SD-DUP17-093011 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAH

The PAL for benzo(a)pyrene was met.

PCB

The total Aroclor PAL was met by the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH data set. Several PAH results were qualified as estimated in sample DSY-SD-O17-1224 due to a poor internal standard area response for perylene-d_{12}. Select PAH results in sample DSY-SD-O17-2448 were qualified as estimated due to low MS recoveries. Benzo(a)pyrene was estimated (UJ) in sample DSY-SD-S09-2448 due to low surrogate recovery. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set. Select PAH results in sample DSY-SD-O17-2448 were qualified as estimated due poor MS/MSD precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. Aroclor-1254 was qualified as estimated in sample DSY-SD-S13-1224 due to instrument calibration variability. Select samples were qualified as estimated due to low surrogate recoveries. Although specific method criteria were not met in these instances, the affected results are usable as estimated values.

The project goals with respect to precision were met for the PCB data set. Aroclor-1254 was qualified as estimated in samples DSY-SD-O13-0012 and DSY-SD-DUP17-093011 due to poor field duplicate precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected result is usable as an estimated value.

The project goals with respect to sensitivity and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP16-093011			DSY-SD-DUP17-093011			DSY-SD-O09-0012			DSY-SD-O09-1224		
SDG: DSY-13	LAB_ID	SE6441-4			SE6441-14			SE6441-5			SE6441-6		
FRACTION: OS	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.3			72.6			52.7			69.0		
	DUP_OF	DSY-SD-S09-2448			DSY-SD-O13-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		330	U		330	U		240	J	P	350	U	
BENZO(B)FLUORANTHENE		330	U		330	U		260	J	P	350	U	
BENZO(G,H,I)PERYLENE		330	U		330	U		460	U		350	U	
BENZO(K)FLUORANTHENE		330	U		330	U		230	J	P	350	U	
CHRYSENE		330	U		330	U		300	J	P	350	U	
DIBENZO(A,H)ANTHRACENE		330	U		330	U		460	U		350	U	
FLUORANTHENE		330	U		330	U		280	J	P	350	U	
INDENO(1,2,3-CD)PYRENE		330	U		330	U		460	U		350	U	
PYRENE		330	U		330	U		500	J	P	350	U	

PROJ_NO: 02747 SDG: DSY-13 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O09-2448			DSY-SD-O13-0012			DSY-SD-O13-1224			DSY-SD-O13-2448		
	LAB_ID	SE6441-7			SE6441-11			SE6441-12			SE6441-13		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			76.9			75.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		330	U		320	U		320	U		320	U	
BENZO(B)FLUORANTHENE		330	U		320	U		320	U		320	U	
BENZO(G,H,I)PERYLENE		330	U		320	U		320	U		320	U	
BENZO(K)FLUORANTHENE		330	U		320	U		320	U		320	U	
CHRYSENE		330	U		320	U		320	U		320	U	
DIBENZO(A,H)ANTHRACENE		330	U		320	U		320	U		320	U	
FLUORANTHENE		330	U		320	U		320	U		320	U	
INDENO(1,2,3-CD)PYRENE		330	U		320	U		320	U		320	U	
PYRENE		330	U		320	U		320	U		320	U	

PROJ_NO: 02747 SDG: DSY-13 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O17-0012			DSY-SD-O17-1224			DSY-SD-O17-2448			DSY-SD-S09-0012		
	LAB_ID	SE6441-8			SE6441-9			SE6441-10			SE6441-1		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.5			43.7			61.7			48.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		560	U		380	J	P	390	U		190	J	P
BENZO(B)FLUORANTHENE		560	U		550	J	NP	390	U		450	U	
BENZO(G,H,I)PERYLENE		560	U		560	UJ	N	390	UJ	D	450	U	
BENZO(K)FLUORANTHENE		560	U		520	J	NP	390	U		240	J	P
CHRYSENE		560	U		520	J	P	390	U		250	J	P
DIBENZO(A,H)ANTHRACENE		560	U		560	UJ	N	390	UJ	D	450	U	
FLUORANTHENE		560	U		270	J	P	390	U		250	J	P
INDENO(1,2,3-CD)PYRENE		560	U		560	UJ	N	390	UJ	D	450	U	
PYRENE		560	U		1400			390	U		550	J	P

PROJ_NO: 02747 SDG: DSY-13 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S09-1224			DSY-SD-S09-2448			DSY-SD-S13-0012			DSY-SD-S13-1224		
	LAB_ID	SE6441-2			SE6441-3			SE6441-15			SE6441-16		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	62.6			64.7			44.7			46.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		380	U		360	U		250	J	P	280	J	P
BENZO(B)FLUORANTHENE		380	U		360	U		530	U		350	J	P
BENZO(G,H,I)PERYLENE		380	U		360	U		530	U		520	U	
BENZO(K)FLUORANTHENE		380	U		360	U		320	J	P	350	J	P
CHRYSENE		380	U		360	U		340	J	P	420	J	P
DIBENZO(A,H)ANTHRACENE		380	U		360	U		530	U		520	U	
FLUORANTHENE		380	U		360	U		250	J	P	230	J	P
INDENO(1,2,3-CD)PYRENE		380	U		360	U		530	U		520	U	
PYRENE		380	U		360	U		550	J	P	880		

PROJ_NO: 02747	NSAMPLE	DSY-SD-S13-2448			DSY-SD-W13-0012			DSY-SD-W13-1224			DSY-SD-W13-2448		
SDG: DSY-13	LAB_ID	SE6441-17			SE6441-18			SE6441-19			SE6441-20		
FRACTION: OS	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	59.5			59.9			65.3			68.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		410	U		160	J	P	370	U		360	U	
BENZO(B)FLUORANTHENE		410	U		400	U		370	U		360	U	
BENZO(G,H,I)PERYLENE		410	U		400	U		370	U		360	U	
BENZO(K)FLUORANTHENE		410	U		210	J	P	370	U		360	U	
CHRYSENE		410	U		220	J	P	370	U		360	U	
DIBENZO(A,H)ANTHRACENE		410	U		400	U		370	U		360	U	
FLUORANTHENE		410	U		180	J	P	370	U		360	U	
INDENO(1,2,3-CD)PYRENE		410	U		400	U		370	U		360	U	
PYRENE		410	U		580			370	U		360	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP16-093011			DSY-SD-DUP17-093011			DSY-SD-O09-0012			DSY-SD-O09-1224		
SDG: DSY-13	LAB_ID	SE6441-4			SE6441-14			SE6441-5			SE6441-6		
FRACTION: PAH	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.3			72.6			52.7			69.0		
	DUP_OF	DSY-SD-S09-2448			DSY-SD-O13-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		13	U		16	J	P	160			14	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-O09-2448			DSY-SD-O13-0012			DSY-SD-O13-1224			DSY-SD-O13-2448		
SDG: DSY-13	LAB_ID	SE6441-7			SE6441-11			SE6441-12			SE6441-13		
FRACTION: PAH	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			76.9			75.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		26	J	PR	24	J	P	13	U		13	U	

PROJ_NO: 02747 SDG: DSY-13 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O17-0012			DSY-SD-O17-1224			DSY-SD-O17-2448			DSY-SD-S09-0012		
	LAB_ID	SE6441-8			SE6441-9			SE6441-10			SE6441-1		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.5			43.7			61.7			48.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		79			390			42			170		

PROJ_NO: 02747	NSAMPLE	DSY-SD-S09-1224			DSY-SD-S09-2448			DSY-SD-S13-0012			DSY-SD-S13-1224		
SDG: DSY-13	LAB_ID	SE6441-2			SE6441-3			SE6441-15			SE6441-16		
FRACTION: PAH	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	62.6			64.7			44.7			46.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		21	J	P	15	UJ	R	180			220		

PROJ_NO: 02747 SDG: DSY-13 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S13-2448			DSY-SD-W13-0012			DSY-SD-W13-1224			DSY-SD-W13-2448		
	LAB_ID	SE6441-17			SE6441-18			SE6441-19			SE6441-20		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	59.5			59.9			65.3			68.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		43			150			32			14	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP16-093011			DSY-SD-DUP17-093011			DSY-SD-O09-0012			DSY-SD-O09-1224		
SDG: DSY-13	LAB_ID	SE6441-4			SE6441-14			SE6441-5			SE6441-6		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.3			72.6			52.7			69.0		
	DUP_OF	DSY-SD-S09-2448			DSY-SD-O13-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	U		12	U		16	U		12	U	
AROCLOR-1221		13	U		12	U		16	U		12	U	
AROCLOR-1232		15	U		14	U		18	U		14	U	
AROCLOR-1242		13	U		12	U		16	U		12	U	
AROCLOR-1248		13	U		12	U		16	U		12	U	
AROCLOR-1254		13	U		12	UJ	G	160	J	R	12	U	
AROCLOR-1260		13	U		12	U		16	U		12	U	

PROJ_NO: 02747 SDG: DSY-13 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O09-2448			DSY-SD-O13-0012			DSY-SD-O13-1224			DSY-SD-O13-2448		
	LAB_ID	SE6441-7			SE6441-11			SE6441-12			SE6441-13		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			76.9			75.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		11	U		11	U		11	U	
AROCLOR-1221		11	U		11	U		11	U		11	U	
AROCLOR-1232		13	U		13	U		13	U		13	U	
AROCLOR-1242		11	U		11	U		11	U		11	U	
AROCLOR-1248		11	U		11	U		11	U		11	U	
AROCLOR-1254		11	U		74	J	GR	11	U		11	U	
AROCLOR-1260		11	U		11	U		11	U		11	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-O17-0012			DSY-SD-O17-1224			DSY-SD-O17-2448			DSY-SD-S09-0012		
SDG: DSY-13	LAB_ID	SE6441-8			SE6441-9			SE6441-10			SE6441-1		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.5			43.7			61.7			48.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		20	U		19	U		13	U		17	U	
AROCLOR-1221		20	U		19	U		13	U		17	U	
AROCLOR-1232		24	U		22	U		16	U		20	U	
AROCLOR-1242		20	U		19	U		13	U		17	U	
AROCLOR-1248		20	U		19	U		13	U		17	U	
AROCLOR-1254		96	J	R	250			130			120		
AROCLOR-1260		20	U		19	U		13	U		17	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-S09-1224			DSY-SD-S09-2448			DSY-SD-S13-0012			DSY-SD-S13-1224		
SDG: DSY-13	LAB_ID	SE6441-2			SE6441-3			SE6441-15			SE6441-16		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	62.6			64.7			44.7			46.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		13	U		13	U		19	U		18	UJ	R
AROCLOR-1221		13	U		13	U		19	U		18	UJ	R
AROCLOR-1232		16	U		15	U		22	U		21	UJ	R
AROCLOR-1242		13	U		13	U		19	U		18	UJ	R
AROCLOR-1248		13	U		13	U		19	U		18	UJ	R
AROCLOR-1254		13	U		13	U		19	U		140	J	CR
AROCLOR-1260		13	U		13	U		19	U		18	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-S13-2448			DSY-SD-W13-0012			DSY-SD-W13-1224			DSY-SD-W13-2448		
SDG: DSY-13	LAB_ID	SE6441-17			SE6441-18			SE6441-19			SE6441-20		
FRACTION: PCB	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	59.5			59.9			65.3			68.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		14	U		14	U		13	U		12	UJ	R
AROCLOR-1221		14	U		14	U		13	U		12	UJ	R
AROCLOR-1232		16	U		16	U		15	U		15	UJ	R
AROCLOR-1242		14	U		14	U		13	U		12	UJ	R
AROCLOR-1248		14	U		14	U		13	U		12	UJ	R
AROCLOR-1254		14	U		260			13	U		12	UJ	R
AROCLOR-1260		14	U		14	U		13	U		12	UJ	R

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG DSY-16

2. DATE OF DOCUMENT: 12/20/11 DOCUMENT CONTROL No.: C-Navy-12-11-4938a

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Maffei							PDM	12-15-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4938W

Date: December 20, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-16
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

14/Sediments/	DSY-SD-Y25-0012	DSY-SD-Y25-1224	DSY-SD-Y25-2448
	DSY-SD-Y26-0012	DSY-SD-Y26-1224	DSY-SD-Y26-2448
	DSY-SD-Y28-0012	DSY-SD-Y28-1224	DSY-SD-Y28-2448
	DSY-SD-Y30-0012	DSY-SD-Y30-1224	DSY-SD-Y30-2448
	DSY-SD-DUP20-093011		
	DSY-SD-DUP23-100311		

Field Duplicate Pair: DSY-SD-S21-2448/DSY-SD-DUP20-093011
DSY-SD-Y25-2448/DSY-SD-DUP23-100311

1/Rinsate Blank/ DSY-SD-RB08-100311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30 and October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- Initial and Continuing Calibrations
- * Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample/Laboratory Control Sample Duplicate
- Field Duplicates
- Compound Identification/Quantitation
- * Limits of Detection

* All criteria were met for this parameter

Laboratory Data Completeness

The laboratory received the containers for sample DSY-SD-DUP20-093011; however this sample was not listed on the chain-of-custody form. The sampler was contacted and he instructed the laboratory to analyze this sample. The sampler submitted an amended chain-of-custody form including this sample.

Initial and Continuing Calibrations

PAHs

The following table summarizes the compounds that did not meet the CC criterion of %D <20%:

Compound	%D	Action		Affected Sample
		(+)	NDs	
Pyrene	21.8	J		DSY-SD-Y25-0012

Although the %D was outside of the QC limits for pyrene, the project accuracy goals are not impacted since there is not a PAL for this PAH and the sample result is much lower than the PAL established for total HMWPAHs in the sediment samples. The non-detected pyrene result in sample DSY-SD-Y25-0012 is usable as an estimated value.

Surrogate Compounds

PAH

The following sample had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
DSY-SD-Y28-2448	Terphenyl-d14	145	24-136	J	
DSY-SD-Y30-0012DL		149*		J	
DSY-SD-Y30-1224		143		J	
DSY-SD-Y30-1224DL		150*		J	
DSY-SD-Y26-1224		138		J	

* - pyrene only

The surrogate terphenyl-d14 recovered above of the QC limits in the affected samples; consequently, the project accuracy goals may be impacted for benzo(a)pyrene and the total HMWPAHs in the affected sediment samples. The positive PAH results in the affected samples are usable as estimated values which may be biased high.

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-Y25-0012	DCB	44/53	59-124	J	UJ
DSY-SD-Y25-2448		39/55		J	UJ
DSY-SD-DUP23-100311		41/55		J	UJ
DSY-SD-Y26-0012		47/49		J	UJ
DSY-SD-Y28-0012		36/50		J	UJ
DSY-SD-Y28-1224		33/46		J	UJ
DSY-SD-Y28-2448		38/57		J	UJ
DSY-SD-Y30-1224		54/58		J	UJ

Although the surrogate DCB recovered below the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor results in the affected samples are usable as estimated values which may be biased low.

Internal Standard

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Perylene-d12	181995	196795-787180	J	UJ	DSY-SD-Y25-0012
	75870		J	UJ	DSY-SD-Y28-2448
	59980		J	UJ	DSY-SD-Y25-1224

Internal Standard	IS Area	Acceptable Range	Action (+)	Action NDs	Affected Samples
Perylene-d12	135992	196795-787180	J	UJ	DSY-SD-Y25-2448
	130005		J	UJ	DSY-SD-DUP23-100311
	157132		J	UJ	DSY-SD-Y26-0012
	90696		J	UJ	DSY-SD-Y26-1224
	64277		J	UJ	DSY-SD-Y26-2448
	128164		J	UJ	DSY-SD-Y28-0012
	114976		J	UJ	DSY-SD-Y28-1224
	123739		J	UJ	DSY-SD-Y30-0012
	70803		J	UJ	DSY-SD-Y30-1224
Chrysene-d12	202988	325277-1301108	J	UJ	DSY-SD-Y28-2448
	156199		J	UJ	DSY-SD-Y25-1224
	289371		J	UJ	DSY-SD-Y26-1224
	181253		J	UJ	DSY-SD-Y26-2448
	307759		J	UJ	DSY-SD-Y28-1224
	180075		J	UJ	DSY-SD-Y30-1224
	266761		J		DSY-SD-Y30-1224DL

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAHs

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-Y28-2448 that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action (+)	Action NDs
Fluoranthene	39.2/ -	40-100			J	

-Criterion met

Although the MS/MSD recoveries for fluoranthene did not meet the QC limits, the project accuracy goals are not impacted since the PAL for the total HMWPAHs is much higher than the affected result. The

positive fluoranthene result in sample DSY-SD-Y28-2448 is usable as an estimated value which may be biased low.

Laboratory Control Sample/Laboratory Control Sample Duplicates

PAH

The following table summarizes the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action		Affected Samples
					(+)	NDs	
Benzo(a)pyrene	44.2	63-98	54	30		UJ	DSY-SD-RB08-100311

Although the LCS recovery was below the QC limits for benzo(a)pyrene, the project accuracy goals are not impacted since there are no PALs established for the rinsate blank sample. The non-detected benzo(a)pyrene result in the affected sample is usable as estimated value which may be biased low.

Although the RPD for benzo(a)pyrene exceeded the QC limit, the project precision goals are not impacted since there are no PALs established for the rinsate blank sample. The non-detected benzo(a)pyrene result in the affected sample is usable as an estimated value.

Field Duplicates

PAH

The following table summarizes the compound detected in the field duplicate samples DSY-SD-Y25-2448 and DSY-SD-DUP23-100311 that did not meet the QC criteria of RPD <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Pyrene	1600	570	95	J	

Although the field duplicate RPD criterion was not met for pyrene, the project precision goals are not impacted since the pyrene results are much lower than the PAL established for the total HMWPAHs. The positive pyrene results in samples DSY-SD-Y25-2448 and DSY-SD-DUP23-100311 are usable as estimated values for which the bias is undetermined.

Compound Identification/Quantitation

PCBs

The RPD between the results of analytical columns 1 and 2 exceeded the 40% RPD QC criterion for the compounds in the following samples:

Sample	Analyte	%RPD	Action (+)
DSY-SD-Y26-1224	Aroclor 1254	53	J

Although the compound quantitation relative percent difference exceeded the 40% RPD QC limit for the sample listed above, the project accuracy goals are not impacted since the affected sample result is much lower than the PAL established for total PCBs in the sediment samples. The positive Aroclor 1254 result in sample DSY-SD-Y26-1224 is usable as an estimated value.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. Positive results were estimated in select samples due to high surrogate recovery; results may be biased

high. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses for perylene-d_{12} and chrysene-d_{12}. In addition, the positive pyrene result in sample DSY-SD-Y25-0012 was qualified as estimated due to the instrument calibration variability. Although specific method criteria were not met in this instance, the affected positive results are usable as estimated values which may have a minor impact on data usability. In addition, the fluoranthene result in sample DSY-SD-Y28-2448 was qualified as estimated due to the low MS recovery; results may be biased low. The benzo(a)pyrene result in sample DSY-SD-RB08-100311 was qualified as estimated due to low LCS recoveries. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set. The benzo(a)pyrene result in sample DSY-SD-RB08-100311 was qualified as estimated due to poor LCS precision. The pyrene results in samples DSY-SD-Y25-2448 and DSY-SD-DUP23-100311 were estimated due to poor field duplicate precision. Although specific QC criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. Aroclor results in several samples were qualified as estimated due to low surrogate recoveries. The positive Aroclor 1254 result in sample DSY-SD-Y26-1224 was qualified as estimated due to poor dual column results. Although specific method criteria were not met in these instances, the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-16 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP20-093011			DSY-SD-DUP23-100311			DSY-SD-Y25-0012			DSY-SD-Y25-1224		
	LAB_ID	SE6444-15			SE6444-4			SE6444-1			SE6444-2		
	SAMP_DATE	9/30/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.7			65.3			37.4			41.1		
	DUP_OF	DSY-SD-S21-2448			DSY-SD-Y25-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		330	U		170	J	P	1000			3000	J	N
BENZO(B)FLUORANTHENE		330	U		370	UJ	N	650	J	NP	1800	J	N
BENZO(G,H,I)PERYLENE		330	U		370	UJ	N	320	J	NP	690	J	N
BENZO(K)FLUORANTHENE		330	U		370	UJ	N	700	J	NP	1800	J	N
CHRYSENE		330	U		240	J		1200			2900	J	N
DIBENZO(A,H)ANTHRACENE		330	U		370	UJ	N	640	UJ	N	580	UJ	N
FLUORANTHENE		330	U		160	J	P	1500			4500		
INDENO(1,2,3-CD)PYRENE		330	U		370	UJ	N	350	J	NP	810	J	N
PYRENE		330	U		570	J	G	4000	J	C			

PROJ_NO: 02747 SDG: DSY-16 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y25-1224DL			DSY-SD-Y25-2448			DSY-SD-Y26-0012			DSY-SD-Y26-1224		
	LAB_ID	SE6444-2DL			SE6444-3			SE6444-5			SE6444-6		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.1			66.4			37.5			39.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE					230	J	P	1300			1900	J	NR
BENZO(B)FLUORANTHENE					220	J	NP	1200	J	N	1500	J	NR
BENZO(G,H,I)PERYLENE					350	UJ	N	600	UJ	N	370	J	NPR
BENZO(K)FLUORANTHENE					200	J	NP	1200	J	N	1300	J	NR
CHRYSENE					300	J	P	1600			2200	J	NR
DIBENZO(A,H)ANTHRACENE					350	UJ	N	600	UJ	N	560	UJ	N
FLUORANTHENE					280	J		1200			1800	J	R
INDENO(1,2,3-CD)PYRENE					350	UJ	N	380	J	NP	500	J	NPR
PYRENE		14000			1600	J	G	3000			6400	J	NR

PROJ_NO: 02747 SDG: DSY-16 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y26-2448			DSY-SD-Y28-0012			DSY-SD-Y28-1224			DSY-SD-Y28-1224DL		
	LAB_ID	SE6444-7			SE6444-8			SE6444-9			SE6444-9DL		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	63.1			32.9			39.8			39.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		580	J	N	320	J	P	4700	J	N			
BENZO(B)FLUORANTHENE		380	J	NP	740	UJ	N	2600	J	N			
BENZO(G,H,I)PERYLENE		390	UJ	N	740	UJ	N	640	J	NP			
BENZO(K)FLUORANTHENE		420	J	NP	740	UJ	N	2900	J	N			
CHRYSENE		730	J	N	400	J	P	6100	J	N			
DIBENZO(A,H)ANTHRACENE		390	UJ	N	740	UJ	N	580	UJ	N			
FLUORANTHENE		720			740	U		4900					
INDENO(1,2,3-CD)PYRENE		390	UJ	N	740	UJ	N	840	J	N			
PYRENE		2300	J	N	900	J	P				14000		

PROJ_NO: 02747 SDG: DSY-16 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y28-2448			DSY-SD-Y30-0012			DSY-SD-Y30-0012DL			DSY-SD-Y30-1224		
	LAB_ID	SE6444-10			SE6444-11			SE6444-11DL			SE6444-12		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.7			55.5			55.5			69.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		220	J	NPR	1300						1100	J	NR
BENZO(B)FLUORANTHENE		250	J	NPR	1100	J	N				640	J	NR
BENZO(G,H,I)PERYLENE		350	UJ	N	450	J	NP				320	UJ	N
BENZO(K)FLUORANTHENE		330	J	NPR	1400	J	N				800	J	NR
CHRYSENE		440	J	NPR	1600						1400	J	NR
DIBENZO(A,H)ANTHRACENE		350	UJ	N	440	UJ	N				320	UJ	N
FLUORANTHENE		280	J	DNPR	2000						2300	J	R
INDENO(1,2,3-CD)PYRENE		350	UJ	N	530	J	NP				370	J	NPR
PYRENE		2100	J	NR				9400	J	R			

PROJ_NO: 02747 SDG: DSY-16 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y30-1224DL
	LAB_ID	SE6444-12DL
	SAMP_DATE	10/3/2011
	QC_TYPE	NM
	UNITS	UG/KG
	PCT_SOLIDS	69.9
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE			
BENZO(B)FLUORANTHENE			
BENZO(G,H,I)PERYLENE			
BENZO(K)FLUORANTHENE			
CHRYSENE			
DIBENZO(A,H)ANTHRACENE			
FLUORANTHENE			
INDENO(1,2,3-CD)PYRENE			
PYRENE	7700	J	NR

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB08-100311
SDG: DSY-16	LAB_ID	SE6444-13
FRACTION: OS	SAMP_DATE	10/3/2011
MEDIA: WATER	QC_TYPE	RB
	UNITS	UG/L
	PCT_SOLIDS	
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE	7.1	U	
BENZO(B)FLUORANTHENE	7.1	U	
BENZO(G,H,I)PERYLENE	7.1	U	
BENZO(K)FLUORANTHENE	7.1	U	
CHRYSENE	7.1	U	
DIBENZO(A,H)ANTHRACENE	7.1	U	
FLUORANTHENE	7.1	U	
INDENO(1,2,3-CD)PYRENE	7.1	U	
PYRENE	7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP20-093011			DSY-SD-DUP23-100311			DSY-SD-Y25-0012			DSY-SD-Y25-1224		
SDG: DSY-16	LAB_ID	SE6444-15			SE6444-4			SE6444-1			SE6444-2		
FRACTION: PAH	SAMP_DATE	9/30/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.7			65.3			37.4			41.1		
	DUP_OF	DSY-SD-S21-2448			DSY-SD-Y25-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		9.4	J	P	93			520			1600	J	N

PROJ_NO: 02747 SDG: DSY-16 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y25-2448			DSY-SD-Y26-0012			DSY-SD-Y26-1224			DSY-SD-Y26-2448		
	LAB_ID	SE6444-3			SE6444-5			SE6444-6			SE6444-7		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.4			37.5			39.9			63.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		160			900	J	N	1200	J	NR	370		

PROJ_NO: 02747 SDG: DSY-16 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y28-0012			DSY-SD-Y28-1224			DSY-SD-Y28-2448RA			DSY-SD-Y30-0012		
	LAB_ID	SE6444-8			SE6444-9			SE6444-10			SE6444-11		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.9			39.8			65.7			55.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		220			2300	J	N	230			1100	J	N

PROJ_NO: 02747 SDG: DSY-16 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y30-1224		
	LAB_ID	SE6444-12		
	SAMP_DATE	10/3/2011		
	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	69.9		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		650	J	NR

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB08-100311		
SDG: DSY-16	LAB_ID	SE6444-13		
FRACTION: PAH	SAMP_DATE	10/3/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	UJ	E

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP20-093011			DSY-SD-DUP23-100311			DSY-SD-Y25-0012			DSY-SD-Y25-1224		
SDG: DSY-16	LAB_ID	SE6444-15			SE6444-4			SE6444-1			SE6444-2		
FRACTION: PCB	SAMP_DATE	9/30/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.7			65.3			37.4			41.1		
	DUP_OF	DSY-SD-S21-2448			DSY-SD-Y25-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		12	UJ	R	20	UJ	R	20	UJ	R
AROCLOR-1221		12	U		12	UJ	R	20	UJ	R	20	UJ	R
AROCLOR-1232		14	U		15	UJ	R	24	UJ	R	23	UJ	R
AROCLOR-1242		12	U		12	UJ	R	20	UJ	R	20	UJ	R
AROCLOR-1248		12	U		12	UJ	R	20	UJ	R	20	UJ	R
AROCLOR-1254		12	U		81	J	R	190	J	R	1000	J	R
AROCLOR-1260		12	U		12	UJ	R	20	UJ	R	20	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-Y25-2448			DSY-SD-Y26-0012			DSY-SD-Y26-1224			DSY-SD-Y26-2448		
SDG: DSY-16	LAB_ID	SE6444-3			SE6444-5			SE6444-6			SE6444-7		
FRACTION: PCB	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.4			37.5			39.9			63.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	R	22	UJ	R	21	U		13	U	
AROCLOR-1221		12	UJ	R	22	UJ	R	21	U		13	U	
AROCLOR-1232		15	UJ	R	25	UJ	R	25	U		16	U	
AROCLOR-1242		12	UJ	R	22	UJ	R	21	U		13	U	
AROCLOR-1248		12	UJ	R	22	UJ	R	21	U		13	U	
AROCLOR-1254		120	J	R	200	J	R	1000	J	U	800		
AROCLOR-1260		12	UJ	R	22	UJ	R	21	U		13	U	

PROJ_NO: 02747 SDG: DSY-16 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y28-0012			DSY-SD-Y28-1224			DSY-SD-Y28-2448			DSY-SD-Y30-0012		
	LAB_ID	SE6444-8			SE6444-9			SE6444-10			SE6444-11		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.9			39.8			65.7			55.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		23	UJ	R	19	UJ	R	12	UJ	R	14	U	
AROCLOR-1221		23	UJ	R	19	UJ	R	12	UJ	R	14	U	
AROCLOR-1232		27	UJ	R	23	UJ	R	14	UJ	R	17	U	
AROCLOR-1242		23	UJ	R	19	UJ	R	12	UJ	R	14	U	
AROCLOR-1248		23	UJ	R	19	UJ	R	12	UJ	R	14	U	
AROCLOR-1254		190	J	R	680	J	R	260	J	R	530		
AROCLOR-1260		23	UJ	R	19	UJ	R	12	UJ	R	14	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-Y30-1224		
SDG: DSY-16	LAB_ID	SE6444-12		
FRACTION: PCB	SAMP_DATE	10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	69.9		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	R
AROCLOR-1221		12	UJ	R
AROCLOR-1232		14	UJ	R
AROCLOR-1242		12	UJ	R
AROCLOR-1248		12	UJ	R
AROCLOR-1254		12	UJ	R
AROCLOR-1260		12	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB08-100311		
SDG: DSY-16	LAB_ID	SE6444-13		
FRACTION: PCB	SAMP_DATE	10/3/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	U	
AROCLOR-1221		0.24	U	
AROCLOR-1232		0.24	U	
AROCLOR-1242		0.24	U	
AROCLOR-1248		0.24	U	
AROCLOR-1254		0.24	U	
AROCLOR-1260		0.24	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG D SY - 3

2. DATE OF DOCUMENT: 11/17/11 DOCUMENT CONTROL No.: C-Nary-11-11-4677W

AUTHORS: **L. Guzman** TINUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a)								
b) Paula Di Maffei							PDM	11/16/11
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

DATE:_____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4677W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-3
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-BB26-0012	DSY- SD-BB26-1224	DSY- SD-BB26-2448
	DSY-SD-BC28-0012	DSY-SD-BC28-1224	DSY-SD-BC28-2448
	DSY-SD-BC30-0012	DSY-SD-BC30-1224	DSY- SD-BC30-2448
	DSY-SD-BD26-0012	DSY- SD-BD26-1224	DSY-SD-BD26-2448
	DSY-SD-BG26-0012	DSY-SD-BG26-1224	DSY-SD-BG26-2448
	DSY-SD-BJ23-0012	DSY-SD-BJ23-1224	DSY-SD-BJ23-2448
	DSY-SD-DUP01-092111	DSY-SD-DUP02-092111	

Field Duplicate Pairs: DSY-SD-BD26-0012/DSY-SD-DUP01-092111
DSY-SD-BJ23-2448/DSY-SD-DUP02-092111

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbon (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
	• Initial and Continuing Calibrations
*	• Blanks
	• Surrogate Compounds
*	• Internal Standards
N/A	• Matrix Spike/Matrix Spike Duplicate
	• Laboratory Control Sample/Laboratory Control Sample Duplicate
*	• Field Duplicates
*	• Analyte Identification/Quantitation
	• Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Laboratory Data Completeness

PCB

On November 16, 2011 the laboratory resubmitted the edited Form 8 pages since the original submittal was missing the last four digits of the sample IDs.

Initial and Continuing Calibrations

PCB

The following table summarizes the Aroclors that did not meet the continuing calibration criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/ 2	Action (+)	Action NDs	Affected Samples
Aroclor 1016	21.00 to 50.26		UJ	All samples except DSY-SD-BB26-0012
Aroclor 1260	38.65/44.59		UJ	DSY-SD-BJ23-2448, DSY-SD-DUP02-0092111

Although the continuing calibration %D QC criteria for Aroclors 1016 and 1260 were not met, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limit (PAL) established for total PCBs in the sediment samples. The non-detected results for Aroclors 1016 and 1260 in the affected samples are usable as estimated values.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action*	
				(+)	NDs
DSY-SD-BB26-0012	DCB	18/42	59-124%:		UJ
DSY-SD-BB26-1224		32/46			UJ
DSY-SD-BB26-2448		38/55			UJ
DSY-SD-BC28-0012		33/54			UJ
DSY-SD-BC28-1224		43/58			UJ
DSY-SD-BC28-2448		43/47			UJ
DSY-SD-BC30-0012		24/33			UJ
DSY-SD-BC30-1224		20/48			UJ
DSY-SD-BC30-2448		27/57			UJ
DSY-SD-BD26-0012		26/40			UJ
DSY-SD-BD26-1224		19/29			UJ
DSY-SD-BD26-2448		27/40			UJ
DSY-SD-BG26-0012		28/44			UJ
DSY-SD-DUP01-092111		18/27			UJ

Although the surrogate decachlorobiphenyl (DCB) recovered below of the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor results in the affected samples are usable as estimated values that may be biased low.

Internal Standards

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Perylene-d12	273280	350883-1403532	J	UJ	DSY-SD-BD26-1224
	279712		J	UJ	DSY-SD-BG26-1224
	246447		J	UJ	DSY-SD-BD26-0012
	195896		J	UJ	DSY-SD-DUP01-092111
	220537		J	UJ	DSY-SD-BB26-0012
	210562		J	UJ	DSY-SD-BC28-0012
	188872		J	UJ	DSY-SD-BC28-1224
	211358		J	UJ	DSY-SD-BC30-0012
	108596		J	UJ	DSY-SD-BC30-1224
	134163		J	UJ	DSY-SD-BC30-2448
	212951		J	UJ	DSY-SD-BB26-1224
Chrysene-d12	445603	501504-2006014	J	UJ	DSY-SD-DUP01-092111
	453045		J	UJ	DSY-SD-BB26-0012
	405952		J	UJ	DSY-SD-BC28-0012
	438078		J	UJ	DSY-SD-BC28-1224

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Chrysene-d12	474554	501504-2006014	J	UJ	DSY-SD-BC30-0012
	183368		J	UJ	DSY-SD-BC30-1224
	291252		J	UJ	DSY-SD-BC30-2448
	463235		J		DSY-SD-BC30-1224 DL
	396750		J	UJ	DSY-SD-BB26-1224

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Laboratory Control Sample/Laboratory Control Sample Duplicates

PAH

The following table summarizes the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action		Affected Samples
					(+)	NDs	
Benzo(a)anthracene	64.7	65-111	-	-	J	UJ	All sediment samples
Indeno(1,2,3-cd)pyrene	-	-	41	40	J	UJ	

- Criterion met

Although the LCS recovery was below the QC limits for benzo(a)anthracene, the project accuracy goals are not impacted since there are no PALs established for this compound for the sediment samples. The positive and non-detected benzo(a)anthracene results in all sediment samples are usable as estimated values which may be biased low.

Although the RPD for indeno(1,2,3-cd)pyrene exceeded the QC limit, the project precision goals are not impacted since there are no PALs established for this compound for the sediment samples. The positive and non-detected indeno(1,2,3-cd)pyrene results in all sediment samples are usable as estimated values for which the bias is undetermined.

Field Duplicates

PAH

The following table summarizes the compounds detected in the field duplicate samples DSY-SD-BD26-0012 and DSY-SD-DUP01-092111 that did not meet the QC criteria of RPD <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Benzo(a)anthracene	1200	2100	54	J	
Benzo(a)pyrene	920	1600	54	J	
Benzo(b)fluoranthene	1500	2600	54	J	
Pyrene	4200	7300	54	J	

The field duplicate RPD criterion was not met for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and pyrene; therefore, the project precision goals for benzo(a)pyrene and for the total HMWPAHs may be impacted. The positive benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and pyrene results in samples DSY-SD-BD26-0012 and DSY-SD-DUP01-092111 are usable as estimated values for which the bias is undetermined.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAH

All the samples were analyzed for PAHs by GC/MS in the full scan range. Samples with benzo(a)pyrene results below the LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCB

The total Aroclor PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded

quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exception. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses for perylene-d_{12} and chrysene-d_{12}; the data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, the positive and non-detected benzo(a)anthracene results in all sediment samples are qualified as estimated due to the low LCS recovery. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exceptions. Indeno(1,2,3-cd)pyrene results were estimated for all the samples due to poor laboratory precision with thhe LCS/LCSD analysis. The positive benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and pyrene results in samples DSY-SD-BD26-0012 and DSY-SD-DUP01-092111 are usable as estimated due to poor field duplicate precision. Although specific QC criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. The non-detected results for Aroclors 1016 and 1260 were qualified as estimated in select samples due to instrument calibration variability. The non-detected Aroclor results were also qualified as estimated in select samples due to low surrogate recoveries. Although specific method criteria were not met in these instances, the affected non-detected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB26-0012			DSY-SD-BB26-1224			DSY-SD-BB26-2448			DSY-SD-BC28-0012		
SDG: DSY-3	LAB_ID	SE6158-1			SE6158-2			SE6158-3			SE6158-4		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	47.9			60.7			61.4			60.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1300	J	EN	930	J	EN	350	J	EP	940	J	EN
BENZO(A)PYRENE		930	J	N	940	J	N				790	J	N
BENZO(B)FLUORANTHENE		1600	J	N	1100	J	N	570			1000	J	N
BENZO(G,H,I)PERYLENE		560	J	NP	720	J	N	190	J	P	430	J	NP
BENZO(K)FLUORANTHENE		670	J	N	420	J	NP	220	J	P	400	J	NP
CHRYSENE		1500	J	N	1300	J	N	440	J	P	1200	J	N
DIBENZO(A,H)ANTHRACENE		480	UJ	N	360	UJ	N	400	U		400	UJ	N
FLUORANTHENE		1700			1100			760			1000		
INDENO(1,2,3-CD)PYRENE		500	J	ENP	470	J	ENP	400	UJ	E	300	J	ENP
PYRENE		7600	J	N	3900	J	N	1200			3600	J	N

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC28-1224			DSY-SD-BC28-2448			DSY-SD-BC30-0012			DSY-SD-BC30-1224		
SDG: DSY-3	LAB_ID	SE6158-5			SE6158-6			SE6158-7			SE6158-8		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.2			78.0			43.1			58.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		420	J	ENP	320	UJ	E	1300	J	EN	420	UJ	EN
BENZO(A)PYRENE								1200	J	N	2100	J	N
BENZO(B)FLUORANTHENE		550	J	N	320	U		1900	J	N	1900	J	N
BENZO(G,H,I)PERYLENE		180	J	NP	320	U		520	J	NP	1800	J	N
BENZO(K)FLUORANTHENE		230	J	NP	320	U		840	J	N	690	J	N
CHRYSENE		510	J	N	320	U		1700	J	N	420	UJ	N
DIBENZO(A,H)ANTHRACENE		350	UJ	N	320	U		580	UJ	N	420	UJ	N
FLUORANTHENE		510			320	U		1700			1400		
INDENO(1,2,3-CD)PYRENE		350	UJ	EN	320	UJ	E	330	J	ENP	850	J	EN
PYRENE		1500	J	N	320	U		4600	J	N			

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC30-1224DL			DSY-SD-BC30-2448			DSY-SD-BD26-0012			DSY-SD-BD26-1224		
SDG: DSY-3	LAB_ID	SE6158-8DL			SE6158-9			SE6158-11			SE6158-12		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	58.5			71.2			45.5			60.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE					830	J	EN	1200	J	EG	1300	J	E
BENZO(A)PYRENE					690	J	N	920	J	GN	1100	J	N
BENZO(B)FLUORANTHENE					340	UJ	N	1500	J	GN	1600	J	N
BENZO(G,H,I)PERYLENE					440	J	NP	480	J	NP	660	J	N
BENZO(K)FLUORANTHENE					340	UJ	N	700	J	NP	700	J	N
CHRYSENE					1200	J	N	1500			1400		
DIBENZO(A,H)ANTHRACENE					340	UJ	N	530	UJ	N	410	UJ	N
FLUORANTHENE					1000			1500			1800		
INDENO(1,2,3-CD)PYRENE					340	UJ	EN	530	UJ	EN	560	J	EN
PYRENE		11000	J	N	4600	J	N	4200	J	G	4200		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BD26-2448			DSY-SD-BG26-0012			DSY-SD-BG26-1224			DSY-SD-BG26-2448		
SDG: DSY-3	LAB_ID	SE6158-13			SE6158-14			SE6158-15			SE6158-16		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.6			44.7			65.5			83.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		170	J	EP	640	J	EP	340	J	EP	290	UJ	E
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		240	J	P	1000			570	J	N	290	U	
BENZO(G,H,I)PERYLENE		340	U		310	J	P	240	J	NP	290	U	
BENZO(K)FLUORANTHENE		340	U		430	J	P	260	J	NP	290	U	
CHRYSENE		210	J	P	770			480	J	P	290	U	
DIBENZO(A,H)ANTHRACENE		340	U		540	U		370	UJ	N	290	U	
FLUORANTHENE		300	J	P	860			570			290	U	
INDENO(1,2,3-CD)PYRENE		340	UJ	E	540	UJ	E	370	UJ	EN	290	UJ	E
PYRENE		490			2200			1400			290	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BJ23-0012			DSY-SD-BJ23-1224			DSY-SD-BJ23-2448			DSY-SD-DUP01-092111		
SDG: DSY-3	LAB_ID	SE6158-17			SE6158-18			SE6158-19			SE6158-10		
FRACTION: OS	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.2			76.8			82.9			45.6		
	DUP_OF										DSY-SD-BD26-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		150	J	EP	320	UJ	E	300	UJ	E	2100	J	EGN
BENZO(A)PYRENE											1600	J	GN
BENZO(B)FLUORANTHENE		210	J	P	320	U		300	U		2600	J	GN
BENZO(G,H,I)PERYLENE		310	U		320	U		300	U		910	J	N
BENZO(K)FLUORANTHENE		310	U		320	U		300	U		1200	J	N
CHRYSENE		210	J	P	320	U		300	U		2500	J	N
DIBENZO(A,H)ANTHRACENE		310	U		320	U		300	U		540	UJ	N
FLUORANTHENE		250	J	P	320	U		300	U		2200	J	N
INDENO(1,2,3-CD)PYRENE		310	UJ	E	320	UJ	E	300	UJ	E	820	J	E
PYRENE		370	J	P	320	U		300	U		7300	J	GN

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP02-092111		
SDG: DSY-3	LAB_ID	SE6158-20		
FRACTION: OS	SAMP_DATE	9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	FD		
	UNITS	UG/KG		
	PCT_SOLIDS	83.5		
	DUP_OF	DSY-SD-BJ23-2448		
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		290	UJ	E
BENZO(A)PYRENE				
BENZO(B)FLUORANTHENE		290	U	
BENZO(G,H,I)PERYLENE		290	U	
BENZO(K)FLUORANTHENE		290	U	
CHRYSENE		290	U	
DIBENZO(A,H)ANTHRACENE		290	U	
FLUORANTHENE		290	U	
INDENO(1,2,3-CD)PYRENE		290	UJ	E
PYRENE		290	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB26-2448			DSY-SD-BC28-1224			DSY-SD-BC28-2448			DSY-SD-BD26-2448		
SDG: DSY-3	LAB_ID	SE6158-3			SE6158-5			SE6158-6			SE6158-13		
FRACTION: PAH	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	61.4			67.2			78.0			71.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		300			340			13	U		120		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BG26-0012			DSY-SD-BG26-1224			DSY-SD-BG26-2448			DSY-SD-BJ23-0012		
SDG: DSY-3	LAB_ID	SE6158-14			SE6158-15			SE6158-16			SE6158-17		
FRACTION: PAH	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	44.7			65.5			83.7			77.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		490			240			12	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BJ23-1224			DSY-SD-BJ23-2448			DSY-SD-DUP02-092111		
SDG: DSY-3	LAB_ID	SE6158-18			SE6158-19			SE6158-20		
FRACTION: PAH	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.8			82.9			83.5		
	DUP_OF							DSY-SD-BJ23-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		11	J	P	12	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB26-0012			DSY-SD-BB26-1224			DSY-SD-BB26-2448			DSY-SD-BC28-0012		
SDG: DSY-3	LAB_ID	SE6158-1			SE6158-2			SE6158-3			SE6158-4		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	47.9			60.7			61.4			60.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		16	UJ	R	13	UJ	CR	13	UJ	CR	13	UJ	CR
AROCLOR-1221		16	UJ	R	13	UJ	R	13	UJ	R	13	UJ	R
AROCLOR-1232		19	UJ	R	15	UJ	R	15	UJ	R	15	UJ	R
AROCLOR-1242		16	UJ	R	13	UJ	R	13	UJ	R	13	UJ	R
AROCLOR-1248		16	UJ	R	13	UJ	R	13	UJ	R	13	UJ	R
AROCLOR-1254		16	UJ	R	13	UJ	R	13	UJ	R	13	UJ	R
AROCLOR-1260		16	UJ	R	13	UJ	R	13	UJ	R	13	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC28-1224			DSY-SD-BC28-2448			DSY-SD-BC30-0012			DSY-SD-BC30-1224		
SDG: DSY-3	LAB_ID	SE6158-5			SE6158-6			SE6158-7			SE6158-8		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.2			78.0			43.1			58.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	CR	10	UJ	CR	19	UJ	CR	14	UJ	CR
AROCLOR-1221		12	UJ	R	10	UJ	R	19	UJ	R	14	UJ	R
AROCLOR-1232		15	UJ	R	12	UJ	R	22	UJ	R	17	UJ	R
AROCLOR-1242		12	UJ	R	10	UJ	R	19	UJ	R	14	UJ	R
AROCLOR-1248		12	UJ	R	10	UJ	R	19	UJ	R	14	UJ	R
AROCLOR-1254		12	UJ	R	10	UJ	R	19	UJ	R	14	UJ	R
AROCLOR-1260		12	UJ	R	10	UJ	R	19	UJ	R	14	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC30-2448			DSY-SD-BD26-0012			DSY-SD-BD26-1224			DSY-SD-BD26-2448		
SDG: DSY-3	LAB_ID	SE6158-9			SE6158-11			SE6158-12			SE6158-13		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.2			45.5			60.0			71.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	CR	18	UJ	CR	14	UJ	CR	11	UJ	CR
AROCLOR-1221		11	UJ	R	18	UJ	R	14	UJ	R	11	UJ	R
AROCLOR-1232		14	UJ	R	21	UJ	R	16	UJ	R	13	UJ	R
AROCLOR-1242		11	UJ	R	18	UJ	R	14	UJ	R	11	UJ	R
AROCLOR-1248		11	UJ	R	18	UJ	R	14	UJ	R	11	UJ	R
AROCLOR-1254		11	UJ	R	18	UJ	R	14	UJ	R	11	UJ	R
AROCLOR-1260		11	UJ	R	18	UJ	R	14	UJ	R	11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BG26-0012			DSY-SD-BG26-1224			DSY-SD-BG26-2448			DSY-SD-BJ23-0012		
SDG: DSY-3	LAB_ID	SE6158-14			SE6158-15			SE6158-16			SE6158-17		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	44.7			65.5			83.7			77.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		19	UJ	CR	12	UJ	C	9.7	UJ	C	10	UJ	C
AROCLOR-1221		19	UJ	R	12	U		9.7	U		10	U	
AROCLOR-1232		22	UJ	R	14	U		11	U		12	U	
AROCLOR-1242		19	UJ	R	12	U		9.7	U		10	U	
AROCLOR-1248		19	UJ	R	12	U		9.7	U		10	U	
AROCLOR-1254		19	UJ	R	12	U		9.7	U		10	U	
AROCLOR-1260		19	UJ	R	12	U		9.7	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BJ23-1224			DSY-SD-BJ23-2448			DSY-SD-DUP01-092111			DSY-SD-DUP02-092111		
SDG: DSY-3	LAB_ID	SE6158-18			SE6158-19			SE6158-10			SE6158-20		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.8			82.9			45.6			83.5		
	DUP_OF							DSY-SD-BD26-0012			DSY-SD-BJ23-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	C	9.8	UJ	C	18	UJ	CR	10	UJ	C
AROCLOR-1221		11	U		9.8	U		18	UJ	R	10	U	
AROCLOR-1232		13	U		12	U		21	UJ	R	12	U	
AROCLOR-1242		11	U		9.8	U		18	UJ	R	10	U	
AROCLOR-1248		11	U		9.8	U		18	UJ	R	10	U	
AROCLOR-1254		11	U		9.8	U		18	UJ	R	10	U	
AROCLOR-1260		11	U		9.8	UJ	C	18	UJ	R	10	UJ	C

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Organic Data Validation, SDG ___DSY-5_____

2. DATE OF DOCUMENT: 11/21/11 DOCUMENT CONTROL No.: C-Navy-11-11-4690W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/21/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4690W

Date: November 21, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-5
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-AT16-0012	DSY- SD-AT16-1224	DSY- SD-AT16-2448
	DSY-SD-AT20-0012	DSY-SD-AT20-1224	DSY-SD-AT20-2448
	DSY-SD-AX06-0012	DSY-SD-AX06-1224	DSY- SD-AX06-2448
	DSY-SD-BB06-0012	DSY- SD-BB06-1224	DSY-SD-BB06-2448
	DSY-SD-BB10-0012	DSY-SD-BB10-1224	DSY-SD-BB10-2448
	DSY-SD-BF06-1224	DSY-SD-BF06-2448	DSY-SD-DUP04-092211
	DSY-SD-DUP05-092211	DSY-SD-DUP06-092211	

Field Duplicate Pairs: DSY-SD-BB02-2448 (in SDG DYS-4)/DSY-SD-DUP04-092211
DSY-SD-BB10-2448/DSY-SD-DUP05-092211
DSY-SD-AT16-2448/DSY-SD-DUP06-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	•	Laboratory Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
	•	Surrogate Compounds
	•	Internal Standards
	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
*	•	Analyte Identification/Quantitation
	•	Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory noted that the sample collection times for samples DSY-SD-BB10-1224 and DSY-SD-BB10-2448 were reversed on the bottles as compared to the chain-of-custody (COC) form. Likewise, the sample collection times for samples DSY-SD-AT20-1224 and DSY-SD-AT20-2448 were reversed on the bottles as compared to the COC. No other discrepancies were noted.

PCB

On November 17, 2011 the laboratory resubmitted the edited Form 8 pages since the original submittal was missing the last four digits of the sample IDs.

Preservation and Technical Holding Times

PAH

The original extract for sample DSY-SD-AT20-1224 was lost during the GPC cleanup procedure and therefore, required re-extraction. The re-extraction of sample DSY-SD-AT20-1224 was performed 8 days beyond the 14-day extraction holding time criterion. The non-detected PAH results for sample DSY-SD-AT20-1224 were qualified as estimated (UJ) due to possible sample degradation.

The extraction holding criterion was not met for sample DSY-SD-AT20-1224; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The non-detected results in the affected sample are usable as estimated values.

Initial and Continuing Calibrations

PAH

The following table summarizes the compounds that failed to meet the continuing calibration (CC) %D criteria of <20%:

Compound	%RSD	Action		Affected Sample
		(+)	NDs	
Fluoranthene	27.2		UJ	DSY-SD-AT20-1224
Dibenzo(a,h)anthracene	32.3		UJ	
Benzo(g,h,i)perylene	31.8		UJ	

Although the %D was outside of the QC limits for fluoranthene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limit (PAL) established for total PAHs. The non-detected results for fluoranthene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene in the affected sample are usable as estimated values.

PCB

The following table summarizes the Aroclors that did not meet the CC criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/2	Action*		Affected Sample
		(+)	NDs	
Aroclor 1254	20.8/-	J		DSY-SD-AX06-0012
*Aroclor 1254 was reported from the noncompliant column.				

-criterion met

Although the %D was outside of the QC limits for Aroclor 1254, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor 1254 result in the affected sample is usable as an estimated value.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-BB06-2448	DCB	6/6	59-124%		R
DSY-SD-AT16-1224		42/58			UJ

The surrogate decachlorobiphenyl (DCB) recovered below 10% in sample DSY-SD-BB06-2448; therefore, all non-detected Aroclor results in this sample were qualified as rejected (R). Results are not usable for project decisions. The laboratory data completeness goals may be impacted.

Although the surrogate DCB recovered below of the QC limits in sample DSY-SD-AT16-1224, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor results in sample DSY-SD-AT16-1224 are usable as estimated values which may be biased low.

Internal Standards

PAHs

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Phenanthrene-d_{10}	1442908	358137-1432546	J		DSY-SD-AT20-0012
Perylene-d_{12}	176266	196795-787180		UJ	DSY-SD-DUP06-092211

The internal standard areas for phenanthrene-d_{10} and perylene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAH fluoranthene is associated with phenanthrene-d_{10}. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for phenanthrene-d_{10} and perylene-d_{12} for the samples listed above; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Field Duplicates

PAH

The following table summarizes the compounds detected in the field duplicate samples DSY-SD-BB10-2448 and DSY-SD-DUP05-092211 that did not meet the QC criteria of relative percent difference (RPD) <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Benzo(a)pyrene	14 U	120	NC	J	UJ

The RPD was not calculable (NC) for benzo(a)pyrene in the field duplicate samples listed above since benzo(a)pyrene was not detected in sample DSY-SD-BB10-2448. Professional judgment was applied to

qualify the positive and non-detected results for benzo(a)pyrene in these samples since the detected concentration in the field duplicate sample is greater than 2x the level of quantitation (LOQ). The project precision goals for benzo(a)pyrene may be impacted in this field duplicate pair. The positive benzo(a)pyrene results in samples DSY-SD-BB10-2448 and DSY-SD-DUP05-092211 are usable as estimated values for which the bias is undetermined.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. All PAH compounds in sample DSY-AT20-1224 were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses. The data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, fluoranthene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene in sample DSY-SD-AT20-1224 were qualified as estimated due to instrument

calibration variability. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exception. The results for benzo(a)pyrene in samples DSY-SD-BB10-2448 and DSY-SD-DUP05-092211 were qualified as estimated due to field duplicate imprecision. The data usability for benzo(a)pyrene may be impacted.

The project goals with respect to laboratory data completeness and sensitivity were met for the PAH data set. Data usability was not impacted with regards to laboratory data completeness and sensitivity.

PCB

The project goals with respect to accuracy were met for the PCB data set. The positive Aroclor 1254 result in sample DSY-SD-AX06-0012 was qualified as estimated due to instrument calibration variability. The non-detected Aroclor results in sample DSY-SD-AT16-1224 were qualified as estimated due to low surrogate recoveries; results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to laboratory data completeness were met for the PCB data set with the following exception. The non-detected PCB results in sample DSY-SD-BB06-2448 were qualified as rejected (R) due to very low (<10%) surrogate recoveries. These results are not usable for project decisions. The data usability with regards to laboratory data completeness may be impacted.

The project goals with respect to precision and sensitivity were met for the PCB data set. Data usability was not impacted with regards to precision and sensitivity.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT16-1224			DSY-SD-AT16-2448			DSY-SD-AT20-0012		
SDG: DSY-5	LAB_ID	SE6160-17			SE6160-18			SE6160-19			SE6160-14		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.6			65.6			63.1			67.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		460	U		370	U		380	U		340	U	
BENZO(B)FLUORANTHENE		460	U		370	U		380	U		340	U	
BENZO(G,H,I)PERYLENE		460	U		370	U		380	U		340	U	
BENZO(K)FLUORANTHENE		460	U		370	U		380	U		340	U	
CHRYSENE		220	J	P	370	U		380	U		340	U	
DIBENZO(A,H)ANTHRACENE		460	U		370	U		380	U		340	U	
FLUORANTHENE		250	J	P	370	U		380	U		170	J	NP
INDENO(1,2,3-CD)PYRENE		460	U		370	U		380	U		340	U	
PYRENE		510	J	P	370	U		380	U		280	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT20-1224			DSY-SD-AT20-2448			DSY-SD-AX06-0012			DSY-SD-AX06-1224		
SDG: DSY-5	LAB_ID	SE6160-15			SE6160-16			SE6160-4			SE6160-5		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.0			66.4			52.2			65.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		330	UJ	H	370	U		470	U		380	U	
BENZO(B)FLUORANTHENE		330	UJ	H	370	U		470	U		380	U	
BENZO(G,H,I)PERYLENE		330	UJ	CH	370	U		470	U		380	U	
BENZO(K)FLUORANTHENE		330	UJ	H	370	U		470	U		380	U	
CHRYSENE		330	UJ	H	370	U		470	U		380	U	
DIBENZO(A,H)ANTHRACENE		330	UJ	CH	370	U		470	U		380	U	
FLUORANTHENE		330	UJ	CH	370	U		230	J	P	380	U	
INDENO(1,2,3-CD)PYRENE		330	UJ	H	370	U		470	U		380	U	
PYRENE		330	UJ	H	370	U		390	J	P	380	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX06-2448			DSY-SD-BB06-0012			DSY-SD-BB06-1224			DSY-SD-BB06-2448		
SDG: DSY-5	LAB_ID	SE6160-6			SE6160-11			SE6160-12			SE6160-13		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.6			61.8			63.1			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		360	U		390	U		360	U		370	U	
BENZO(B)FLUORANTHENE		360	U		390	U		360	U		370	U	
BENZO(G,H,I)PERYLENE		360	U		390	U		360	U		370	U	
BENZO(K)FLUORANTHENE		360	U		390	U		360	U		370	U	
CHRYSENE		360	U		390	U		360	U		370	U	
DIBENZO(A,H)ANTHRACENE		360	U		390	U		360	U		370	U	
FLUORANTHENE		360	U		390	U		360	U		370	U	
INDENO(1,2,3-CD)PYRENE		360	U		390	U		360	U		370	U	
PYRENE		360	U		170	J	P	360	U		370	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-BB10-1224			DSY-SD-BB10-2448			DSY-SD-BF06-1224		
SDG: DSY-5	LAB_ID	SE6160-7			SE6160-8			SE6160-9			SE6160-2		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.2			57.1			64.6			72.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	U		400	U		350	U		340	U	
BENZO(B)FLUORANTHENE		350	U		400	U		350	U		340	U	
BENZO(G,H,I)PERYLENE		350	U		400	U		350	U		340	U	
BENZO(K)FLUORANTHENE		350	U		400	U		350	U		340	U	
CHRYSENE		350	U		400	U		350	U		340	U	
DIBENZO(A,H)ANTHRACENE		350	U		400	U		350	U		340	U	
FLUORANTHENE		170	J	P	400	U		350	U		340	U	
INDENO(1,2,3-CD)PYRENE		350	U		400	U		350	U		340	U	
PYRENE		260	J	P	400	U		350	U		340	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF06-2448			DSY-SD-DUP04-092211			DSY-SD-DUP05-092211			DSY-SD-DUP06-092211		
SDG: DSY-5	LAB_ID	SE6160-3			SE6160-1			SE6160-10			SE6160-20		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			63.1			59.6			61.7		
	DUP_OF				DSY-SD-BB02-2448			DSY-SD-BB10-2448			DSY-SD-AT16-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	U		390	U		410	U		380	U	
BENZO(B)FLUORANTHENE		350	U		390	U		410	U		380	UJ	N
BENZO(G,H,I)PERYLENE		350	U		390	U		410	U		380	UJ	N
BENZO(K)FLUORANTHENE		350	U		390	U		410	U		380	UJ	N
CHRYSENE		350	U		390	U		410	U		380	U	
DIBENZO(A,H)ANTHRACENE		350	U		390	U		410	U		380	UJ	N
FLUORANTHENE		350	U		390	U		210	J	P	380	U	
INDENO(1,2,3-CD)PYRENE		350	U		390	U		410	U		380	UJ	N
PYRENE		350	U		390	U		360	J	P	380	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT16-1224			DSY-SD-AT16-2448			DSY-SD-AT20-0012		
SDG: DSY-5	LAB_ID	SE6160-17			SE6160-18			SE6160-19			SE6160-14		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.6			65.6			63.1			67.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		160			6.1	J	P	15	U		100		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT20-1224			DSY-SD-AT20-2448			DSY-SD-AX06-0012			DSY-SD-AX06-1224		
SDG: DSY-5	LAB_ID	SE6160-15			SE6160-16			SE6160-4			SE6160-5		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.0			66.4			52.2			65.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		13	UJ	H	15	U		160			15	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX06-2448			DSY-SD-BB06-0012			DSY-SD-BB06-1224			DSY-SD-BB06-2448		
SDG: DSY-5	LAB_ID	SE6160-6			SE6160-11			SE6160-12			SE6160-13		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.6			61.8			63.1			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		14	U		64			15	U		15	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-BB10-1224			DSY-SD-BB10-2448			DSY-SD-BF06-1224		
SDG: DSY-5	LAB_ID	SE6160-7			SE6160-8			SE6160-9			SE6160-2		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.2			57.1			64.6			72.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		100			16	U		14	UJ	G	14	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF06-2448			DSY-SD-DUP04-092211			DSY-SD-DUP05-092211			DSY-SD-DUP06-092211		
SDG: DSY-5	LAB_ID	SE6160-3			SE6160-1			SE6160-10			SE6160-20		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			63.1			59.6			61.7		
	DUP_OF				DSY-SD-BB02-2448			DSY-SD-BB10-2448			DSY-SD-AT16-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		14	U		16	U		120	J	G	15	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT16-1224			DSY-SD-AT16-2448			DSY-SD-AT20-0012		
SDG: DSY-5	LAB_ID	SE6160-17			SE6160-18			SE6160-19			SE6160-14		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.6			65.6			63.1			67.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		16	U		11	UJ	R	13	U		11	U	
AROCLOR-1221		16	U		11	UJ	R	13	U		11	U	
AROCLOR-1232		19	U		12	UJ	R	15	U		13	U	
AROCLOR-1242		16	U		11	UJ	R	13	U		11	U	
AROCLOR-1248		16	U		11	UJ	R	13	U		11	U	
AROCLOR-1254		130			11	UJ	R	13	U		11	U	
AROCLOR-1260		16	U		11	UJ	R	13	U		11	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT20-1224			DSY-SD-AT20-2448			DSY-SD-AX06-0012			DSY-SD-AX06-1224		
SDG: DSY-5	LAB_ID	SE6160-15			SE6160-16			SE6160-4			SE6160-5		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.0			66.4			52.2			65.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		12	U		16	U		12	U	
AROCLOR-1221		12	U		12	U		16	U		12	U	
AROCLOR-1232		14	U		14	U		19	U		15	U	
AROCLOR-1242		12	U		12	U		16	U		12	U	
AROCLOR-1248		12	U		12	U		16	U		12	U	
AROCLOR-1254		12	U		12	U		100	J	C	12	U	
AROCLOR-1260		12	U		12	U		16	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX06-2448			DSY-SD-BB06-0012			DSY-SD-BB06-1224			DSY-SD-BB06-2448		
SDG: DSY-5	LAB_ID	SE6160-6			SE6160-11			SE6160-12			SE6160-13		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.6			61.8			63.1			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		12	U		12	U		12	UJ	R
AROCLOR-1221		12	U		12	U		12	U		12	UJ	R
AROCLOR-1232		15	U		15	U		14	U		14	UJ	R
AROCLOR-1242		12	U		12	U		12	U		12	UJ	R
AROCLOR-1248		12	U		12	U		12	U		12	UJ	R
AROCLOR-1254		12	U		12	U		12	U		12	UJ	R
AROCLOR-1260		12	U		12	U		12	U		12	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-BB10-1224			DSY-SD-BB10-2448			DSY-SD-BF06-1224		
SDG: DSY-5	LAB_ID	SE6160-7			SE6160-8			SE6160-9			SE6160-2		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.2			57.1			64.6			72.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		15	U		13	U		12	U	
AROCLOR-1221		12	U		15	U		13	U		12	U	
AROCLOR-1232		14	U		17	U		15	U		14	U	
AROCLOR-1242		12	U		15	U		13	U		12	U	
AROCLOR-1248		12	U		15	U		13	U		12	U	
AROCLOR-1254		12	U		15	U		13	U		12	U	
AROCLOR-1260		12	U		15	U		13	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF06-2448			DSY-SD-DUP04-092211			DSY-SD-DUP05-092211			DSY-SD-DUP06-092211		
SDG: DSY-5	LAB_ID	SE6160-3			SE6160-1			SE6160-10			SE6160-20		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.5			63.1			59.6			61.7		
	DUP_OF				DSY-SD-BB02-2448			DSY-SD-BB10-2448			DSY-SD-AT16-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		13	U		14	U		13	U	
AROCLOR-1221		12	U		13	U		14	U		13	U	
AROCLOR-1232		14	U		16	U		17	U		15	U	
AROCLOR-1242		12	U		13	U		14	U		13	U	
AROCLOR-1248		12	U		13	U		14	U		13	U	
AROCLOR-1254		12	U		13	U		14	U		13	U	
AROCLOR-1260		12	U		13	U		14	U		13	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Organic Data Validation, SDG ___DSY-6_____

2. DATE OF DOCUMENT: 11/25/11 DOCUMENT CONTROL No.: C-Nasy-11-11- 4897 W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/25/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4897W

Date: November 25, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-6
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

10/Sediments/	DSY-SD-AP20-0012	DSY- SD-AP20-1224	DSY- SD-AP20-2448
	DSY-SD-AX20-0012	DSY-SD-AX20-1224	DSY-SD-AX20-2448
	DSY-SD-AT24-0012	DSY-SD-AT24-1224	DSY- SD-AT24-2448
	DSY-SD-DUP07-092211		

Field Duplicate Pairs: DSY-SD-AT24-0012/DSY-SD-DUP07-092211

2/Rinsate Blanks/ DSY-SD-RB01-092111 DSY-SD-RB02-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
- Preservation and Technical Holding Times

*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
*	•	Analyte Identification/Quantitation
	•	Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Laboratory Data Completeness

PCB

On November 17, 2011 the laboratory resubmitted the edited Form 8 pages since the original submittal was missing the last four digits of the sample IDs.

Preservation and Technical Holding Times

PAH

The original extract for sample DSY-SD-AT24-0012 was lost during the GPC cleanup procedure and therefore, required re-extraction. The re-extraction of sample DSY-SD-AT24-0012 was performed 8 days beyond the 14-day extraction holding time criterion. The positive and non-detected PAH results for sample DSY-SD-AT24-0012 were qualified as estimated (J, UJ) due to possible sample degradation.

The extraction holding criterion was not met for sample DSY-SD-AT24-0012; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the affected sample are usable as estimated values.

Initial and Continuing Calibrations

PCB

The following table summarizes the Aroclors that did not meet the CC criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/2	Action*		Affected Samples
		(+)	NDs	
Aroclor 1016	58.6/39.8		UJ	DSY-SD-RB01-092111(RE) DSY-SD-RB02-092211(RE)
Aroclor 1260	56.8/39.9		UJ	

Compound	%D Columns 1/2	Action*		Affected Samples
		(+)	NDs	
Aroclor 1254	44.8/22.9	J	UJ	DSY-SD-AP20-0012, DSY-SD-AP20-1224, DSY-SD-AP20-2448

-criterion met

Although the %D was outside of the QC limits for Aroclors 1016 and 1260, the project accuracy goals are not impacted since there are no project action limits (PALs) established for the rinsate blank samples. The non-detected results for Aroclors 1016 and 1260 in the affected rinsate blank samples are usable as estimated values.

Although the %D was outside of the QC limits for Aroclor 1254, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The positive and non-detected Aroclor 1254 results in the affected samples are usable as estimated values.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-RB01-092111(RE)	DCB	15/14	44-135		UJ
DSY-SD-RB02-092211(RE)		25/22			UJ
DSY-SD-AP20-0012		38/34	59-124	J	UJ
DSY-SD-AP20-1224		16/14			UJ
DSY-SD-AP20-2448		25/22			UJ
DSY-SD-AX20-0012		23/28			UJ
DSY-SD-AX20-1224		14/15			UJ
DSY-SD-AT24-0012		28/29			UJ
DSY-SD-DUP07-092211		31/34			UJ
DSY-SD-AT24-1224		28/27			UJ
DSY-SD-AT24-2448		26/25			UJ

Although the surrogate DCB recovered below the QC limits in samples DSY-SD-RB01-092111 and DSY-SD-RB02-092211, the project accuracy goals are not impacted since there are no PALs established for the rinsate blank samples. The non-detected Aroclor results in samples DSY-SD-RB01-092111 and DSY-SD-RB02-092211 are usable as estimated values which may be biased low.

Although the surrogate DCB recovered below of the QC limits in samples DSY-SD-AP20-0012, DSY-SD-AP20-1224, DSY-SD-AP20-2448, DSY-SD-AX20-0012, DSY-SD-AX20-1224, DSY-SD-AT24-0012, DSY-SD-DUP07-092211, DSY-SD-AT24-1224, DSY-SD-AT24-2448, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the

sediment samples. The non-detected Aroclor results in the affected samples are usable as estimated values which may be biased low.

Laboratory Control Sample/Laboratory Control Sample Duplicates

PAH

The following table summarizes the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses that were outside of the QC limits:

Compound	LCS/LCSD %Rec.	%Rec. QC Limits	Action		Affected Samples
			(+)	NDs	
Benzo(a)anthracene	59.3/-	65-111		UJ	DSY-SD-AP20-0012, DSY-SD-AP20-1224, DSY-SD-AP20-2448, DSY-SD-AX20-0012, DSY-SD-AX20-1224, DSY-SD-AX20-2448, DSY-SD-DUP07-092211, DSY-SD-AT24-1224, DSY-SD-AT24-2448
Fluoranthene	67.7/-	70-115	J	UJ	
Pyrene	-/136	54-131	J		DSY-SD-AP20-0012, DSY-SD-AX20-0012, DSY-SD-DUP07-092211

- Criterion met

Although the LCS or LCSD recoveries were outside of the QC limits for benzo(a)anthracene, fluoranthene, and/or pyrene, the project accuracy goals are not impacted since there are no PALs established for these compounds for the sediment samples and the affected results are much lower than the total HMWPAH PAL. The positive and non-detected benzo(a)anthracene, fluoranthene, and pyrene results in affected sediment samples are usable as estimated values. The affected benzo(a)anthracene and fluoranthene results may be biased low and the affected pyrene results may be biased high.

PCB

The following table summarizes the results of the LCS/LCSD analyses that were outside of the QC limits:

Compound	LCS/LCSD %Rec.	%Rec. QC Limits	Action		Affected Samples
			(+)	NDs	
Aroclor 1260	-/53.4	62-104		UJ	DSY-SD-RB01-092111(RE), DSY-SD-RB02-092211(RE)

- Criterion met

Although the LCSD recovered below the QC limits in samples DSY-SD-RB01-092111(RE) and DSY-SD-RB02-092211(RE), the project accuracy goals are not impacted since there are no PALs established for the rinsate blank samples. The non-detected Aroclor 1260 results in samples DSY-SD-RB01-092111(RE) and DSY-SD-RB02-092211(RE) are usable as estimated values which may be biased low.

Field Duplicates

PAH

The following table summarizes the compounds detected in the field duplicate samples DSY-SD-AT24-0012 and DSY-SD-DUP07-092211 that did not meet the QC criteria of relative percent difference (RPD) <50%:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Benzo(a)pyrene	200	88	78	J	

The RPD criterion was exceeded for benzo(a)pyrene in the field duplicate samples listed above; therefore, the project precision goals may be impacted. The positive benzo(a)pyrene results in samples DSY-SD-AT24-0012 and DSY-SD-DUP07-092211 are usable as estimated values for which the bias is undetermined.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exception. All PAH compounds in sample DSY-AT24-0012 were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. The data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, benzo(a)anthracene, fluoranthene, and pyrene in select samples were qualified as estimated due to low or high LCS or LCSD recoveries. Results for benzo(a)anthracene and fluoranthene in affected samples may be biased low, and results for pyrene in affected samples may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set with the following exception. The results for benzo(a)pyrene in samples DSY-SD-AT24-0012 and DSY-SD-DUP07-092211 were qualified as estimated due to field duplicate imprecision. The data usability for benzo(a)pyrene may be impacted.

The project goals with respect to laboratory data completeness and sensitivity were met for the PAH data set. Data usability was not impacted with regards to laboratory data completeness and sensitivity.

PCB

The project goals with respect to accuracy were met for the PCB data set. The non-detected results for Aroclors 1016 and 1260 in samples DSY-SD-RB01-092111(RE) and DSY-SD-RB02-092211(RE) and the positive and non-detected results for Aroclor 1254 in samples DSY-SD-AP20-0012, DSY-SD-AP20-1224, and DSY-SD-AP20-2448 were qualified as estimated due to instrument calibration variability. The positive and non-detected Aroclor results in select samples were qualified as estimated due to low surrogate recoveries; results may be biased low. The non-detected results for Aroclor 1260 in samples DSY-SD-RB01-092111(RE) and DSY-SD-RB02-092211(RE) were qualified as estimated due to the low LCSD recovery; results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-6 FRACTION: OS MEDIA: SOIL	NSAMPLE	DSY-SD-AP20-0012			DSY-SD-AP20-1224			DSY-SD-AP20-2448			DSY-SD-AT24-0012		
	LAB_ID	SE6161-1			SE6161-2			SE6161-3			SE6161-7		
	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.1			63.8			62.9			69.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		360	UJ	E	380	UJ	E	370	UJ	E	180	J	HP
BENZO(B)FLUORANTHENE		360	U		380	U		370	U		350	J	HP
BENZO(G,H,I)PERYLENE		360	U		380	U		370	U		320	UJ	H
BENZO(K)FLUORANTHENE		360	U		380	U		370	U		320	UJ	H
CHRYSENE		360	U		380	U		370	U		280	J	HP
DIBENZO(A,H)ANTHRACENE		360	U		380	U		370	U		320	UJ	H
FLUORANTHENE		180	J	EP	380	UJ	E	370	UJ	E	440	J	H
INDENO(1,2,3-CD)PYRENE		360	U		380	U		370	U		320	UJ	H
PYRENE		190	J	EP	380	U		370	U		480	J	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT24-1224			DSY-SD-AT24-2448			DSY-SD-AX20-0012			DSY-SD-AX20-1224		
SDG: DSY-6	LAB_ID	SE6161-9			SE6161-10			SE6161-4			SE6161-5		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.2			74.8			66.4			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		330	UJ	E	300	UJ	E	370	UJ	E	330	UJ	E
BENZO(B)FLUORANTHENE		330	U		300	U		370	U		330	U	
BENZO(G,H,I)PERYLENE		330	U		300	U		370	U		330	U	
BENZO(K)FLUORANTHENE		330	U		300	U		370	U		330	U	
CHRYSENE		330	U		300	U		170	J	P	330	U	
DIBENZO(A,H)ANTHRACENE		330	U		300	U		370	U		330	U	
FLUORANTHENE		330	UJ	E	300	UJ	E	290	J	EP	330	UJ	E
INDENO(1,2,3-CD)PYRENE		330	U		300	U		370	U		330	U	
PYRENE		330	U		300	U		440	J	EP	330	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX20-2448			DSY-SD-DUP07-092211		
SDG: DSY-6	LAB_ID	SE6161-6			SE6161-8		
FRACTION: OS	SAMP_DATE	9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	69.6			65.2		
	DUP_OF				DSY-SD-AT24-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	UJ	E	360	UJ	E
BENZO(B)FLUORANTHENE		350	U		360	U	
BENZO(G,H,I)PERYLENE		350	U		360	U	
BENZO(K)FLUORANTHENE		350	U		360	U	
CHRYSENE		350	U		360	U	
DIBENZO(A,H)ANTHRACENE		350	U		360	U	
FLUORANTHENE		350	UJ	E	230	J	EP
INDENO(1,2,3-CD)PYRENE		350	U		360	U	
PYRENE		350	U		270	J	EP

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB01-092111			DSY-SD-RB02-092211		
SDG: DSY-6	LAB_ID	SE6161-11			SE6161-12		
FRACTION: OS	SAMP_DATE	9/21/2011			9/22/2011		
MEDIA: WATER	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		8.2	U		7.1	U	
BENZO(B)FLUORANTHENE		8.2	U		7.1	U	
BENZO(G,H,I)PERYLENE		8.2	U		7.1	U	
BENZO(K)FLUORANTHENE		8.2	U		7.1	U	
CHRYSENE		8.2	U		7.1	U	
DIBENZO(A,H)ANTHRACENE		8.2	U		7.1	U	
FLUORANTHENE		8.2	U		7.1	U	
INDENO(1,2,3-CD)PYRENE		8.2	U		7.1	U	
PYRENE		8.2	U		7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AP20-0012			DSY-SD-AP20-1224			DSY-SD-AP20-2448			DSY-SD-AT24-0012		
SDG: DSY-6	LAB_ID	SE6161-1			SE6161-2			SE6161-3			SE6161-7		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.1			63.8			62.9			69.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		91			16	U		15	U		200	J	GH

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT24-1224			DSY-SD-AT24-2448			DSY-SD-AX20-0012			DSY-SD-AX20-1224		
SDG: DSY-6	LAB_ID	SE6161-9			SE6161-10			SE6161-4			SE6161-5		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.2			74.8			66.4			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		4.6	J	P	12	U		140			13	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX20-2448			DSY-SD-DUP07-092211		
SDG: DSY-6	LAB_ID	SE6161-6			SE6161-8		
FRACTION: PAH	SAMP_DATE	9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	69.6			65.2		
	DUP_OF				DSY-SD-AT24-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		14	U		88	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB01-092111			DSY-SD-RB02-092211		
SDG: DSY-6	LAB_ID	SE6161-11			SE6161-12		
FRACTION: PAH	SAMP_DATE	9/21/2011			9/22/2011		
MEDIA: WATER	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		0.11	U		0.094	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AP20-0012			DSY-SD-AP20-1224			DSY-SD-AP20-2448			DSY-SD-AT24-0012		
SDG: DSY-6	LAB_ID	SE6161-1			SE6161-2			SE6161-3			SE6161-7		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.1			63.8			62.9			69.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	UJ	R	13	UJ	R	13	UJ	R	12	UJ	R
AROCLOR-1221		12	UJ	R	13	UJ	R	13	UJ	R	12	UJ	R
AROCLOR-1232		15	UJ	R	15	UJ	R	16	UJ	R	14	UJ	R
AROCLOR-1242		12	UJ	R	13	UJ	R	13	UJ	R	12	UJ	R
AROCLOR-1248		12	UJ	R	13	UJ	R	13	UJ	R	12	UJ	R
AROCLOR-1254		58	J	CR	13	UJ	CR	13	UJ	CR	12	UJ	R
AROCLOR-1260		12	UJ	R	13	UJ	R	13	UJ	R	12	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT24-1224			DSY-SD-AT24-2448			DSY-SD-AX20-0012			DSY-SD-AX20-1224		
SDG: DSY-6	LAB_ID	SE6161-9			SE6161-10			SE6161-4			SE6161-5		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.2			74.8			66.4			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R
AROCLOR-1221		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R
AROCLOR-1232		12	UJ	R	12	UJ	R	14	UJ	R	14	UJ	R
AROCLOR-1242		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R
AROCLOR-1248		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R
AROCLOR-1254		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R
AROCLOR-1260		11	UJ	R	11	UJ	R	12	UJ	R	12	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX20-2448			DSY-SD-DUP07-092211		
SDG: DSY-6	LAB_ID	SE6161-6			SE6161-8		
FRACTION: PCB	SAMP_DATE	9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	69.6			65.2		
	DUP_OF				DSY-SD-AT24-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		12	U		13	UJ	R
AROCLOR-1221		12	U		13	UJ	R
AROCLOR-1232		14	U		15	UJ	R
AROCLOR-1242		12	U		13	UJ	R
AROCLOR-1248		12	U		13	UJ	R
AROCLOR-1254		12	U		13	UJ	R
AROCLOR-1260		12	U		13	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB01-092111RE			DSY-SD-RB02-092211RE		
SDG: DSY-6	LAB_ID	SE6161-11RE			SE6161-12RE		
FRACTION: PCB	SAMP_DATE	9/21/2011			9/22/2011		
MEDIA: WATER	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.25	UJ	CR	0.24	UJ	CR
AROCLOR-1221		0.25	UJ	R	0.24	UJ	R
AROCLOR-1232		0.25	UJ	R	0.24	UJ	R
AROCLOR-1242		0.25	UJ	R	0.24	UJ	R
AROCLOR-1248		0.25	UJ	R	0.24	UJ	R
AROCLOR-1254		0.25	UJ	R	0.24	UJ	R
AROCLOR-1260		0.25	UJ	CER	0.24	UJ	CER

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG D54 - 8

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: C-Navy-12-11-4904N

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula DiMattei							pe	11-29-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4904W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-8
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

19/Sediments/	DSY-SD-AK30-0012	DSY-SD-AK30-1224	DSY-SD-AK30-2448
	DSY-SD-AI28-0012	DSY-SD-AI28-1224	DSY-SD-AI28-2448
	DSY-SD-AI30-0012	DSY-SD-AI30-1224	DSY-SD-AI30-2448
	DSY-SD-AG28-0012	DSY-SD-AG28-1224	DSY-SD-AG28-2448
	DSY-SD-AG24-0012	DSY-SD-AG24-1224	DSY-SD-AG24-2448
	DSY-SD-AI24-0012	DSY-SD-AI24-1224	DSY-SD-AI24-2448
	DSY-SD-DUP10-092611		

Field Duplicate Pair: DSY-SD-AG28-2448/DSY-SD-DUP10-092611

1/Rinsate Blank/ DSY-SD-RB03-092311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbon (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 23 - 26, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
- Analyte Identification/Quantitation
- Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Laboratory Data Completeness

The analyses required for sample DSY-SD-AG28-1224 were not marked on the chain-of-custody (COC) form. The samples were logged for the correct analyses based on the sample containers received.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action*	
				(+)	NDs
DSY-SD-AI24-0012	DCB	50/-	59-124	J	
DSY-SD-AI24-1224		45/-		J	
DSY-SD-AK30-0012		58/58			UJ
DSY-SD-AI28-0012		42/35			UJ
DSY-SD-AI28-1224		54/46			UJ
DSY-SD-AI28-2448		49/54			UJ

-Criterion met

Although the surrogate decachlorobiphenyl (DCB) recovered below of the QC limits in the affected samples, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor results in the affected samples are usable as estimated values that may be biased low.

Internal Standards

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Perylene-d_{12}	68944	88704-354814	J	UJ	DSY-SD-AK30-2448
	46377		J	UJ	DSY-SD-AI30-2448
	52671		J	UJ	DSY-SD-AG24-1224
Perylene-d_{12}	85154	123212-492846	J	UJ	DSY-SD-AI28-2448
	108195		J	UJ	DSY-SD-AI30-0012
	97520		J	UJ	DSY-SD-AG28-0012
	108853		J	UJ	DSY-SD-AI24-0012
Chrysene-d_{12}	165183	194751-779004	J	UJ	DSY-SD-AI28-2448

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAHs

The following table summarizes the results of the matrix spike and/or matrix spike duplicate (MS/MSD) analysis of sample DSY-SD-AI24-0012 that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action	
					(+)	NDs
Benzo(k)fluoranthene	-	-	37	30	J	
Fluoranthene	-/ 34.9	40-100			J	

-Criterion met

Although the MS/MSD recoveries for fluoranthene did not meet the QC limits, the project accuracy goals are not impacted since the PAL for the total HMWPAHs is much higher than the affected result. The positive fluoranthene result in sample DSY-SD-AI24-0012 is usable as an estimated value which may be biased low.

Although the MS/MSD relative percent difference for benzo(k)flouoranthene did not meet the QC limits, the project precision goals are not impacted since the PAL for total HMWPAHs is much higher than the affected result. The positive benzo(k)fluoranthene result in sample DSY-SD-AI24-0012 is usable as estimated value for which the bias is undetermined.

Laboratory Control Sample/Laboratory Control Sample Duplicates

PAH

The following table summarizes the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses that were outside of the QC limits:

Compound	%Rec.	%Rec. QC Limits	RPD	RPD QC Limits	Action		Affected Samples
					(+)	NDs	
Benzo(a)anthracene	58.2	66-109				UJ	DSY-SD-RB03-092311
Benzo(g,h,i)perylene	52.0	58-115	33	30		UJ	
Chrysene	66.6	68-114				UJ	
Dibenzo(a,h)anthracene	53.8	61-111	34	30		UJ	
Indeno(1,2,3-cd)pyrene	46.2	55-111	36	30		UJ	

- Criterion met

Although the LCS recovery was below the QC limits for the compounds listed above, the project accuracy goals are not impacted since there are no PALs established for the rinsate blank sample. The non-detected benzo(a)anthracene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene results in sample DSY-SD-RB03-092311 are usable as estimated values which may be biased low.

Although the RPDs for benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded the QC limit, the project precision goals are not impacted since there are no PALs established for the rinsate blank sample. The non-detected benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene results in sample DSY-SD-RB03-092311 are usable as estimated values for which the bias is undetermined.

Analyte Identification/Quantitation

PCBs

The RPD between the results of analytical columns 1 and 2 exceeded the 40% RPD QC criterion for the compounds in the following samples:

Sample	Analyte	%RPD	Action
			(+)
DSY-SD-AI24-0012	Aroclor 1254	47	J

Although the analyte quantitation relative percent difference exceeded the 40% RPD QC limit for the sample listed above, the project accuracy goals are not impacted since the affected sample result is much lower than the PAL established for total PCBs in the sediment samples. The positive Aroclor 1254 result in sample DSY-SD-AI24-0012 is usable as an estimated value.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAH

All the samples were analyzed for PAHs by GC/MS in the full scan range. Samples with benzo(a)pyrene results below the LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCB

The total Aroclor PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exception. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses for perylene-d_{12} and chrysene-d_{12}; the data usability for the total HMW PAHs may be impacted. In addition, the positive fluoranthene result in sample DSY-SD-AI24-0012 is qualified as estimated due to the low MS recovery. Several non-detect PAH results in the rinsate blank sample are qualified as estimated due to low LCS recoveries. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the PAH data set. Benzo(k)fluoranthene in sample DSY-SD-AI24-0012 was qualified as estimated due to poor MS/MSD precision. Several non-detect PAH results in the rinsate blank sample are qualified as estimated due to poor LCS/LCSD precision. Although specific QC criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to sensitivity and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. Select Aroclors in several samples were qualified as estimated due to low surrogate recoveries. The positive Aroclor 1254 result in sample DSY-SD-AI24-0012 is qualified as estimated due to poor dual column results. Although specific method criteria were not met in these instances, the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-8 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG24-0012			DSY-SD-AG24-1224			DSY-SD-AG24-2448			DSY-SD-AG28-0012		
	LAB_ID	SE6226-15			SE6226-16			SE6226-17			SE6226-11		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.3			64.5			65.5			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		210	J	P	380	U		340	U		650	U	
BENZO(B)FLUORANTHENE		400	J	P	380	UJ	N	340	U		650	UJ	N
BENZO(G,H,I)PERYLENE		290	J	P	380	UJ	N	340	U		650	UJ	N
BENZO(K)FLUORANTHENE		230	J	P	380	UJ	N	340	U		650	UJ	N
CHRYSENE		360	J	P	380	U		340	U		650	U	
DIBENZO(A,H)ANTHRACENE		500	U		380	UJ	N	340	U		650	UJ	N
FLUORANTHENE		280	J	P	380	U		340	U		650	U	
INDENO(1,2,3-CD)PYRENE		500	U		380	UJ	N	340	U		650	UJ	N
PYRENE		990			210	J	P	340	U		500	J	P

PROJ_NO: 02747 SDG: DSY-8 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG28-1224			DSY-SD-AG28-2448			DSY-SD-AI24-0012			DSY-SD-AI24-1224		
	LAB_ID	SE6226-12			SE6226-13			SE6226-18			SE6226-19		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.8			60.0			38.9			66.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		260	J	P	180	J	P	440	J	P	330	U	
BENZO(B)FLUORANTHENE		400	J	P	270	J	P	780	J	NP	330	U	
BENZO(G,H,I)PERYLENE		620	U		410	U		630	UJ	N	330	U	
BENZO(K)FLUORANTHENE		620	U		410	U		350	J	DNP	330	U	
CHRYSENE		330	J	P	300	J	P	660	J	P	330	U	
DIBENZO(A,H)ANTHRACENE		620	U		410	U		630	UJ	N	330	U	
FLUORANTHENE		320	J	P	210	J	P	360	J	DP	330	U	
INDENO(1,2,3-CD)PYRENE		620	U		410	U		630	UJ	N	330	U	
PYRENE		770	J	P	760			2100			400	J	P

PROJ_NO: 02747 SDG: DSY-8 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI24-2448			DSY-SD-AI28-0012			DSY-SD-AI28-1224			DSY-SD-AI28-2448		
	LAB_ID	SE6226-20			SE6226-4			SE6226-5			SE6226-6		
	SAMP_DATE	9/26/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.9			37.1			40.1			42.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		310	U		640	U		300	J	P	410	J	NP
BENZO(B)FLUORANTHENE		310	U		640	U		530	J	P	530	UJ	N
BENZO(G,H,I)PERYLENE		310	U		640	U		610	U		530	UJ	N
BENZO(K)FLUORANTHENE		310	U		640	U		270	J	P	530	UJ	N
CHRYSENE		310	U		640	U		480	J	P	610	J	NP
DIBENZO(A,H)ANTHRACENE		310	U		640	U		610	U		530	UJ	N
FLUORANTHENE		310	U		640	U		500	J	P	660	J	P
INDENO(1,2,3-CD)PYRENE		310	U		640	U		610	U		530	UJ	N
PYRENE		310	U		370	J	P	980			1400	J	N

PROJ_NO: 02747 SDG: DSY-8 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-0012			DSY-SD-AI30-1224			DSY-SD-AI30-2448			DSY-SD-AK30-0012		
	LAB_ID	SE6226-8			SE6226-9			SE6226-10			SE6226-1		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.5			80.6			83.1			74.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		270	U		200	J	P	290	U		310	U	
BENZO(B)FLUORANTHENE		270	UJ	N	300	J	P	290	UJ	N	310	U	
BENZO(G,H,I)PERYLENE		270	UJ	N	290	U		290	UJ	N	310	U	
BENZO(K)FLUORANTHENE		270	UJ	N	290	U		290	UJ	N	310	U	
CHRYSENE		110	J	P	270	J	P	290	U		130	J	P
DIBENZO(A,H)ANTHRACENE		270	UJ	N	290	U		290	UJ	N	310	U	
FLUORANTHENE		160	J	P	370	J	P	290	U		180	J	P
INDENO(1,2,3-CD)PYRENE		270	UJ	N	290	U		290	UJ	N	310	U	
PYRENE		330	J	P	960			120	J	P	420	J	P

PROJ_NO: 02747 SDG: DSY-8 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK30-1224			DSY-SD-AK30-2448			DSY-SD-DUP10-092611		
	LAB_ID	SE6226-2			SE6226-3			SE6226-14		
	SAMP_DATE	9/23/2011			9/23/2011			9/26/2011		
	QC_TYPE	NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.7			81.7			62.9		
	DUP_OF							DSY-SD-AG28-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		280	U		170	J	P
BENZO(B)FLUORANTHENE		300	U		280	UJ	N	390	U	
BENZO(G,H,I)PERYLENE		300	U		280	UJ	N	390	U	
BENZO(K)FLUORANTHENE		300	U		280	UJ	N	390	U	
CHRYSENE		300	U		280	U		390	U	
DIBENZO(A,H)ANTHRACENE		300	U		280	UJ	N	390	U	
FLUORANTHENE		300	U		280	U		390	U	
INDENO(1,2,3-CD)PYRENE		300	U		280	UJ	N	390	U	
PYRENE		220	J	P	280	U		690		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB03-092311		
SDG: DSY-8	LAB_ID	SE6226-7		
FRACTION: OS	SAMP_DATE	9/23/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.1	UJ	E
BENZO(B)FLUORANTHENE		7.1	U	
BENZO(G,H,I)PERYLENE		7.1	UJ	E
BENZO(K)FLUORANTHENE		7.1	U	
CHRYSENE		7.1	UJ	E
DIBENZO(A,H)ANTHRACENE		7.1	UJ	E
FLUORANTHENE		7.1	U	
INDENO(1,2,3-CD)PYRENE		7.1	UJ	E
PYRENE		7.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG24-0012			DSY-SD-AG24-1224			DSY-SD-AG24-2448			DSY-SD-AG28-0012		
SDG: DSY-8	LAB_ID	SE6226-15			SE6226-16			SE6226-17			SE6226-11		
FRACTION: PAH	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.3			64.5			65.5			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		250			35			22	J	P	150		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG28-1224			DSY-SD-AG28-2448			DSY-SD-AI24-0012			DSY-SD-AI24-1224		
	LAB_ID	SE6226-12			SE6226-13			SE6226-18			SE6226-19		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.8			60.0			38.9			66.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		210			140			400			89		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI24-2448			DSY-SD-AI28-0012			DSY-SD-AI28-1224			DSY-SD-AI28-2448		
	LAB_ID	SE6226-20			SE6226-4			SE6226-5			SE6226-6		
	SAMP_DATE	9/26/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.9			37.1			40.1			42.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		5.5	J	P	140			310			260		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-0012			DSY-SD-AI30-1224			DSY-SD-AI30-2448			DSY-SD-AK30-0012		
	LAB_ID	SE6226-8			SE6226-9			SE6226-10			SE6226-1		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.5			80.6			83.1			74.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		75			180			19	J	P	110	J	R

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK30-1224			DSY-SD-AK30-2448			DSY-SD-DUP10-092611		
	LAB_ID	SE6226-2			SE6226-3			SE6226-14		
	SAMP_DATE	9/23/2011			9/23/2011			9/26/2011		
	QC_TYPE	NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.7			81.7			62.9		
	DUP_OF							DSY-SD-AG28-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		59			12	U		150		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB03-092311		
SDG: DSY-8	LAB_ID	SE6226-7		
FRACTION: PAH	SAMP_DATE	9/23/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.094	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG24-0012			DSY-SD-AG24-1224			DSY-SD-AG24-2448			DSY-SD-AG28-0012		
SDG: DSY-8	LAB_ID	SE6226-15			SE6226-16			SE6226-17			SE6226-11		
FRACTION: PCB	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.3			64.5			65.5			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		17	U		13	U		12	U		22	U	
AROCLOR-1221		17	U		13	U		12	U		22	U	
AROCLOR-1232		20	U		15	U		14	U		26	U	
AROCLOR-1242		17	U		13	U		12	U		22	U	
AROCLOR-1248		17	U		13	U		12	U		22	U	
AROCLOR-1254		180			13	U		12	U		22	U	
AROCLOR-1260		17	U		13	U		12	U		22	U	

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG28-1224			DSY-SD-AG28-2448			DSY-SD-AI24-0012			DSY-SD-AI24-1224		
	LAB_ID	SE6226-12			SE6226-13			SE6226-18			SE6226-19		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.8			60.0			38.9			66.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		21	U		14	U		22	U		12	U	
AROCLOR-1221		21	U		14	U		22	U		12	U	
AROCLOR-1232		25	U		16	U		25	U		14	U	
AROCLOR-1242		21	U		14	U		22	U		12	U	
AROCLOR-1248		21	U		14	U		22	U		12	U	
AROCLOR-1254		140			240			360	J	RU	250	J	R
AROCLOR-1260		21	U		14	U		22	U		12	U	

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI24-2448			DSY-SD-AI28-0012			DSY-SD-AI28-1224			DSY-SD-AI28-2448		
	LAB_ID	SE6226-20			SE6226-4			SE6226-5			SE6226-6		
	SAMP_DATE	9/26/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.9			37.1			40.1			42.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		20	UJ	R	21	UJ	R	19	UJ	R
AROCLOR-1221		10	U		20	UJ	R	21	UJ	R	19	UJ	R
AROCLOR-1232		12	U		23	UJ	R	24	UJ	R	22	UJ	R
AROCLOR-1242		10	U		20	UJ	R	21	UJ	R	19	UJ	R
AROCLOR-1248		10	U		20	UJ	R	21	UJ	R	19	UJ	R
AROCLOR-1254		10	U		20	UJ	R	21	UJ	R	230	J	R
AROCLOR-1260		10	U		20	UJ	R	21	UJ	R	19	UJ	R

PROJ_NO: 02747 SDG: DSY-8 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-0012			DSY-SD-AI30-1224			DSY-SD-AI30-2448			DSY-SD-AK30-0012		
	LAB_ID	SE6226-8			SE6226-9			SE6226-10			SE6226-1		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.5			80.6			83.1			74.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		10	U		9.6	U		11	UJ	R
AROCLOR-1221		10	U		10	U		9.6	U		11	UJ	R
AROCLOR-1232		12	U		12	U		11	U		13	UJ	R
AROCLOR-1242		10	U		10	U		9.6	U		11	UJ	R
AROCLOR-1248		10	U		10	U		9.6	U		11	UJ	R
AROCLOR-1254		10	U		10	U		9.6	U		65	J	R
AROCLOR-1260		10	U		10	U		9.6	U		11	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK30-1224			DSY-SD-AK30-2448			DSY-SD-DUP10-092611		
SDG: DSY-8	LAB_ID	SE6226-2			SE6226-3			SE6226-14		
FRACTION: PCB	SAMP_DATE	9/23/2011			9/23/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.7			81.7			62.9		
	DUP_OF							DSY-SD-AG28-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	U		10	U		13	U	
AROCLOR-1221		10	U		10	U		13	U	
AROCLOR-1232		12	U		12	U		15	U	
AROCLOR-1242		10	U		10	U		13	U	
AROCLOR-1248		10	U		10	U		13	U	
AROCLOR-1254		10	U		10	U		240		
AROCLOR-1260		10	U		10	U		13	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB03-092311		
SDG: DSY-8	LAB_ID	SE6226-7		
FRACTION: PCB	SAMP_DATE	9/23/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	U	
AROCLOR-1221		0.24	U	
AROCLOR-1232		0.24	U	
AROCLOR-1242		0.24	U	
AROCLOR-1248		0.24	U	
AROCLOR-1254		0.24	U	
AROCLOR-1260		0.24	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Organic Data Validation, SDG ___DSY-7_____

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: Navy-12-11-4906 W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								12/1/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4906W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-7
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-AK24-0012	DSY- SD-AK24-1224	DSY- SD-AK24-2448
	DSY-SD-AK26-0012	DSY-SD-AK26-1224	DSY-SD-AK26-2448
	DSY-SD-AK28-0012	DSY-SD-AK28-1224	DSY- SD-AK28-2448
	DSY-SD-AO30-0012	DSY-SD-AO30-1224	DSY-SD-AO30-2448
	DSY-SD-AT30-0012	DSY-SD-AT30-1224	DSY-SD-AT30-2448
	DSY-SD-AY30-0012	DSY-SD-AY30-1224	DSY-SD-AY30-2448
	DSY-SD-DUP08-092311	DSY-SD-DUP09-092311	

Field Duplicate Pairs: DSY-SD-AT30-1224/DSY-SD-DUP08-092311
DSY-SD-AK24-2448/DSY-SD-DUP09-092311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 23, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
*	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
*	•	Analyte Identification/Quantitation
	•	Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Initial and Continuing Calibrations

PCB

The following table summarizes the Aroclors that did not meet the CC criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/2	Action (+)	Action NDs	Affected Samples
Aroclor 1016	60.8/39.7		UJ	DSY-SD-AK26-1224, DSY-SD-AK26-2448, DSY-SD-AK24-0012, DSY-SD-AK24-1224, DSY-SD-AK24-2448, DSY-SD-DUP09-092311, DSY-SD-AK28-0012, DSY-SD-AK28-1224, DSY-SD-AK28-2448
Aroclor 1260	62.9/33.2		UJ	
Aroclor 1016	36.0/45.3 48.3/50.3		UJ	DSY-SD-AY30-0012, DSY-SD-AY30-1224, DSY-SD-AY30-2448, DSY-SD-AT30-0012, DSY-SD-AT30-1224, DSY-SD-AT30-2448, DSY-SD-DUP08-092311, DSY-SD-AO30-0012
Aroclor 1260	38.6/44.6		UJ	

-criterion met

Although the %D was outside of the QC limits for Aroclors 1016 and 1260, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected results for Aroclors 1016 and 1260 in the affected samples are usable as estimated values.

Surrogate Compounds

PCB

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample ID	Surrogate	% Recovery Columns 1/ 2	QC Limits	Action	
				(+)	NDs
DSY-SD-AK28-0012	DCB	48/39	59-124		UJ

Although the surrogate DCB recovered below of the QC limits in sample DSY-SD-AK28-0012, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor results in the affected sample are usable as estimated values which may be biased low.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAHs

All the samples were analyzed for PAH by GC/MS in the full scan range. Samples with benzo(a)pyrene results below LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCBs

The total PCB PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAHs

The project goals with respect to accuracy, precision, laboratory data completeness, and sensitivity were met for the PAH data set. Data usability was not impacted with regards to accuracy, precision, laboratory data completeness, and sensitivity.

PCB

The project goals with respect to accuracy were met for the PCB data set. The non-detected results for Aroclors 1016 and 1260 in select samples were qualified as estimated due to instrument calibration variability. The non-detected Aroclor results in sample DSY-SD-AK28-0012 were qualified as estimated due to low surrogate recoveries; results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-7 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK24-0012			DSY-SD-AK24-1224			DSY-SD-AK24-2448			DSY-SD-AK26-0012		
	LAB_ID	SE6225-14			SE6225-15			SE6225-16			SE6225-11		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.7			73.8			73.9			79.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		320	U		300	U		320	U		310	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		320	U		300	U		320	U		310	U	
BENZO(G,H,I)PERYLENE		320	U		300	U		320	U		310	U	
BENZO(K)FLUORANTHENE		320	U		300	U		320	U		310	U	
CHRYSENE		320	U		300	U		320	U		310	U	
DIBENZO(A,H)ANTHRACENE		320	U		300	U		320	U		310	U	
FLUORANTHENE		320	U		300	U		320	U		310	U	
INDENO(1,2,3-CD)PYRENE		320	U		300	U		320	U		310	U	
PYRENE		320	U		140	J	P	320	U		310	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK26-1224			DSY-SD-AK26-2448			DSY-SD-AK28-0012			DSY-SD-AK28-1224		
	LAB_ID	SE6225-12			SE6225-13			SE6225-18			SE6225-19		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.4			81.0			82.2			78.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		280	U		290	U		290	U		290	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		280	U		290	U		290	U		290	U	
BENZO(G,H,I)PERYLENE		280	U		290	U		290	U		290	U	
BENZO(K)FLUORANTHENE		280	U		290	U		290	U		290	U	
CHRYSENE		280	U		290	U		290	U		290	U	
DIBENZO(A,H)ANTHRACENE		280	U		290	U		290	U		290	U	
FLUORANTHENE		280	U		290	U		290	U		290	U	
INDENO(1,2,3-CD)PYRENE		280	U		290	U		290	U		290	U	
PYRENE		280	U		290	U		290	U		290	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK28-2448			DSY-SD-AO30-0012			DSY-SD-AO30-1224			DSY-SD-AO30-2448		
	LAB_ID	SE6225-20			SE6225-8			SE6225-9			SE6225-10		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.5			77.1			80.8			82.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		280	U		310	U		300	U		290	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		280	U		310	U		300	U		290	U	
BENZO(G,H,I)PERYLENE		280	U		310	U		300	U		290	U	
BENZO(K)FLUORANTHENE		280	U		310	U		300	U		290	U	
CHRYSENE		280	U		310	U		300	U		290	U	
DIBENZO(A,H)ANTHRACENE		280	U		310	U		300	U		290	U	
FLUORANTHENE		280	U		310	U		300	U		290	U	
INDENO(1,2,3-CD)PYRENE		280	U		310	U		300	U		290	U	
PYRENE		280	U		210	J	P	300	U		290	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT30-0012			DSY-SD-AT30-1224			DSY-SD-AT30-2448			DSY-SD-AY30-0012		
	LAB_ID	SE6225-4			SE6225-5			SE6225-6			SE6225-1		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.0			81.9			81.9			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1100			300	U		300	U		300	U	
BENZO(A)PYRENE		890											
BENZO(B)FLUORANTHENE		1400			300	U		300	U		300	U	
BENZO(G,H,I)PERYLENE		420			300	U		300	U		300	U	
BENZO(K)FLUORANTHENE		620			300	U		300	U		300	U	
CHRYSENE		1400			300	U		300	U		300	U	
DIBENZO(A,H)ANTHRACENE		290	U		300	U		300	U		300	U	
FLUORANTHENE		3000			300	U		300	U		300	U	
INDENO(1,2,3-CD)PYRENE		440			300	U		300	U		300	U	
PYRENE		3000			300	U		300	U		300	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AY30-1224			DSY-SD-AY30-2448			DSY-SD-DUP08-092311			DSY-SD-DUP09-092311		
	LAB_ID	SE6225-2			SE6225-3			SE6225-7			SE6225-17		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.8			84.5			83.4			73.9		
	DUP_OF							DSY-SD-AT30-1224			DSY-SD-AK24-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		300	U		260	U		280	U		290	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		300	U		260	U		280	U		290	U	
BENZO(G,H,I)PERYLENE		300	U		260	U		280	U		290	U	
BENZO(K)FLUORANTHENE		300	U		260	U		280	U		290	U	
CHRYSENE		300	U		260	U		280	U		290	U	
DIBENZO(A,H)ANTHRACENE		300	U		260	U		280	U		290	U	
FLUORANTHENE		300	U		260	U		280	U		290	U	
INDENO(1,2,3-CD)PYRENE		300	U		260	U		280	U		290	U	
PYRENE		300	U		260	U		280	U		290	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK24-0012			DSY-SD-AK24-1224			DSY-SD-AK24-2448			DSY-SD-AK26-0012		
	LAB_ID	SE6225-14			SE6225-15			SE6225-16			SE6225-11		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.7			73.8			73.9			79.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		22	J	P	57			13	U		66		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK26-1224			DSY-SD-AK26-2448			DSY-SD-AK28-0012			DSY-SD-AK28-1224		
	LAB_ID	SE6225-12			SE6225-13			SE6225-18			SE6225-19		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.4			81.0			82.2			78.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		11	U		12	U		12	U		12	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK28-2448			DSY-SD-AO30-0012			DSY-SD-AO30-1224			DSY-SD-AO30-2448		
SDG: DSY-7	LAB_ID	SE6225-20			SE6225-8			SE6225-9			SE6225-10		
FRACTION: PAH	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.5			77.1			80.8			82.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		11	U		59			12	U		12	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT30-1224			DSY-SD-AT30-2448			DSY-SD-AY30-0012			DSY-SD-AY30-1224		
	LAB_ID	SE6225-5			SE6225-6			SE6225-1			SE6225-2		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.9			81.9			80.9			82.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		12	U		12	U		12	U		12	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AY30-2448			DSY-SD-DUP08-092311			DSY-SD-DUP09-092311		
	LAB_ID	SE6225-3			SE6225-7			SE6225-17		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	84.5			83.4			73.9		
	DUP_OF				DSY-SD-AT30-1224			DSY-SD-AK24-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		10	U		11	U		7.2	J	P

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK24-0012			DSY-SD-AK24-1224			DSY-SD-AK24-2448			DSY-SD-AK26-0012		
	LAB_ID	SE6225-14			SE6225-15			SE6225-16			SE6225-11		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.7			73.8			73.9			79.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	UJ	C	11	UJ	C	11	UJ	C	10	U	
AROCLOR-1221		11	U		11	U		11	U		10	U	
AROCLOR-1232		13	U		13	U		13	U		12	U	
AROCLOR-1242		11	U		11	U		11	U		10	U	
AROCLOR-1248		11	U		11	U		11	U		10	U	
AROCLOR-1254		11	U		11	U		11	U		10	U	
AROCLOR-1260		11	UJ	C	11	UJ	C	11	UJ	C	10	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK26-1224			DSY-SD-AK26-2448			DSY-SD-AK28-0012			DSY-SD-AK28-1224		
	LAB_ID	SE6225-12			SE6225-13			SE6225-18			SE6225-19		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.4			81.0			82.2			78.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	C	10	UJ	C	10	UJ	CR	10	UJ	C
AROCLOR-1221		10	U		10	U		10	UJ	R	10	U	
AROCLOR-1232		12	U		12	U		12	UJ	R	12	U	
AROCLOR-1242		10	U		10	U		10	UJ	R	10	U	
AROCLOR-1248		10	U		10	U		10	UJ	R	10	U	
AROCLOR-1254		10	U		10	U		10	UJ	R	10	U	
AROCLOR-1260		10	UJ	C	10	UJ	C	10	UJ	CR	10	UJ	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK28-2448			DSY-SD-AO30-0012			DSY-SD-AO30-1224			DSY-SD-AO30-2448		
SDG: DSY-7	LAB_ID	SE6225-20			SE6225-8			SE6225-9			SE6225-10		
FRACTION: PCB	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.5			77.1			80.8			82.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.6	UJ	C	11	UJ	C	10	U		9.6	U	
AROCLOR-1221		9.6	U		11	U		10	U		9.6	U	
AROCLOR-1232		11	U		13	U		12	U		11	U	
AROCLOR-1242		9.6	U		11	U		10	U		9.6	U	
AROCLOR-1248		9.6	U		11	U		10	U		9.6	U	
AROCLOR-1254		9.6	U		11	U		10	U		9.6	U	
AROCLOR-1260		9.6	UJ	C	11	UJ	C	10	U		9.6	U	

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT30-0012			DSY-SD-AT30-1224			DSY-SD-AT30-2448			DSY-SD-AY30-0012		
	LAB_ID	SE6225-4			SE6225-5			SE6225-6			SE6225-1		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.0			81.9			81.9			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	C	10	UJ	C	9.9	UJ	C	10	UJ	C
AROCLOR-1221		10	U		10	U		9.9	U		10	U	
AROCLOR-1232		12	U		12	U		12	U		12	U	
AROCLOR-1242		10	U		10	U		9.9	U		10	U	
AROCLOR-1248		10	U		10	U		9.9	U		10	U	
AROCLOR-1254		10	U		10	U		9.9	U		10	U	
AROCLOR-1260		10	UJ	C	10	UJ	C	9.9	UJ	C	10	UJ	C

PROJ_NO: 02747 SDG: DSY-7 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AY30-1224			DSY-SD-AY30-2448			DSY-SD-DUP08-092311			DSY-SD-DUP09-092311		
	LAB_ID	SE6225-2			SE6225-3			SE6225-7			SE6225-17		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	82.8			84.5			83.4			73.9		
	DUP_OF							DSY-SD-AT30-1224			DSY-SD-AK24-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		10	UJ	C	10	UJ	C	10	UJ	C	11	UJ	C
AROCLOR-1221		10	U		10	U		10	U		11	U	
AROCLOR-1232		12	U		12	U		12	U		14	U	
AROCLOR-1242		10	U		10	U		10	U		11	U	
AROCLOR-1248		10	U		10	U		10	U		11	U	
AROCLOR-1254		10	U		10	U		10	U		11	U	
AROCLOR-1260		10	UJ	C	10	UJ	C	10	UJ	C	11	UJ	C

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-xxxxW

Date: January 31, 2012 c: File G02747-4.10

To: Steve Parker

From: Paula DiMattei (no copy)

Subject: Analytical Data Usability Assessment
SDG: DSY-9, DSY-11, DSY-18, DSY-19, DSY-20, DSY-21, DSY-22, DSY-23, DSY-24
CTO WE61, Derecktor Shipyard, Naval Station (NAVSTA), Newport, RI

Samples: DSY-9
13/Sediment: Lead

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448
DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
DSY-SD-DUP11-092611[1]		

[1]Field duplicate of DSY-SD-AG26-0012

3/Sediment: Copper/Zinc

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448

1/Rinsate blank: Copper/Lead/Zinc

DSY-SD-RB04-092611

DSY-11
19/Sediment: Lead

DSY-SD-AC26-0012	DSY-SD-AC26-1224	DSY-SD-AC26-2448
DSY-SD-AC28-0012	DSY-SD-AC28-1224	DSY-SD-AC28-2448
DSY-SD-AE26-0012	DSY-SD-AE26-1224	DSY-SD-AE26-2448
DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448
DSY-SD-AE30-0012	DSY-SD-AE30-1224	DSY-SD-AG30-0012
DSY-SD-AG30-1224	DSY-SD-AG30-2436	DSY-SD-DUP13-092811[2]
DSY-SD-DUP14-092811[3]		

[2]Field duplicate of DSY-SD-AC26-2448 [3]Field duplicate of DSY-SD-AG28-0012

3/Sediment: Copper/Zinc

DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448

DSY-18
19/Sediments: Lead

DSY-SD-DUP26-100511[4]	DSY-SD-L24-0012	DSY-SD-L24-1224
DSY-SD-L24-2448	DSY-SD-L26-1224	DSY-SD-L26-2448
DSY-SD-N24-0012	DSY-SD-N24-1224	DSY-SD-N24-2448
DSY-SD-N26-0012	DSY-SD-N26-1224	DSY-SD-N26-2448
DSY-SD-N28-0012	DSY-SD-N28-1224	DSY-SD-N28-2448
DSY-SD-N30-0012	DSY-SD-N30-1224	DSY-SD-N30-2448
DSY-SD-Q25-0012		

[4]Field duplicate of DSY-SD-N24-2448

1/Rinsate blank

DSY-SD-RB09-100411

DSY-19
19/Sediments: Lead

DSY-SD-DUP27-100511[5]	DSY-SD-DUP28-100611[6]	DSY-SD-Q25-1224
DSY-SD-Q25-2448	DSY-SD-Q29-0012	DSY-SD-Q29-1224
DSY-SD-Q29-2448	DSY-SD-T25-0012	DSY-SD-T25-1224
DSY-SD-T25-2448	DSY-SD-T29-0012	DSY-SD-T29-1224
DSY-SD-T29-2448	DSY-SD-W24-0012	DSY-SD-W24-1224
DSY-SD-W24-2448	DSY-SD-W26-0012	DSY-SD-W26-1224
DSY-SD-W26-2448		

[5]Field duplicate of DSY-SD-W26-2448 [6]Field duplicate of DSY-SD-W24-0012

1/Rinsate blank

DSY-SD-RB10-100511

DSY-20
19/Sediments: Copper/Lead/Zinc

DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
DSY-SD-C25-0012	DSY-SD-C25-1224	DSY-SD-C25-2448
DSY-SD-DUP29-100711[7]	DSY-SD-W28-0012	DSY-SD-W28-1224
DSY-SD-W28-2448	DSY-SD-W30-0012	DSY-SD-W30-1224
DSY-SD-W30-2448		

[7]Field duplicate of DSY-SD-C25-1224

1/Rinsate blank

DSY-SD-RB11-100611

DSY-21
10/Sediments: Copper/Lead/Zinc

DSY-SD-C13-0012	DSY-SD-C13-1224	DSY-SD-C13-2448
DSY-SD-C17-0012	DSY-SD-C17-1224	DSY-SD-C17-2448
DSY-SD-C29-0012	DSY-SD-C29-1224	DSY-SD-C29-2448
DSY-SD-DUP30-100711[8]		

[8]Field duplicate of DSY-SD-C09-2448 (in SDG DSY-20)

1/Rinsate blank

DSY-SD-RB12-100711

DSY-22
23/Sediments: Copper/Lead/Zinc

DSY-SD-DUP31-101211[9]	DSY-SD-DUP32-101211[10]	DSY-SD-G01-0012
DSY-SD-G01-1224	DSY-SD-G01-2448	DSY-SD-G05-0012
DSY-SD-G05-1224	DSY-SD-G05-2448	DSY-SD-G09-0012
DSY-SD-G09-1224	DSY-SD-G09-2448	DSY-SD-G13-0012
DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-G21-0012
DSY-SD-G21-1224	DSY-SD-G21-2448	DSY-SD-G25-0012
DSY-SD-G25-1224	DSY-SD-G25-2448	

[9]Field duplicate of DSY-SD-G05-2448 [10]Field duplicate of DSY-SD-G17-2448

DSY-23
7/Sediments: Copper/Lead/Zinc

DSY-SD-AA01-0012	DSY-SD-AA01-1224	DSY-SD-AA01-2448
DSY-SD-AA05-0012	DSY-SD-AA05-1224	DSY-SD-AA05-2448
DSY-SD-DUP33-101211[11]		

[11]Field duplicate of DSY-SD-AA01-2448

1/Rinsate blank

DSY-SD-RB13-101211

DSY-24
24/Sediments: Copper/Lead/Zinc

DSY-SD-AA09-0012	DSY-SD-AA09-1224	DSY-SD-AA09-2448
DSY-SD-AA13-0012	DSY-SD-AA13-1224	DSY-SD-AA13-2448
DSY-SD-AA17-0012	DSY-SD-AA17-1224	DSY-SD-AA17-2448
DSY-SD-AA21-0012	DSY-SD-AA21-1224	DSY-SD-AA21-2448
DSY-SD-AA24-0012	DSY-SD-AA24-1224	DSY-SD-AA24-2448
DSY-SD-AA26-0012	DSY-SD-AA26-1224	DSY-SD-AA26-2448
DSY-SD-AA28-0016	DSY-SD-AA30-0012	DSY-SD-AA30-1224
DSY-SD-DUP34-101311[12]	DSY-SD-DUP35-101311[13]	DSY-SD-G30-0018

[12]Field duplicate of DSY-SD-AA21-2448 [13]Field duplicate of DSY-SD-AA28-0016

1/Rinsate blank

DSY-SD-RB14-101311

Analytical Data Usability Assessment

The analytical data usability assessment was performed to determine if the analytical data reported by the laboratory for these SDGs met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Metals (copper, lead, and/or zinc)

The project goals with respect to accuracy were met for the metals data set with the following exceptions. Copper for sediment samples DSY-SD-AE28-0012, DSY-SD-AE28-1224, and DSY-SD-AE28-2448 (in SDG DSY-11) and lead for all sediment samples in SDG DSY-22 were qualified as estimated due to low matrix spike (MS) recoveries; these results may be biased low. Lead was qualified as estimated for all sediment samples in SDG DSY-21 since the ICP serial dilution results exceeded QC acceptance criteria. Zinc for all sediment samples in SDG DSY-24 were qualified as estimated due to high MS/MS duplicate (MSD) recoveries; these results may be biased high. Copper, lead, and zinc for sediment sample DSY-SD-AA09-0012 (in SDG DSY 24) were qualified as estimated due to the low percent solids content. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the metals data set with the following exceptions. Copper and zinc were qualified as estimated for sediment samples DSY-SD-AE28-0012, DSY-SD-AE28-1224, and DSY-SD-AE28-2448 (in SDG DSY-11) due to MS/MSD imprecision. Lead was qualified as estimated for all sediment samples in SDG DSY-18 due to laboratory duplicate imprecision.

The following analytes in the SDGs listed were qualified as estimated due to field duplicate imprecision: lead for sediment samples DSY-SD-W24-0012 and DSY-SD-DUP28-100611 (in SDG DSY-19), lead for all sediment samples in SDGs DSY-18 and DSY-20, copper, lead, and zinc for all sediment samples in SDG DSY-21, and zinc for sediment samples DSY-SD-G05-2448 and DSY-SD-DUP31-101211 (in SDG DSY-22). Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to sensitivity were evaluated based on the project action limits (PALs) as they pertain to the reporting of non-detected results [reported at the limit of detection (LOD)]. There were no samples in this data set with non-detected results; thus, data usability is not impacted with regards to sensitivity.

The project goals with respect to laboratory data completeness were met for the metals data set. Data usability was not impacted with regards to laboratory data completeness.

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 13, 2012**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – COPPER, LEAD, ZINC/TOC**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-11

SAMPLES: 19/Sediment/Lead/

DSY-SD-AC26-0012	DSY-SD-AC26-1224	DSY-SD-AC26-2448
DSY-SD-AC28-0012	DSY-SD-AC28-1224	DSY-SD-AC28-2448
DSY-SD-AE26-0012	DSY-SD-AE26-1224	DSY-SD-AE26-2448
DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448
DSY-SD-AE30-0012	DSY-SD-AE30-1224	DSY-SD-AG30-0012
DSY-SD-AG30-1224	DSY-SD-AG30-2436	DSY-SD-DUP13-092811
DSY-SD-DUP14-092811		

3/Sediment/Copper & Zinc/

DSY-SD-AE28-0012	DSY-SD-AE28-1224	DSY-SD-AE28-2448

7/Sediment/TOC

DSY-SD-AC26-0012	DSY-SD-AC28-0012	DSY-SD-AE26-0012
DSY-SD-AE28-0012	DSY-SD-AE30-0012	DSY-SD-AG30-0012
DSY-SD-DUP14-092811		

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-11, consisted of nineteen (19) sediment samples. All twenty (20) samples were analyzed for lead. Three (3) sediment samples were additionally analyzed for copper and zinc. Seven (7) sediment samples were analyzed for total organic carbon (TOC). Two field duplicate pairs were included in this SDG: DSY-SD-DUP13-092811/DSY-SD-AC26-2448 and DSY-SD-DUP14-092811/DSY-SD-AC28-0012.

The samples were collected by Tetra Tech NUS on September 28, 2011 and analyzed by Katahdin Analytical Services. The analyses were conducted in accordance with SW-846 Method 6010C and Lloyd Kahn analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
• Laboratory Method/Preparation Blank Analyses
* • ICP Interference Results
• Laboratory Duplicate Results

* • Laboratory Control Sample Results
• Matrix Spike Recovery
* • Field Duplicate Precision
* • ICP Serial Dilution
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets. Appendix D contains the documentation to support the findings as discussed in this validation report.

MATRIX SPIKE RECOVERY

The Matrix Spike (MS) sample had a Percent Recovery (%R) for copper below 10%. In addition, the %Rs for lead and zinc were outside the quality control limits. No action was taken for lead and zinc because the concentrations of these analytes in the environmental sample were 4X greater than the spike concentration. The positive results reported for copper in the affected samples, DSY-SD-AE28-0012, DSY-SD-AE28-1224 and DSY-SD-AE28-2448, were qualified as estimated, (J).

The Relative Percent Differences (RPDs) for copper and zinc between the sample, DSY-SD-AE28-2448, and its duplicate, DSY-SD-AE28-2448D, the exceeded the 35% project specific quality control limit for sediments as presented in the Sampling and Analysis Plan (SAP). The positive results reported for these analytes in the associated samples, DSY-SD-AE28-0012, DSY-SD-AE28-1224 and DSY-SD-AE28-2448, were qualified as estimated, (J). No action was necessary for lead because the RPD was less than 35%.

NOTES

The TOC results performed in duplicate for each sample (presented as TOC (1) and TOC (2)). The laboratory provided both results and the average of the two results. The average result for samples analyzed for TOC was used in the data validation.

EXECUTIVE SUMMARY

Laboratory Performance: The RPD quality control limit was exceeded in the laboratory duplicate analyses for lead and TOC.

Other Factors Affecting Data Quality: The MS %R for copper was less than 10%.

The Tier II data validation performed for these analyses were completed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April, 2009.

The text of this report has been formulated to address only those areas affecting data quality.

Tetra Tech NUS
Michelle L. Allen
Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region I Worksheets
4. Appendix D – Support Documentation

Appendix A – Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-11 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AC26-0012			DSY-SD-AC26-1224			DSY-SD-AC26-2448			DSY-SD-AC28-0012		
	LAB_ID	SE6389-001			SE6389-002			SE6389-003			SE6389-011		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	36.6			44.1			75.9			37.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		114			473			97.8			75.5		
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC28-1224			DSY-SD-AC28-2448			DSY-SD-AE26-0012			DSY-SD-AE26-1224		
SDG: DSY-11	LAB_ID	SE6389-012			SE6389-013			SE6389-008			SE6389-009		
FRACTION: M	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	40.5			44.0			34.0			39.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		103			276			48.4			68.2		
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE26-2448			DSY-SD-AE28-0012			DSY-SD-AE28-1224			DSY-SD-AE28-2448		
SDG: DSY-11	LAB_ID	SE6389-010			SE6389-005			SE6389-006			SE6389-007		
FRACTION: M	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.4			32.4			37.6			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER					45.3	J	DF	86.8	J	DF	72.1	J	DF
LEAD		296			48.8			88.4			98.6		
ZINC					138	J	F	209	J	F	931	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE30-0012			DSY-SD-AE30-1224			DSY-SD-AG30-0012			DSY-SD-AG30-1224		
SDG: DSY-11	LAB_ID	SE6389-015			SE6389-016			SE6389-018			SE6389-019		
FRACTION: M	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	73.5			87.7			82.7			84.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		51.3			8.3			8.7			191		
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG30-2436			DSY-SD-DUP13-092811			DSY-SD-DUP14-092811		
SDG: DSY-11	LAB_ID	SE6389-020			SE6389-004			SE6389-014		
FRACTION: M	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.8			75.9			37.3		
	DUP_OF				DSY-SD-AC26-2448			DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER										
LEAD		22.1			84			75.1		
ZINC										

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC26-0012						DSY-SD-AC26-1224			DSY-SD-AC26-2448		
SDG: DSY-11	LAB_ID	SE6389-1						SE6389-2			SE6389-3		
FRACTION: MISC	SAMP_DATE	9/28/2011						9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	36.6			36.6			44.1			75.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					35000								
TOTAL SOLIDS		36						44			76		

PROJ_NO: 02747 SDG: DSY-11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AC28-0012						DSY-SD-AC28-1224			DSY-SD-AC28-2448		
	LAB_ID	SE6389-11						SE6389-12			SE6389-13		
	SAMP_DATE	9/28/2011						9/28/2011			9/28/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	37.7			37.7			40.5			44.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					40000								
TOTAL SOLIDS		38						40			44		

PROJ_NO: 02747 SDG: DSY-11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AE26-0012						DSY-SD-AE26-1224			DSY-SD-AE26-2448		
	LAB_ID	SE6389-8						SE6389-9			SE6389-10		
	SAMP_DATE	9/28/2011						9/28/2011			9/28/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	34.0			34.0			39.4			48.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					36000								
TOTAL SOLIDS		34						39			48		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE28-0012						DSY-SD-AE28-1224			DSY-SD-AE28-2448		
SDG: DSY-11	LAB_ID	SE6389-5						SE6389-6			SE6389-7		
FRACTION: MISC	SAMP_DATE	9/28/2011						9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	32.4			32.4			37.6			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					36000								
TOTAL SOLIDS		32						38			68		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE30-0012						DSY-SD-AE30-1224			DSY-SD-AG30-0012		
SDG: DSY-11	LAB_ID	SE6389-15						SE6389-16			SE6389-18		
FRACTION: MISC	SAMP_DATE	9/28/2011						9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	73.5			73.5			87.7			82.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					12000								
TOTAL SOLIDS		74						88			83		

PROJ_NO: 02747 SDG: DSY-11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG30-0012			DSY-SD-AG30-1224			DSY-SD-AG30-2436			DSY-SD-DUP13-092811		
	LAB_ID	SE6389-18			SE6389-19			SE6389-20			SE6389-4		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	82.7			84.6			85.8			75.9		
	DUP_OF										DSY-SD-AC26-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1600											
TOTAL SOLIDS					84			86			76		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP14-092811					
SDG: DSY-11	LAB_ID	SE6389-14					
FRACTION: MISC	SAMP_DATE	9/28/2011					
MEDIA: SEDIMENT	QC_TYPE	NM					
	UNITS	%			MG/KG		
	PCT_SOLIDS	37.3			37.3		
	DUP_OF	DSY-SD-AC28-0012			DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					42000		
TOTAL SOLIDS		37					

Appendix B – Results as Reported by the Laboratory

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC26-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 36.6 **Lab Sample ID:** SE6389-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	114		*	P	1	1.0	0.18	0.82

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC26-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 44.1 **Lab Sample ID:** SE6389-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	473		*	P	1	0.71	0.12	0.57

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC26-2448

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 75.9 **Lab Sample ID:** SE6389-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	97.8		*	P	1	0.46	0.08	0.37

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC28-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 37.7 **Lab Sample ID:** SE6389-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	75.5		*	P	1	1.0	0.18	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC28-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 40.5 **Lab Sample ID:** SE6389-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	103		*	P	1	0.93	0.16	0.74

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC28-2448

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 44.0 **Lab Sample ID:** SE6389-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	276		*	P	1	0.74	0.13	0.59

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE26-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 34.0 **Lab Sample ID:** SE6389-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	48.4		*	P	1	1.2	0.21	0.96

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE26-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 39.4 **Lab Sample ID:** SE6389-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	68.2		*	P	1	0.76	0.13	0.61

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE26-2448

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 48.4 **Lab Sample ID:** SE6389-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	296		*	P	1	0.68	0.12	0.54

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE28-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 32.4 **Lab Sample ID:** SE6389-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	45.3		N*	P	1	7.4	0.46	3.0
7439-92-1	LEAD, TOTAL	48.8		*	P	1	1.5	0.26	1.2
7440-66-6	ZINC, TOTAL	138		*	P	1	7.4	0.50	3.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE28-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 37.6 **Lab Sample ID:** SE6389-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	86.8		N*	P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	88.4		*	P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	209		*	P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE28-2448

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 68.3 **Lab Sample ID:** SE6389-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	72.1		N*	P	1	2.4	0.15	0.95
7439-92-1	LEAD, TOTAL	98.6		*	P	1	0.48	0.08	0.38
7440-66-6	ZINC, TOTAL	931		*	P	1	2.4	0.16	0.95

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE30-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 73.5 **Lab Sample ID:** SE6389-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	51.3		*	P	1	0.46	0.08	0.37

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE30-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 87.7 **Lab Sample ID:** SE6389-016

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7439-92-1	LEAD, TOTAL	8.3		*	P	2	1.0	0.17	0.80

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG30-0012

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 82.7 **Lab Sample ID:** SE6389-018

Concentration Units : mg/Kgdrywt

							ADJUSTED	
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7439-92-1	LEAD, TOTAL	8.7		*	P	1	0.56	0.10	0.45

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG30-1224

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 84.6 **Lab Sample ID:** SE6389-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	191		*	P	2	0.79	0.14	0.63

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG30-2436

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 85.8 **Lab Sample ID:** SE6389-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	22.1		*	P	1	0.39	0.07	0.31

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP13-092811

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 75.9 **Lab Sample ID:** SE6389-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	84.0		*	P	1	0.44	0.08	0.35

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP14-092811

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 37.3 **Lab Sample ID:** SE6389-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	75.1		*	P	1	0.84	0.15	0.67

Comments:

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-4
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP13-092811	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	76. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:32:48	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-14
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP14-092811	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	45000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99016	10-OCT-11 15:03:11	N/A	N/A	
Toc In Soil(2)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99016	10-OCT-11 15:17:09	N/A	N/A	
Toc In Soil(Avg)	42000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	37. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:13	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-1
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC26-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	35000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99016	10-OCT-11 11:19:12	N/A	N/A	
Toc In Soil(2)	35000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99016	10-OCT-11 11:40:03	N/A	N/A	
Toc In Soil(Avg)	35000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	36. %	1		N/A	SM2540G	WG99010	12-OCT-11 09:20:31	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-2
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC26-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	44. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:32:23	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
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Pittsburgh,PA 15220

Lab Sample ID: SE6389-3
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC26-2448	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	76. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:32:36	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-11
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC28-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	41000 ug/gdrywt	1100	220	800	LLOYD KAHN	WG99016	10-OCT-11 14:33:31	N/A	N/A	
Toc In Soil(2)	40000 ug/gdrywt	1100	220	800	LLOYD KAHN	WG99016	10-OCT-11 14:46:53	N/A	N/A	
Toc In Soil(Avg)	40000 ug/gdrywt	1100	220	800	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:34:42	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-12
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC28-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:34:52	ASTM D2216	11-OCT-11	

Katahdin Analytical Services 500008

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-13
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC28-2448	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	44. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:03	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-8
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE26-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	36000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG99016	10-OCT-11 14:08:57	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG99016	10-OCT-11 14:20:30	N/A	N/A	
Toc In Soil(Avg)	36000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	34. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:34:06	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-9
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE26-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	39. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:34:19	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
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Pittsburgh,PA 15220

Lab Sample ID: SE6389-10
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE26-2448	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	48. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:34:32	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
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Lab Sample ID: SE6389-5
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE28-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	36000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99016	10-OCT-11 12:00:35	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99016	10-OCT-11 12:12:47	N/A	N/A	
Toc In Soil(Avg)	36000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	32. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:33:15	ASTM D2216	11-OCT-11	

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-6
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE28-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	38. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:33:27	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-7
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE28-2448	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	68. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:33:43	ASTM D2216	11-OCT-11	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-15
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE30-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	12000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99019	11-OCT-11 10:21:20	N/A	N/A	
Toc In Soil(2)	13000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99019	11-OCT-11 10:48:18	N/A	N/A	
Toc In Soil(Avg)	12000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99019	11-OCT-11 09:44:23	N/A	N/A	
Total Solids	74. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:24	ASTM D2216	11-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-16
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE30-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	88. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:35	ASTM D2216	11-OCT-11	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-18
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG30-0012	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	1100 ug/gdrywt	480	100	360	LLOYD KAHN	WG99016	10-OCT-11 15:28:40	N/A	N/A	
Toc In Soil(2)	2000 ug/gdrywt	480	100	360	LLOYD KAHN	WG99016	10-OCT-11 15:42:30	N/A	N/A	
Toc In Soil(Avg)	1600 ug/gdrywt	480	100	360	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	83. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:45	ASTM D2216	11-OCT-11	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-19
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG30-1224	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	84. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:35:56	ASTM D2216	11-OCT-11	

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6389-20
Report Date: 13-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-11

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG30-2436	SL	28-SEP-11	30-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	86. %	1		N/A	SM2540G	WG99020	12-OCT-11 09:36:10	ASTM D2216	11-OCT-11	

Appendix C – Region I Worksheets

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Derecktor ship yard
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin Analytical Services
Case/Project No. #
SDG No. DSV-11
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____ letter DV
_____
_____
_____ see
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A (Tier II) or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.
_____
_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Michelle Allen Company Name TechTech, Inc Phone Number _____

Date Validation Started 12/12/11 Date Validation Completed _____

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets: See DV letter

INORG	COMPLETE SDG FILE (CSF) AUDIT	_____
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	_____
INORG-II	ICP-MS TUNE	_____
INORG-III-A/B	CALIBRATIONS	_____
INORG-IV-A/B	BLANKS	_____
INORG-IV-C.1	BLANKS	_____
INORG-IV-C.2	BLANKS	_____
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	_____
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	_____
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-VII	ICP-MS INTERNAL STANDARDS	_____
INORG-VIII	MATRIX SPIKES	_____
INORG-IX	LABORATORY DUPLICATE SAMPLES	_____
INORG-X	FIELD DUPLICATES	_____
INORG-XI	ICP SERIAL DILUTIONS	_____
INORG-XII-A/B	SENSITIVITY CHECK	_____
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	_____
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	_____
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	_____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	_____

I certify that all criteria were met for the worksheets checked above.

Signature: _____ Name: _____

Date: _____

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Part I - Data Validation Manual, Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with PO/DV Chemist/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

Site:_____ Case:_____ SDG:_____

see DV letter

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters: _____

Missing Information	Date Lab Contacted	Date Received
N/A		

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-I

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

See DV letter

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

N/A

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			

Comments:

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

III. CALIBRATIONS

See DV letter

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks see DV letter

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

Circle the highest concentration of each contaminant.

See DV letter

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

IV. BLANKS

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample. See DV letter

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action

Comments:

Validator: Michelle Allen

Date: 12/12/11

EPA NE - Data Validation Worksheet
INORG-V-A

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

See DV letter

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

1. List all analytes in the ICSA that are outside ICSA criteria.

See DV letter

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	
Comments:										

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.2

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

2. List all affected sample results. see DV letter

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action
Comments:						

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

List all analytes that are outside ICSAB criteria of 80-120% R.

See DV letter

Date	Analyte	%R	Samples Affected	Action

Comments:

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-B

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

List all analytes that are outside ICSA criteria.

See DV letter

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

VII. ICP-MS INTERNAL STANDARDS

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____ N/A

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator: Michelle Aiken

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-VIII

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____ See DV letter

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action

Comments:

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-IX

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____ See DV letter

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair. See DV letter

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

XI. ICP SERIAL DILUTIONS

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____ See DV letter

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action
Comments:						

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria. See DV letter

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-XIII-A

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N** See DV Letter

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action

Comments:

Validator: Michelle Allen

Date: 12/12/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? **Y** **N** see DV letter

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator: Michelle Allen

Date: 12/12/11

EPA-NE - Data Validation Worksheet
INORG-XIV

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? SEE DV letter
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Michelle Allen

Date: 12/12/11

Appendix D – Support Documentation

NAVSTA NEWPORT
SEDIMENT DATA
DSY-11

FRACTION	CHEMICAL	DSY-SD-AC26-2448	UNITS	DSY-SD-DUP13-092811	RPD	D
M	LEAD	97.8	MG/KG	84	15.18	13.80
MISC	TOTAL SOLIDS	76	%	76	0.00	0.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-11

FRACTION	CHEMICAL	DSY-SD-AC28-0012	UNITS	DSY-SD-DUP14-092811	RPD	D
M	LEAD	75.5	MG/KG	75.1	0.53	0.40
MISC	TOTAL ORGANIC CARBON	40000	MG/KG	42000	4.88	2000.00
MISC	TOTAL SOLIDS	38	%	37	2.67	1.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

HOLDTIME

SDG DSY-11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE28-2448	SE6389-007	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-2448	SE6389-003	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-0012	SE6389-011	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-1224	SE6389-012	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC28-2448	SE6389-013	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-0012	SE6389-008	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-1224	SE6389-009	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-1224	SE6389-002	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-DUP14-092811	SE6389-014	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE26-2448	SE6389-010	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE30-0012	SE6389-015	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE30-1224	SE6389-016	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-0012	SE6389-018	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-1224	SE6389-019	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AG30-2448	SE6389-020	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-DUP13-092811	SE6389-004	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AC26-0012	SE6389-001	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE28-0012	SE6389-005	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
M	MG/KG	DSY-SD-AE28-1224	SE6389-006	NM	09/28/2011	10/17/2011	10/19/2011	19	2	21
TDS	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TDS	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TDS	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/11/2011	10/12/2011	13	1	14
TOC	UG/GD	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/11/2011	10/11/2011	13	0	13
TOC	UG/GD	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
TOC	UG/GD	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/10/2011	10/10/2011	12	0	12
OS	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/02/2011	9	26	35
OS	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	10/31/2011	9	24	33
OS	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
OS	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/01/2011	9	25	34
SIM	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
SIM	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	11/03/2011	9	27	36
PCB	%	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/08/2011	10/19/2011	10	11	21
PCB	%	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	%	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	%	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	%	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	%	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AC26-2448	SE6389-3	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-1224	SE6389-6	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-DUP14-092811	SE6389-14	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-DUP13-092811	SE6389-4	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AG30-2448	SE6389-20	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	DSY-SD-AG30-1224	SE6389-19	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AG30-0012	SE6389-18	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AE30-1224	SE6389-16	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19
PCB	UG/KG	DSY-SD-AC26-0012	SE6389-1	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-2448	SE6389-7	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AC26-1224	SE6389-2	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE28-0012	SE6389-5	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE26-2448	SE6389-10	NM	09/28/2011	10/08/2011	10/19/2011	10	11	21
PCB	UG/KG	DSY-SD-AE26-1224	SE6389-9	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AE26-0012	SE6389-8	NM	09/28/2011	10/08/2011	10/18/2011	10	10	20
PCB	UG/KG	DSY-SD-AC28-2448	SE6389-13	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AC28-1224	SE6389-12	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AC28-0012	SE6389-11	NM	09/28/2011	10/07/2011	10/16/2011	9	9	18
PCB	UG/KG	DSY-SD-AE30-0012	SE6389-15	NM	09/28/2011	10/07/2011	10/17/2011	9	10	19

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order # SEE PAGE ONE | Proj. Name / No. CTO WE 61, Derecktor Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / [signature] | Copies To:

LAB USE ONLY WORK ORDER #: SE6789/SE6340

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N	PAH	Filt. ☐Y ☐N	PCB	Filt. ☐Y ☐N	TOC	Filt. ☐Y ☐N	Metals (Pb)	Filt. ☐Y ☐N	Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AG30-0012	9/28/11 / 1330	SED	3		X		X		X		X						
	DSY-SD-AG30-1224	/ 1333		2		X		X				X						
	DSY-SD-AG30-2436	/ 1336		2		X		X				X						
	DSY-SD-AC30-0012	/ 1435		6		X		X		X		X						
	DSY-SD-AC30-1224	/ 1438		2		X		X				X						
	DSY-SD-AC30-2448	/ 1441		2		X		X				X						
	DSY-SD-AD05-0012	9/29/11 / 0840		3		X		X		X				X				
	DSY-SD-AD05-1224	/ 0843		2		X		X						X				
	DSY-SD-AD05-2448	/ 0846		2		X		X						X				
	DSY-SD-AD09-0012	/ 0820		3		X		X		X				X				
	DSY-SD-AD09-1224	/ 0823		2		X		X						X				
	DSY-SD-AD09-2448	/ 0826		2		X		X						X				
	DSY-SD-AD17-0012	/ 0950		3		X		X		X				X				
	DSY-SD-AD17-1224	/ 0953		2		X		X						X				
	DSY-SD-AD17-2448	/ 0956		2		X		X						X				
	DSY-SD-AD13-0012	/ 0925		3		X		X		X				X				

COMMENTS DSY-SD-AC30-0012 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Lori Anderson	9/30/11 1320	Andrea Feeley			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				0000014	

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
TENUS	Steve Parker	(978)474-8434	(978)474-8499

Address 250 Andover St. Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61, Dereck br Shipyard Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton / MJH

Copies To:

LAB USE ONLY WORK ORDER #: SE6389

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N	PAH	PCB	Metals (Pb)	Metals (Pb,Cu,Zn)	TBC
	DSY-SD-AC26-0012	9/28/11 / 0930	SED	3		X	X	X		X
	DSY-SD-AC26-1224	/ 0933		2		X	X	X		
	DSY-SD-AC26-2448	/ 0936		2		X	X	X		
	DSY-SD-DUP13-092811	/ —		2		X	X	X		
	DSY-SD-AE28-0012	/ 1035		3		X	X		X	X
	DSY-SD-AE28-1224	/ 1038		2		X	X		X	
	DSY-SD-AE28-2448	/ 1041		4		X	X		X	
	DSY-SD-AE26-0012	/ 1015		3		X	X	X		X
	DSY-SD-AE26-1224	/ 1018		2		X	X	X		
	DSY-SD-AE26-2448	/ 1021		2		X	X	X		
	DSY-SD-AC28-0012	/ 1105		3		X	X	X		X
	DSY-SD-AC28-1224	/ 1108		2		X	X	X		
	DSY-SD-AC28-2448	/ 1111		2		X	X	X		
	DSY-SD-DUP14-092811	/ —		3		X	X	X		X
	DSY-SD-AE30-0012	/ 1350		3		X	X	X		X
	DSY-SD-AE30-1224	/ 1353		2		X	X	X		

COMMENTS DSY-SD-AE28-2448 is designated as LabQC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
MJH	9/30/11 1320				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				000015	

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ORIGINAL

KAS-COC1

Organics Analysis

The samples of SDG DSY-11 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Sample SE6389-7 was used for the matrix spike (MS) and matrix spike duplicate (MSD) samples, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The samples were spiked only with the 8270-SCAN surrogates and only the 8270-SCAN LCS/LCSD were extracted. The report package for SIM analysis does not have a Form 2 for surrogates or a Form 3 for a LCS/LCSD with one exception. The method blank WG98769-1 and LCS/LCSD WG98769-2 and 3, associated with all of the samples, were spiked with surrogates. The LCS/LCSD were spiked with the SIM target analyte. There is a Form 2 for the method blank and LCS/LCSD and a Form 3 for the LCS/LCSD.

Sample SE6389-2 was manually integrated for the surrogate fluorene-d10 and the internal standards chrysene-d12 and perylene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The Form 7 for the CV's (file G3714 and G3727) had high responses for the surrogate flourene-d10, which resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

8082 Analysis

Surrogate recoveries for the samples and QC, as well as spike recoveries for LCS/LCSD's and MS/MSD's, were evaluated using laboratory established acceptance limits.

Samples SE6389-7 and 10 were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6389-13 had low recoveries for TCX and DCB on both channels, which were outside the laboratory established acceptance limits. Due to analyst oversight, the sample was not reextracted.

Samples SE6389-2, 3, 4, 7, 10, 11, 12, and 16 had low recoveries for TCX and/or DCB on one or both channels, which were outside the laboratory established acceptance limits. Since the recoveries of one or both surrogates were acceptable on one or both channels, no further action was taken.

Sample SE6389-10 had a %RPD for Aroclor 1260 that was outside of the method acceptance limits of 40%. This analyte is flagged with a "J" qualifier on the report of analysis (ROA).

The opening/closing calibration verification standard (CV) (file 7EJ481) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV (files 7EJ497) had a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for TCX was acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CVs (files 7EJ500) had a high response for Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1254 was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EJ605) had a low response for Aroclor 1260 on channel A, as well as low responses for DCB on both channels, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B and the associated sample had an acceptable DCB recovery on channel B, the sample was not reanalyzed.

The MS/MSD WG98853-4 and 5 had high recoveries for Aroclor 1260 that were outside the laboratory established acceptance limits. Since the associated LCS/LCSD had acceptable recoveries, no further action was taken.

8270C SCAN Analysis

All soil samples and associated QC were subjected to the GPC sample clean-up process.

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6389-13 and 15 were manually integrated the target analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6389-2, 3, 7, 8, 9, 10, 11, 12, 13, 14 and 15 and the MSD WG98768-5 had low responses for one or more internal standards, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard.

The CV (file U8282) had a high response for the target analyte pyrene. This response resulted in a %D that was greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-11 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6389-(1-20) were digested for ICP analysis on 10/17/11 (QC Batch BJ17ICS2) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6389-7 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-11 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of copper in the matrix-spiked aliquot of Katahdin Sample Number SE6389-7 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6389-7 is outside the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for copper, lead, and zinc.

The measured recoveries of copper and lead in a post-digestion spike of SE6389-7 are within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6389-7 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all elements.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-11 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
11.11.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-11 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-AC26-0012	SE6389-001
DSY-SD-AC26-1224	SE6389-002
DSY-SD-AC26-2448	SE6389-003
DSY-SD-AC28-0012	SE6389-011
DSY-SD-AC28-1224	SE6389-012
DSY-SD-AC28-2448	SE6389-013
DSY-SD-AE26-0012	SE6389-008
DSY-SD-AE26-1224	SE6389-009
DSY-SD-AE26-2448	SE6389-010
DSY-SD-AE28-0012	SE6389-005
DSY-SD-AE28-1224	SE6389-006
DSY-SD-AE28-2448	SE6389-007
DSY-SD-AE28-2448	SE6389-007A
DSY-SD-AE28-2448	SE6389-007D
DSY-SD-AE28-2448	SE6389-007S
DSY-SD-AE30-0012	SE6389-015
DSY-SD-AE30-1224	SE6389-016
DSY-SD-AG30-0012	SE6389-018
DSY-SD-AG30-1224	SE6389-019
DSY-SD-AG30-2436	SE6389-020
DSY-SD-DUP13-092811	SE6389-004
DSY-SD-DUP14-092811	SE6389-014

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: George Brewer Name: George Brewer

Date: 12/13/11 Title: Inorganics Dept. Mgr.

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM XI - IN

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ17ICS2

Matrix: SOIL **SDG Name:** DSY-11

Method: P **Prep Date:** 10/17/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ17ICS2	LCSOBJ17ICS2	1	0.1	
PBSBJ17ICS2	PBSBJ17ICS2	1	0.1	
DSY-SD-AC26-0012	SE6389-001	1.34	0.1	A
DSY-SD-AC26-1224	SE6389-002	1.59	0.1	B
DSY-SD-AC26-2448	SE6389-003	1.42	0.1	A
DSY-SD-DUP13-092811	SE6389-004	1.49	0.1	B
DSY-SD-AE28-0012	SE6389-005	1.04	0.1	B
DSY-SD-AE28-1224	SE6389-006	1.47	0.1	B
DSY-SD-AE28-2448	SE6389-007	1.54	0.1	A
DSY-SD-AE28-2448D	SE6389-007D	1.57	0.1	A
DSY-SD-AE28-2448S	SE6389-007S	1.62	0.1	A
DSY-SD-AE26-0012	SE6389-008	1.22	0.1	B
DSY-SD-AE26-1224	SE6389-009	1.67	0.1	B
DSY-SD-AE26-2448	SE6389-010	1.53	0.1	A
DSY-SD-AC28-0012	SE6389-011	1.27	0.1	A
DSY-SD-AC28-1224	SE6389-012	1.33	0.1	B
DSY-SD-AC28-2448	SE6389-013	1.54	0.1	A
DSY-SD-DUP14-092811	SE6389-014	1.59	0.1	A
DSY-SD-AE30-0012	SE6389-015	1.47	0.1	A
DSY-SD-AE30-1224	SE6389-016	1.14	0.1	B
DSY-SD-AG30-0012	SE6389-018	1.08	0.1	C
DSY-SD-AG30-1224	SE6389-019	1.5	0.1	A
DSY-SD-AG30-2436	SE6389-020	1.48	0.1	B

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ17ICS2

Matrix: SOIL **SDG Name:** DSY-11

QC Batch ID: BJ17ICS2

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ17ICS2

Matrix: SOIL **SDG Name:** DSY-11

QC Batch ID: BJ17ICS2

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	23.27	93.1	80	120
LEAD	10.00	9.56	95.6	80	120
ZINC	50.00	52.29	104.6	80	120

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 68.3

Client Field ID: DSY-SD-AE28-2448S

SDG Name: DSY-11

Lab Sample ID: SE6389-007S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	72.5844		72.1268		22.58	2.0	N	80	120	P
LEAD, TOTAL	129.9764		98.6269		9.03	347.2		80	120	P
ZINC, TOTAL	508.1634		931.2544		45.16	-936.9		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 68.3

Client Field ID: DSY-SD-AE28-2448S

SDG Name: DSY-11

Lab Sample ID: SE6389-007A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	1165.0000		759.1000		500	81.2		75	125	P
LEAD, TOTAL	1430.0000		1038.0000		500	78.4		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE28-2448D

Matrix: SOIL **SDG Name:** DSY-11

Percent Solids: 68.3 **Lab Sample ID:** SE6389-007D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
COPPER, TOTAL		72.1268		31.9119		77.3	*	P
LEAD, TOTAL		98.6269		78.1488		23.2	*	P
ZINC, TOTAL		931.2544		420.5214		75.6	*	P

Comments:

FORM VI - IN

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE28-2448L

Matrix: SOIL **SDG Name:** DSY-11

Lab Sample ID: SE6389-007L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
COPPER, TOTAL	759.10		769.40		1.4		P
LEAD, TOTAL	1038.00		1103.00		6.3		P
ZINC, TOTAL	9801.00		10320.00		5.3		P

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ18A

Date: 10/18/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	14:40 AL	CA	CU FE PB MG	ZN
Std 1		1	14:45 AL	CA	CU FE PB MG	ZN
ICV		1	14:49 AL	CA	CU FE PB MG	ZN
ICB		1	14:54 AL	CA	CU FE PB MG	ZN
PQL		1	14:58 AL	CA	CU FE PB MG	ZN
ICSA		1	15:03 AL	CA	CU FE PB MG	ZN
ICSAB		1	15:07 AL	CA	CU FE PB MG	ZN
CCV		1	15:12 AL	CA	CU FE PB MG	ZN
CCB		1	15:16 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	15:21			
ZZZZZZ		5	15:26			
ZZZZZZ		5	15:30			
ZZZZZZ		1	15:35			
ZZZZZZ		1	15:39			
ZZZZZZ		5	15:43			
ZZZZZZ		1	15:48			
ZZZZZZ		1	15:52			
ZZZZZZ		1	15:57			
ZZZZZZ		1	16:01			
CCV		1	16:06 AL	CA	CU FE PB MG	ZN
CCB		1	16:10 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:15			
ZZZZZZ		1	16:19			
ZZZZZZ		1	16:23			
ZZZZZZ		1	16:28			
ZZZZZZ		1	16:32			
ZZZZZZ		1	16:37			
ZZZZZZ		1	16:41			
ZZZZZZ		1	16:46			
ZZZZZZ		1	16:50			
ZZZZZZ		1	16:55			
CCV		1	17:00 AL	CA	CU FE PB MG	ZN
CCB		1	17:04 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	17:08			
ZZZZZZ		1	17:13			
ZZZZZZ		1	17:18			
ZZZZZZ		1	17:22			
ZZZZZZ		1	17:27			
ZZZZZZ		5	17:31			
ZZZZZZ		1	17:36			
ZZZZZZ		1	17:40			
ZZZZZZ		1	17:45			
ZZZZZZ		1	17:49			
CCV		1	17:54 AL	CA	CU FE PB MG	ZN
CCB		1	17:58 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:03			
ZZZZZZ		1	18:07			
ZZZZZZ		1	18:12			
ZZZZZZ		1	18:16			
ZZZZZZ		1	18:21			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ18A

Date: 10/18/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
ZZZZZZ		1	18:26			
ZZZZZZ		1	18:30			
ZZZZZZ		1	18:35			
ZZZZZZ		1	18:39			
ZZZZZZ		1	18:44			
CCV		1	18:48 AL	CA	CU FE PB MG	ZN
CCB		1	18:53 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:57			
ZZZZZZ		1	19:02			
ZZZZZZ		1	19:07			
ZZZZZZ		1	19:11			
ZZZZZZ		1	19:16			
ZZZZZZ		5	19:20			
ZZZZZZ		1	19:25			
ZZZZZZ		1	19:29			
ZZZZZZ		1	19:34			
ZZZZZZ		1	19:38			
CCV		1	19:43 AL	CA	CU FE PB MG	ZN
CCB		1	19:47 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	19:52			
ZZZZZZ		1	19:56			
ZZZZZZ		1	20:01			
ZZZZZZ		1	20:06			
ZZZZZZ		1	20:10			
ZZZZZZ		1	20:15			
ZZZZZZ		1	20:19			
ZZZZZZ		1	20:24			
ZZZZZZ		5	20:28			
ZZZZZZ		1	20:33			
CCV		1	20:37 AL	CA	CU FE PB MG	ZN
CCB		1	20:42 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	20:46			
ZZZZZZ		1	20:51			
ZZZZZZ		1	20:55			
ZZZZZZ		1	21:00			
ZZZZZZ		1	21:04			
ZZZZZZ		1	21:08			
ZZZZZZ		1	21:13			
ZZZZZZ		1	21:17			
ZZZZZZ		1	21:22			
ZZZZZZ		1	21:26			
CCV		1	21:31 AL	CA	CU FE PB MG	ZN
CCB		1	21:35 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	21:40			
ZZZZZZ		1	21:44			
ZZZZZZ		1	21:49			
ZZZZZZ		1	21:53			
ZZZZZZ		1	21:58			
ZZZZZZ		1	22:02			
ZZZZZZ		1	22:07			
ZZZZZZ		1	22:11			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ18A

Date: 10/18/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time			Elements	
ZZZZZZ		1	22:16				
ZZZZZZ		1	22:20				
CCV		1	22:25	AL	CA	CU FE PB MG	ZN
CCB		1	22:29	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	22:34				
ZZZZZZ		1	22:38				
ZZZZZZ		1	22:43				
ZZZZZZ		1	22:47				
ZZZZZZ		1	22:52				
ZZZZZZ		1	22:56				
ZZZZZZ		1	23:01				
ZZZZZZ		1	23:05				
ZZZZZZ		1	23:10				
ZZZZZZ		5	23:15				
CCV		1	23:19	AL	CA	CU FE PB MG	ZN
CCB		1	23:24	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	23:28				
ZZZZZZ		1	23:33				
ZZZZZZ		1	23:37				
ZZZZZZ		1	23:42				
ZZZZZZ		1	23:46				
ZZZZZZ		1	23:51				
ZZZZZZ		1	23:55				
ZZZZZZ		1	0:00				
ZZZZZZ		1	0:04				
ZZZZZZ		1	0:09				
CCV		1	0:13	AL	CA	CU FE PB MG	ZN
CCB		1	0:18	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	0:22				
ZZZZZZ		1	0:27				
ZZZZZZ		1	0:32				
ZZZZZZ		1	0:36				
PBSBJ17ICS2		1	0:41			CU PB	ZN
LCSOBJ17ICS2		1	0:45			CU PB	ZN
SE6389-001	DSY-SD-AC26-0012	1	0:50			PB	
SE6389-002	DSY-SD-AC26-1224	1	0:54			PB	
SE6389-003	DSY-SD-AC26-2448	1	0:59			PB	
SE6389-004	DSY-SD-DUP13-092811	1	1:03			PB	
CCV		1	1:08	AL	CA	CU FE PB MG	ZN
CCB		1	1:12	AL	CA	CU FE PB MG	ZN
SE6389-005	DSY-SD-AE28-0012	1	1:17			CU PB	ZN
SE6389-006	DSY-SD-AE28-1224	1	1:21			CU PB	ZN
SE6389-007	DSY-SD-AE28-2448	1	1:26			CU PB	ZN
SE6389-007L	DSY-SD-AE28-2448L	5	1:30			CU PB	ZN
SE6389-007A	DSY-SD-AE28-2448A	1	1:35			CU PB	
SE6389-007D	DSY-SD-AE28-2448D	1	1:39			CU PB	ZN
ZZZZZZ		1	1:44				
SE6389-008	DSY-SD-AE26-0012	1	1:48			PB	
SE6389-009	DSY-SD-AE26-1224	1	1:52			PB	
SE6389-010	DSY-SD-AE26-2448	1	1:57			PB	
CCV		1	2:01	AL	CA	CU FE PB MG	ZN

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ18A

Date: 10/19/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
CCB		1	2:06	AL	CA	CU	FE	PB	MG	ZN
SE6389-011	DSY-SD-AC28-0012	1	2:10					PB		
SE6389-012	DSY-SD-AC28-1224	1	2:15					PB		
SE6389-013	DSY-SD-AC28-2448	1	2:19					PB		
SE6389-014	DSY-SD-DUP14-092811	1	2:24					PB		
SE6389-015	DSY-SD-AE30-0012	1	2:28					PB		
ZZZZZZ		1	2:33							
SE6389-018	DSY-SD-AG30-0012	1	2:37					PB		
ZZZZZZ		1	2:42							
SE6389-020	DSY-SD-AG30-2436	1	2:46					PB		
CCV		1	2:51	AL	CA	CU	FE	PB	MG	ZN
CCB		1	2:55	AL	CA	CU	FE	PB	MG	ZN

FORM XIV - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ18A Oct 18, 2011 14:49

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9882.00	98.8
CALCIUM	10000.0	9802.00	98.0
COPPER	400.0	402.40	100.6
IRON	10000.0	9951.00	99.5
LEAD	400.0	409.50	102.4
MAGNESIUM	10000.0	10240.00	102.4
ZINC	400.0	404.20	101.1

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 15:12

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12380.00	99.0
CALCIUM	12500.0	12400.00	99.2
COPPER	500.0	493.60	98.7
IRON	12500.0	12390.00	99.1
LEAD	500.0	504.00	100.8
MAGNESIUM	12500.0	12750.00	102.0
ZINC	500.0	500.10	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 16:06

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12520.00	100.2
CALCIUM	12500.0	12460.00	99.7
COPPER	500.0	501.20	100.2
IRON	12500.0	12510.00	100.1
LEAD	500.0	506.50	101.3
MAGNESIUM	12500.0	12780.00	102.2
ZINC	500.0	505.40	101.1

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 17:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12440.00	99.5
CALCIUM	12500.0	12270.00	98.2
COPPER	500.0	485.20	97.0
IRON	12500.0	12390.00	99.1
LEAD	500.0	492.80	98.6
MAGNESIUM	12500.0	12470.00	99.8
ZINC	500.0	494.90	99.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 17:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12280.00	98.2
COPPER	500.0	491.80	98.4
IRON	12500.0	12490.00	99.9
LEAD	500.0	501.10	100.2
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	508.00	101.6

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 18:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12350.00	98.8
COPPER	500.0	492.20	98.4
IRON	12500.0	12540.00	100.3
LEAD	500.0	502.70	100.5
MAGNESIUM	12500.0	12630.00	101.0
ZINC	500.0	512.60	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 19:43

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12610.00	100.9
CALCIUM	12500.0	12300.00	98.4
COPPER	500.0	484.70	96.9
IRON	12500.0	12570.00	100.6
LEAD	500.0	499.50	99.9
MAGNESIUM	12500.0	12560.00	100.5
ZINC	500.0	515.20	103.0

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 20:37

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12440.00	99.5
CALCIUM	12500.0	12050.00	96.4
COPPER	500.0	476.70	95.3
IRON	12500.0	12480.00	99.8
LEAD	500.0	496.00	99.2
MAGNESIUM	12500.0	12570.00	100.6
ZINC	500.0	518.40	103.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 21:31

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12510.00	100.1
CALCIUM	12500.0	12100.00	96.8
COPPER	500.0	476.70	95.3
IRON	12500.0	12570.00	100.6
LEAD	500.0	494.00	98.8
MAGNESIUM	12500.0	12430.00	99.4
ZINC	500.0	517.00	103.4

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 22:25

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12170.00	97.4
CALCIUM	12500.0	11970.00	95.8
COPPER	500.0	467.40	93.5
IRON	12500.0	12320.00	98.6
LEAD	500.0	485.70	97.1
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	507.00	101.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 18, 2011 23:19

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12360.00	98.9
CALCIUM	12500.0	11920.00	95.4
COPPER	500.0	472.70	94.5
IRON	12500.0	12420.00	99.4
LEAD	500.0	488.00	97.6
MAGNESIUM	12500.0	12270.00	98.2
ZINC	500.0	515.80	103.2

SAMPLE: CCV

File: IBJ18A Oct 19, 2011 0:13

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12430.00	99.4
CALCIUM	12500.0	12010.00	96.1
COPPER	500.0	453.00	90.6
IRON	12500.0	12490.00	99.9
LEAD	500.0	493.90	98.8
MAGNESIUM	12500.0	12450.00	99.6
ZINC	500.0	522.70	104.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 19, 2011 1:08

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12520.00	100.2
CALCIUM	12500.0	12160.00	97.3
COPPER	500.0	471.30	94.3
IRON	12500.0	12620.00	101.0
LEAD	500.0	490.90	98.2
MAGNESIUM	12500.0	12400.00	99.2
ZINC	500.0	520.00	104.0

SAMPLE: CCV

File: IBJ18A Oct 19, 2011 2:01

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12060.00	96.5
COPPER	500.0	469.20	93.8
IRON	12500.0	12620.00	101.0
LEAD	500.0	490.40	98.1
MAGNESIUM	12500.0	12380.00	99.0
ZINC	500.0	522.10	104.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ18A Oct 19, 2011 2:51

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12150.00	97.2
CALCIUM	12500.0	11800.00	94.4
COPPER	500.0	468.30	93.7
IRON	12500.0	12300.00	98.4
LEAD	500.0	492.90	98.6
MAGNESIUM	12500.0	12440.00	99.5
ZINC	500.0	525.40	105.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ18A Oct 18, 2011 14:58

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	313.10	104.4
CALCIUM	100.0	102.40	102.4
COPPER	25.0	27.51	110.0
IRON	100.0	99.27	99.3
LEAD	5.0	4.92	98.4
MAGNESIUM	100.0	106.70	106.7
ZINC	20.0	20.80	104.0

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ18A Oct 18, 2011 14:54

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 15:16

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	-0.215	J

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 16:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.965	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 17:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 17:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	1.070	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 18:53

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.649	J
IRON	4.388	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 19:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	1.349	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 20:42

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 21:35

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.686	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 22:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 18, 2011 23:24

Analyte	Result	C
ALUMINUM	17.620	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.294	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ18A Oct 19, 2011 0:18

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	14.450	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ18A Oct 19, 2011 1:12

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ18A Oct 19, 2011 2:06

Analyte	Result	C
ALUMINUM	14.910	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ18A Oct 19, 2011 2:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.225	J

no samples for ZN

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ18A Oct 18, 2011 15:03

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	483900	96.8
CALCIUM	500000	458400	91.7
COPPER	0	3	
IRON	200000	185400	92.7
LEAD	0	-1	
MAGNESIUM	500000	437200	87.4
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ18A Oct 18, 2011 15:07

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	484100	96.8
CALCIUM	500000	454100	90.8
COPPER	500	512	102.4
IRON	200000	182900	91.5
LEAD	50	49	98.0
MAGNESIUM	500000	426300	85.3
ZINC	1000	956	95.6

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ19A

Date: 10/19/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	12:16 AL	CA	CU FE PB MG	ZN
Std 1		1	12:20 AL	CA	CU FE PB MG	ZN
ICV		1	12:25 AL	CA	CU FE PB MG	ZN
ICB		1	12:29 AL	CA	CU FE PB MG	ZN
PQL		1	12:34 AL	CA	CU FE PB MG	ZN
ICSA		1	12:38 AL	CA	CU FE PB MG	ZN
ICSAB		1	12:43 AL	CA	CU FE PB MG	ZN
CCV		1	12:47 AL	CA	CU FE PB MG	ZN
CCB		1	12:52 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	12:56			
ZZZZZZ		1	13:01			
ZZZZZZ		1	13:05			
ZZZZZZ		1	13:10			
ZZZZZZ		1	13:15			
ZZZZZZ		1	13:19			
ZZZZZZ		1	13:24			
ZZZZZZ		10	13:28			
ZZZZZZ		2	13:33			
ZZZZZZ		2	13:37			
CCV		1	13:41 AL	CA	CU FE PB MG	ZN
CCB		1	13:46 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	13:50			
ZZZZZZ		2	13:55			
ZZZZZZ		2	13:59			
ZZZZZZ		1	14:04			
ZZZZZZ		1	14:08			
ZZZZZZ		1	14:13			
ZZZZZZ		1	14:17			
ZZZZZZ		1	14:22			
ZZZZZZ		1	14:26			
ZZZZZZ		1	14:31			
CCV		1	14:36 AL	CA	CU FE PB MG	ZN
CCB		1	14:40 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	14:44			
ZZZZZZ		5	14:49			
ZZZZZZ		2	14:54			
ZZZZZZ		5	14:58			
ZZZZZZ		2	15:03			
ZZZZZZ		2	15:07			
ZZZZZZ		2	15:12			
ZZZZZZ		5	15:16			
ZZZZZZ		1	15:21			
ZZZZZZ		1	15:26			
CCV		1	15:30 AL	CA	CU FE PB MG	ZN
CCB		1	15:35 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:39			
ZZZZZZ		1	15:44			
ZZZZZZ		5	15:48			
ZZZZZZ		1	15:53			
ZZZZZZ		1	15:57			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ19A

Date: 10/19/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
ZZZZZZ		1	16:02			
ZZZZZZ		1	16:06			
ZZZZZZ		1	16:11			
ZZZZZZ		1	16:15			
ZZZZZZ		1	16:20			
CCV		1	16:24 AL	CA	CU FE PB MG	ZN
CCB		1	16:29 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:33			
ZZZZZZ		1	16:38			
ZZZZZZ		1	16:42			
ZZZZZZ		1	16:47			
ZZZZZZ		1	16:51			
ZZZZZZ		1	16:56			
ZZZZZZ		1	17:01			
ZZZZZZ		1	17:05			
ZZZZZZ		1	17:10			
ZZZZZZ		1	17:14			
CCV		1	17:19 AL	CA	CU FE PB MG	ZN
CCB		1	17:23 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	17:28			
ZZZZZZ		1	17:32			
ZZZZZZ		1	17:37			
ZZZZZZ		1	17:41			
ZZZZZZ		5	17:46			
ZZZZZZ		1	17:50			
ZZZZZZ		1	17:54			
ZZZZZZ		1	17:59			
ZZZZZZ		1	18:03			
ZZZZZZ		1	18:08			
CCV		1	18:12 AL	CA	CU FE PB MG	ZN
CCB		1	18:17 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:21			
ZZZZZZ		1	18:26			
ZZZZZZ		1	18:30			
ZZZZZZ		1	18:35			
ZZZZZZ		1	18:39			
ZZZZZZ		1	18:44			
ZZZZZZ		1	18:48			
ZZZZZZ		1	18:53			
ZZZZZZ		1	18:58			
ZZZZZZ		1	19:02			
CCV		1	19:07 AL	CA	CU FE PB MG	ZN
CCB		1	19:11 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	19:16			
ZZZZZZ		1	19:20			
ZZZZZZ		1	19:25			
ZZZZZZ		1	19:29			
ZZZZZZ		1	19:34			
ZZZZZZ		1	19:38			
ZZZZZZ		1	19:43			
ZZZZZZ		1	19:48			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ19A

Date: 10/19/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	19:52				
ZZZZZZ		5	19:57				
CCV		1	20:01 AL	CA	CU FE PB MG		ZN
CCB		1	20:05 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	20:10				
ZZZZZZ		1	20:14				
ZZZZZZ		1	20:19				
ZZZZZZ		1	20:23				
ZZZZZZ		1	20:28				
ZZZZZZ		1	20:33				
ZZZZZZ		1	20:37				
ZZZZZZ		1	20:42				
ZZZZZZ		1	20:46				
ZZZZZZ		1	20:51				
CCV		1	20:55 AL	CA	CU FE PB MG		ZN
CCB		1	21:00 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	21:04				
ZZZZZZ		1	21:09				
ZZZZZZ		1	21:13				
ZZZZZZ		1	21:18				
ZZZZZZ		1	21:23				
ZZZZZZ		1	21:27				
ZZZZZZ		1	21:32				
ZZZZZZ		1	21:36				
ZZZZZZ		1	21:41				
ZZZZZZ		1	21:45				
CCV		1	21:50 AL	CA	CU FE PB MG		ZN
CCB		1	21:54 AL	CA	CU FE PB MG		ZN
SE6389-007S	DSY-SD-AE28-2448S	2	21:59		CU PB		ZN
SE6389-016	DSY-SD-AE30-1224	2	22:03		PB		
SE6389-019	DSY-SD-AG30-1224	2	22:08		PB		
ZZZZZZ		1	22:12				
ZZZZZZ		1	22:17				
ZZZZZZ		1	22:21				
ZZZZZZ		1	22:26				
ZZZZZZ		1	22:30				
ZZZZZZ		1	22:35				
ZZZZZZ		2	22:39				
CCV		1	22:44 AL	CA	CU FE PB MG		ZN
CCB		1	22:49 AL	CA	CU FE PB MG		ZN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ19A Oct 19, 2011 12:25

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9966.00	99.7
CALCIUM	10000.0	9851.00	98.5
COPPER	400.0	402.00	100.5
IRON	10000.0	10060.00	100.6
LEAD	400.0	413.00	103.3
MAGNESIUM	10000.0	10270.00	102.7
ZINC	400.0	407.10	101.8

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 12:47

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12380.00	99.0
CALCIUM	12500.0	12520.00	100.2
COPPER	500.0	520.80	104.2
IRON	12500.0	12440.00	99.5
LEAD	500.0	517.60	103.5
MAGNESIUM	12500.0	13090.00	104.7
ZINC	500.0	508.60	101.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 13:41

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	12870.00	103.0
COPPER	500.0	499.90	100.0
IRON	12500.0	12700.00	101.6
LEAD	500.0	524.20	104.8
MAGNESIUM	12500.0	13220.00	105.8
ZINC	500.0	505.30	101.1

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 14:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12870.00	103.0
COPPER	500.0	499.90	100.0
IRON	12500.0	12680.00	101.4
LEAD	500.0	525.70	105.1
MAGNESIUM	12500.0	13190.00	105.5
ZINC	500.0	508.80	101.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 15:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12920.00	103.4
CALCIUM	12500.0	12990.00	103.9
COPPER	500.0	503.00	100.6
IRON	12500.0	12860.00	102.9
LEAD	500.0	523.50	104.7
MAGNESIUM	12500.0	13120.00	105.0
ZINC	500.0	505.10	101.0

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 16:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13030.00	104.2
CALCIUM	12500.0	12960.00	103.7
COPPER	500.0	496.30	99.3
IRON	12500.0	12880.00	103.0
LEAD	500.0	525.80	105.2
MAGNESIUM	12500.0	13200.00	105.6
ZINC	500.0	503.20	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 17:19

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	491.70	98.3
IRON	12500.0	12680.00	101.4
LEAD	500.0	522.00	104.4
MAGNESIUM	12500.0	13090.00	104.7
ZINC	500.0	500.10	100.0

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 18:12

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13030.00	104.2
CALCIUM	12500.0	12790.00	102.3
COPPER	500.0	497.80	99.6
IRON	12500.0	12910.00	103.3
LEAD	500.0	522.90	104.6
MAGNESIUM	12500.0	13060.00	104.5
ZINC	500.0	502.10	100.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 19:07

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12870.00	103.0
CALCIUM	12500.0	12720.00	101.8
COPPER	500.0	494.80	99.0
IRON	12500.0	12700.00	101.6
LEAD	500.0	525.70	105.1
MAGNESIUM	12500.0	13200.00	105.6
ZINC	500.0	502.40	100.5

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 20:01

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12930.00	103.4
CALCIUM	12500.0	12700.00	101.6
COPPER	500.0	491.30	98.3
IRON	12500.0	12730.00	101.8
LEAD	500.0	520.50	104.1
MAGNESIUM	12500.0	13060.00	104.5
ZINC	500.0	499.30	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 20:55

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13150.00	105.2
CALCIUM	12500.0	12910.00	103.3
COPPER	500.0	498.30	99.7
IRON	12500.0	12890.00	103.1
LEAD	500.0	524.60	104.9
MAGNESIUM	12500.0	13160.00	105.3
ZINC	500.0	499.90	100.0

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 21:50

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13270.00	106.2
CALCIUM	12500.0	12940.00	103.5
COPPER	500.0	500.40	100.1
IRON	12500.0	13040.00	104.3
LEAD	500.0	527.40	105.5
MAGNESIUM	12500.0	13220.00	105.8
ZINC	500.0	504.10	100.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ19A Oct 19, 2011 22:44

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13030.00	104.2
CALCIUM	12500.0	13010.00	104.1
COPPER	500.0	490.30	98.1
IRON	12500.0	12720.00	101.8
LEAD	500.0	533.50	106.7
MAGNESIUM	12500.0	13340.00	106.7
ZINC	500.0	495.90	99.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ19A Oct 19, 2011 12:34

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	300.00	100.0
CALCIUM	100.0	106.40	106.4
COPPER	25.0	26.63	106.5
IRON	100.0	101.40	101.4
LEAD	5.0	4.12	82.4
MAGNESIUM	100.0	108.20	108.2
ZINC	20.0	20.77	103.8

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ19A Oct 19, 2011 12:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	-1.827	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 12:52

Analyte	Result	C
ALUMINUM	-23.740	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 13:46

Analyte	Result	C
ALUMINUM	-18.850	J
CALCIUM	11.400	U
COPPER	-1.647	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 14:40

Analyte	Result	C
ALUMINUM	-28.120	J
CALCIUM	11.400	U
COPPER	-1.724	J
IRON	3.020	U
LEAD	17.720	B
MAGNESIUM	-246.700	B
ZINC	-13.370	B

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 15:35

Analyte	Result	C
ALUMINUM	-21.940	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 16:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	-1.357	J
MAGNESIUM	5.500	U
ZINC	0.190	U

ND Samples

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 17:23

Analyte	Result	C
ALUMINUM	-17.220	J
CALCIUM	11.400	U
COPPER	-0.987	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.209	J

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 18:17

Analyte	Result	C
ALUMINUM	-33.660	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 19:11

Analyte	Result	C
ALUMINUM	-19.750	J
CALCIUM	11.400	U
COPPER	-1.452	J
IRON	3.195	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 20:05

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	-1.177	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 21:00

Analyte	Result	C
ALUMINUM	-25.770	J
CALCIUM	11.400	U
COPPER	-1.083	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ19A Oct 19, 2011 21:54

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ19A Oct 19, 2011 22:49

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	-0.738	J
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	-8.679	J
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-11

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ19A Oct 19, 2011 12:38

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	490100	98.0
CALCIUM	500000	450600	90.1
COPPER	0	1	
IRON	200000	184100	92.0
LEAD	0	0	
MAGNESIUM	500000	446700	89.3
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ19A Oct 19, 2011 12:43

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480400	96.1
CALCIUM	500000	450600	90.1
COPPER	500	502	100.4
IRON	200000	180800	90.4
LEAD	50	47	94.0
MAGNESIUM	500000	428300	85.7
ZINC	1000	937	93.7

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99016	Lloyd Kahn	10-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300
MBLANK	WG99019	Lloyd Kahn	11-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99016	Lloyd Kahn	10-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300
MBLANK	WG99019	Lloyd Kahn	11-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99010	ASTM D2216	12-OCT-11	11-OCT-11	U 1 %	1 %	N/A
MBLANK	WG99020	ASTM D2216	12-OCT-11	11-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99016-2	LCS	WG99016	10-OCT-11	N/A	ug/gdrywt	400000.000	410000	104	80-120	
WG99019-2	LCS	WG99019	11-OCT-11	N/A	ug/gdrywt	400000.000	420000	106	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99016-2	LCS	WG99016	10-OCT-11	N/A	ug/gdrywt	400000.000	410000	104	80-120	
WG99019-2	LCS	WG99019	11-OCT-11	N/A	ug/gdrywt	400000.000	420000	106	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99010-2	LCS	WG99010	12-OCT-11	11-OCT-11	%	90	95.	105	80-120	
WG99020-2	LCS	WG99020	12-OCT-11	11-OCT-11	%	90	95.	106	80-120	

Quality Control Report

Duplicate Sample Summary Report

Toc In Soil(1)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99019-3	SE6389-15	WG99019	11-OCT-11	ug/gdrywt	12000	12000	2	30

Toc In Soil(2)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99019-3	SE6389-15	WG99019	11-OCT-11	ug/gdrywt	13000	16000	18	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99010-4	SE6389-1	WG99010	12-OCT-11	%	36.	35.	4	20
WG99020-4	SE6389-20	WG99020	12-OCT-11	%	86.	86.	0	20
WG99020-3	SE6389-7	WG99020	12-OCT-11	%	68.	70.	3	20

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99019-4	MS	SE6389-15	WG99019	11-OCT-11	ug/gdrywt	13004.25	12000	27000	121	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99019-4	MS	SE6389-15	WG99019	11-OCT-11	ug/gdrywt	13004.25	13000	27000	112	75 - 125

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**S. PARKER**	**DATE:**	**DECEMBER 14, 2011**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – LEAD, TOTAL ORGANIC CARBON, TOTAL SOLIDS**
CTO – WE61 NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) – DSY-18

SAMPLES: 19/Sediments/

DSY-SD-DUP26-100511
DSY-SD-L24-1224
DSY-SD-L26-1224
DSY-SD-N24-0012
DSY-SD-N24-2448
DSY-SD-N26-1224
DSY-SD-N28-0012
DSY-SD-N28-2448
DSY-SD-N30-1224
DSY-SD-Q25-0012
DSY-SD-L24-0012
DSY-SD-L24-2448
DSY-SD-L26-2448
DSY-SD-N24-1224
DSY-SD-N26-0012
DSY-SD-N26-2448
DSY-SD-N28-1224
DSY-SD-N30-0012
DSY-SD-N30-2448

1/Aqueous/

DSY-SD-RB09-100411

Overview

The sample set for NETC Newport, CTO WE61, SDG DSY-18, consists of nineteen (19) sediment environmental samples and one (1) rinsate blank (DSY-SD-RB09-100411). One (1) field duplicate pair (DSY-SD-N24-2448 / DSY-SD-DUP26-100511) was included within this SDG.

All samples were analyzed for lead. All samples except DSY-SD-RB09-100411 were analyzed for total solids. Samples DSY-SD-L24-0012, DSY-SD-N24-0012, DSY-SD-N26-0012, DSY-SD-N28-0012, DSY-SD-N30-0012 and DSY-SD-Q25-0012 were also analyzed for total organic carbon. The samples were collected by Tetra Tech on October 4 and 5, 2011 and analyzed by Katahdin Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals analyses were conducted using SW-846 method 6010C. Total solids analyses were conducted using Standard Method 2540G. Total organic carbon analyses were conducted using the Lloyd Kahn method.

All samples in this SDG were validated to EPA Region I Tier II protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
* • Laboratory Method/Preparation Blank Analyses

* • ICP Interference Check Sample Results
* • Matrix Spike Recoveries
  • Laboratory Duplicate Results
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
  • Field Duplicate Results
* • Detection Limits
* • Sample Quantitation

* - All quality control criteria were met for this parameter.

Laboratory Duplicate Results

Laboratory duplicate imprecision (RPD > 35%) was noted for lead. The positive results reported for lead were qualified as estimated, "J".

Field Duplicate Results

Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-N24-2448 / DSY-SD-DUP26-100511. The positive results reported for lead were qualified as estimated, "J".

Notes

The nondetected results were reported to the limit of detection (LOD)

All detection limits reported were below the project action limit listed in the sampling and analysis plan (SAP).

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Laboratory duplicate imprecision (RPD > 35%) was noted for lead. Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-N24-2448 / DSY-SD-DUP26-100511.

The data for these analyses were reviewed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D – Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB09-100411		
SDG: DSY-18	LAB_ID	SE6617-006		
FRACTION: M	SAMP_DATE	10/4/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-L24-0012			DSY-SD-L24-1224			DSY-SD-L24-2448		
SDG: DSY-18	LAB_ID	SE6617-010			SE6617-003			SE6617-004			SE6617-005		
FRACTION: M	SAMP_DATE	10/5/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	80.9			41.5			47.8			70.5		
	DUP_OF	DSY-SD-N24-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		43.2	J	FG	884	J	FG	543	J	FG	20.8	J	FG

PROJ_NO: 02747 SDG: DSY-18 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-1224			DSY-SD-L26-2448			DSY-SD-N24-0012			DSY-SD-N24-1224		
	LAB_ID	SE6617-001			SE6617-002			SE6617-007			SE6617-008		
	SAMP_DATE	10/4/2011			10/4/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	80.0			75.4			41.5			44.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		4.3	J	FG	9.2	J	FG	53.2	J	FG	66.6	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SD-N24-2448			DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2448		
SDG: DSY-18	LAB_ID	SE6617-009			SE6617-011			SE6617-012			SE6617-013		
FRACTION: M	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	77.3			38.0			56.0			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		1640	J	FG	110	J	FG	68.8	J	FG	45.2	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SD-N28-0012			DSY-SD-N28-1224			DSY-SD-N28-2448			DSY-SD-N30-0012		
SDG: DSY-18	LAB_ID	SE6617-014			SE6617-015			SE6617-016			SE6617-017		
FRACTION: M	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	39.3			41.5			63.0			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		70.6	J	FG	246	J	FG	390	J	FG	51.1	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012		
SDG: DSY-18	LAB_ID	SE6617-018			SE6617-019			SE6617-020		
FRACTION: M	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	41.7			71.8			45.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		213	J	FG	38.5	J	FG	60.6	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-L24-0012						DSY-SD-L24-1224		
SDG: DSY-18	LAB_ID	SE6617-10			SE6617-3						SE6617-4		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/4/2011						10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	80.9			41.5			41.5			47.8		
	DUP_OF	DSY-SD-N24-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								64000					
TOTAL SOLIDS		81			41						48		

PROJ_NO: 02747	NSAMPLE	DSY-SD-L24-2448			DSY-SD-L26-1224			DSY-SD-L26-2448			DSY-SD-N24-0012		
SDG: DSY-18	LAB_ID	SE6617-5			SE6617-1			SE6617-2			SE6617-7		
FRACTION: MISC	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	70.5			80.0			75.4			41.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		70			80			75			41		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N24-0012			DSY-SD-N24-1224			DSY-SD-N24-2448			DSY-SD-N26-0012		
SDG: DSY-18	LAB_ID	SE6617-7			SE6617-8			SE6617-9			SE6617-11		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	41.5			44.0			77.3			38.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		33000											
TOTAL SOLIDS					44			77			38		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2448			DSY-SD-N28-0012		
SDG: DSY-18	LAB_ID	SE6617-11			SE6617-12			SE6617-13			SE6617-14		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	38.0			56.0			72.1			39.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		37000											
TOTAL SOLIDS					56			72			39		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N28-0012			DSY-SD-N28-1224			DSY-SD-N28-2448			DSY-SD-N30-0012		
SDG: DSY-18	LAB_ID	SE6617-14			SE6617-15			SE6617-16			SE6617-17		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	39.3			41.5			62.9			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		38000											
TOTAL SOLIDS					41			63			42		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N30-0012			DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012		
SDG: DSY-18	LAB_ID	SE6617-17			SE6617-18			SE6617-19			SE6617-20		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	41.7			41.7			71.8			45.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		38000											
TOTAL SOLIDS					42			72			45		

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q25-0012		
SDG: DSY-18	LAB_ID	SE6617-20		
FRACTION: MISC	SAMP_DATE	10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	45.1		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		34000		
TOTAL SOLIDS				

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-RB09-100411

Matrix: WATER **SDG Name:** DSY-18

Percent Solids: 0.00 **Lab Sample ID:** SE6617-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP26-100511

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 80.9 **Lab Sample ID:** SE6617-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	43.2		*	P	1	0.43	0.07	0.34

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-L24-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 41.4 **Lab Sample ID:** SE6617-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	884		*	P	2	2.1	0.36	1.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-L24-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 47.8 **Lab Sample ID:** SE6617-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	543		*	P	2	1.5	0.26	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-L24-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 70.5 **Lab Sample ID:** SE6617-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	20.8		*	P	2	0.71	0.12	0.57

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-L26-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 80.0 **Lab Sample ID:** SE6617-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.3		*	P	1	0.61	0.11	0.49

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-L26-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 75.4 **Lab Sample ID:** SE6617-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	9.2		*	P	1	0.59	0.10	0.47

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N24-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 41.5 **Lab Sample ID:** SE6617-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	53.2		*	P	1	0.86	0.15	0.68

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N24-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 44.0 **Lab Sample ID:** SE6617-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	66.6		*	P	1	0.68	0.12	0.54

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N24-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 77.3 **Lab Sample ID:** SE6617-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	1640		*	P	2	0.63	0.11	0.51

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N26-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 38.0 **Lab Sample ID:** SE6617-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	110		*	P	2	1.8	0.31	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N26-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 56.0 **Lab Sample ID:** SE6617-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	68.8		*	P	1	0.74	0.13	0.59

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N26-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 72.1 **Lab Sample ID:** SE6617-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	45.2		*	P	2	0.75	0.13	0.60

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 39.3 **Lab Sample ID:** SE6617-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	70.6		*	P	1	0.64	0.11	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 41.5 **Lab Sample ID:** SE6617-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	246		*	P	1	0.89	0.16	0.71

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 63.0 **Lab Sample ID:** SE6617-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	390		*	P	2	0.86	0.15	0.69

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N30-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 41.6 **Lab Sample ID:** SE6617-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	51.1		*	P	1	0.82	0.14	0.65

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N30-1224

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 41.7 **Lab Sample ID:** SE6617-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	213		*	P	1	0.71	0.12	0.57

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N30-2448

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 71.8 **Lab Sample ID:** SE6617-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	38.5		*	P	2	0.88	0.15	0.70

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q25-0012

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 45.1 **Lab Sample ID:** SE6617-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	60.6		*	P	1	0.70	0.12	0.56

Comments:

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-10
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP26-100511	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	81. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:04:14	ASTM D2216	21-OCT-11	

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ANALYTICAL SERVICES

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nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-3
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-L24-0012	SL	04-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	44000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 16:16:55	N/A	N/A	
Toc In Soil(2)	85000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 16:27:35	N/A	N/A	
Toc In Soil(Avg)	64000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	41. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:02:43	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-4
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-L24-1224	SL	04-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	48. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:02:56	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-5
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-L24-2448	SL	04-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	70. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:03:11	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-1
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-L26-1224	SL	04-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	80. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:01:58	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-2
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-L26-2448	SL	04-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	75. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:02:26	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-7
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N24-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc in Soil(1)	34000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 16:38:14	N/A	N/A	
Toc in Soil(2)	33000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 16:49:12	N/A	N/A	
Toc in Soil(Avg)	33000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	41. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:03:26	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-8
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N24-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	44. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:03:46	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-9
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N24-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	77. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:04:02	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-11
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N26-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	37000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99433	17-OCT-11 16:59:21	N/A	N/A	
Toc In Soil(2)	37000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99433	17-OCT-11 17:10:06	N/A	N/A	
Toc In Soil(Avg)	37000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:04:27	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-12
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N26-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	56. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:04:41	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-13
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N26-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	72. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:04:54	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-14
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N28-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	34000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99433	17-OCT-11 17:23:01	N/A	N/A	
Toc In Soil(2)	41000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99433	17-OCT-11 17:34:26	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	39. %	1		N/A	SM2540G	WG99628	22-OCT-11 11:05:04	ASTM D2216	21-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-15
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N28-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	41. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:24:09	ASTM D2216	22-OCT-11	

Katahdin Analytical Services 500082

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-16
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N28-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	63. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:24:26	ASTM D2216	22-OCT-11	

Katahdin Analytical Services 5000822

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-17
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N30-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	44000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 17:44:25	N/A	N/A	
Toc In Soil(2)	31000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 18:10:20	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	42. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:24:34	ASTM D2216	22-OCT-11	

Katahdin Analytical Services 5000823

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-18
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N30-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	42. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:24:50	ASTM D2216	22-OCT-11	

Katahdin Analytical Services 5000[illegible]

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-19
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-N30-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	72. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:25:00	ASTM D2216	22-OCT-11	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6617-20
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-18

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q25-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	34000 ug/gdrywt	890	190	660	LLOYD KAHN	WG99433	17-OCT-11 18:19:30	N/A	N/A	
Toc In Soil(2)	34000 ug/gdrywt	890	190	660	LLOYD KAHN	WG99433	17-OCT-11 18:29:21	N/A	N/A	
Toc In Soil(Avg)	34000 ug/gdrywt	890	190	660	LLOYD KAHN	WG99433	17-OCT-11 08:37:08	N/A	N/A	
Total Solids	45. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:25:07	ASTM D2216	22-OCT-11	

APPENDIX C
REGION I WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. DSY-19
No. of Samples/Matrix 19 sediment
1 aqueous

SOW/Method No. See validation report
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Terri Solomon Company Name Tetra Tech Phone Number _____

Date Validation Started 12-14-2011 Date Validation Completed 12-14-2011

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets:

INORG	COMPLETE SDG FILE (CSF) AUDIT	
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	
INORG-II	ICP-MS TUNE	NA
INORG-III-A/B	CALIBRATIONS	
INORG-IV-A/B	BLANKS	
INORG-IV-C.1	BLANKS	
INORG-IV-C.2	BLANKS	
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	NA
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	NA
INORG-VII	ICP-MS INTERNAL STANDARDS	NA
INORG-VIII	MATRIX SPIKES	
INORG-IX	LABORATORY DUPLICATE SAMPLES	
INORG-X	FIELD DUPLICATES	
INORG-XI	ICP SERIAL DILUTIONS	
INORG-XII-A/B	SENSITIVITY CHECK	
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	NA
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Terri Solomon Name: Terri Solomon

Date: 12-14-2011

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

see validation letter

Site:_____ Case:_____ SDG:_____

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Pam Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG

see validation letter

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters:_____

Missing Information	Date Lab Contacted	Date Received

Validator: Russ Slamon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-I

see validation letter

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Heidi Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

N/A

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			

Comments:

Validator: Alan Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

see validation letter

III. CALIBRATIONS

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Anne Sulaman Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

see validation letter

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: Lisa Sulcman Date: 12-14-2011

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

see validation letter

Circle the highest concentration of each contaminant.

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator Kenn Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IV-C.2

see validation letter

IV. BLANKS

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample.

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action

Comments:

Validator: Mary Solomon

Date: 12-14-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-A

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

See validation letter

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Karen Sukman

Date: 12-14-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

see validation letter

1. List all analytes in the ICSA that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	
Comments:										

Validator: Helen Solomon

Date: 12-14-2011

EPA NE - Data Validation Worksheet
INORG-V-B.2

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

see validation letter

2. List all affected sample results.

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action

Comments:

Validator: Kris Solomon

Date: 12-14-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

N/A

List all analytes that are outside ICSAB criteria of 80-120% R.

Date	Analyte	%R	Samples Affected	Action
Comments:				

Validator: Heri Solomon

Date: 12-14-2011

EPA NE - Data Validation Worksheet
INORG-VI-B

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

N/A

List all analytes that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Kim Sulcman

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

VII. ICP-MS INTERNAL STANDARDS

N/A

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator: Karen Sakmen

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VIII

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

see validation letter

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action
Comments:								

Validator: Karen Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IX

See validation letter

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Karen Solomon

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria. see validation letter

Use a separate worksheet for each field duplicate pair.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Andrew Solomon Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

see validation letter

XI. ICP SERIAL DILUTIONS

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action

Comments:

Validator: Kristi Solomon Date: 12-14-2011

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

See validation letter

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Kim Solomon

Date: 12-14-2011

EPA-NE - Data Validation Worksheet
INORG-XIII-A

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

see validation letter

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N**

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action
Comments:								

Validator: John Sulaman

Date: 12-14-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

N/A

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? **Y** **N**

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator Kevin Solomon

Date: 12-14-2011

EPA-NE - Data Validation Worksheet
INORG-XIV

see validation letter

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? _____
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Terri Solomon

Date: 12-14-2011

APPENDIX D
SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-18
SE6617

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6617 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6617-1	DSY-SD-L26-1224
SE6617-2	DSY-SD-L26-2448
SE6617-3	DSY-SD-L24-0012
SE6617-4	DSY-SD-L24-1224
SE6617-5	DSY-SD-L24-2448
SE6617-6	DSY-SD-RB09-100411
SE6617-7	DSY-SD-N24-0012
SE6617-8	DSY-SD-N24-1224
SE6617-9	DSY-SD-N24-2448
SE6617-10	DSY-SD-DUP26-100511
SE6617-11	DSY-SD-N26-0012
SE6617-12	DSY-SD-N26-1224
SE6617-13	DSY-SD-N26-2448
SE6617-14	DSY-SD-N28-0012
SE6617-15	DSY-SD-N28-1224
SE6617-16	DSY-SD-N28-2448
SE6617-17	DSY-SD-N30-0012
SE6617-18	DSY-SD-N30-1224
SE6617-19	DSY-SD-N30-2448
SE6617-20	DSY-SD-Q25-0012

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

One of the five peaks that was used to quantitate Aroclor 1260 on the A or B channel had an elevated concentration due to interference from Aroclor 1254 for the following samples: SE6617-3, 4, 8 and 12. The peak was deleted electronically. However, due to software limitations, the average calculated concentration was still based on five peaks. Therefore, the average concentration was manually calculated based on four peaks. The mean concentration was manually calculated based on the correct amount of peaks and was manually corrected on the Form 10. The %RPD was also manually corrected on the Form 10.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-18 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6617-6 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6617-(1-5 and 7-20) were digested for ICP analysis on 10/23/11 (QC Batch BJ23ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6617-16 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-18 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6617-16 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6617-16 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6617-16 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6617-16 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-18 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.02.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Dorchester SY	

Bill (If different than above) | Address

Sampler (Print / Sign) Michael Horton / [signature]

Copies To:

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT/NUMBER

REMARKS: SE Lobelle / SE Lobe 17

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	Filt. PCB	Filt. TOC	Filt. Metals (Pb)	Filt.	Filt.	Filt.	Filt.	Filt.	Filt.
	DSY-SD-L28-1224	10/4/11 / 1338	SED	2	X	X		X						
	DSY-SD-L28-2448	/ 1341		2	X	X		X						
	DSY-SD-DUP25-100411	/ —		2	X	X		X						
	DSY-SD-L26-0012	/ 1430		3	X	X	X	X						
	DSY-SD-L26-1224	/ 1433		2	X	X		X						
	DSY-SD-L26-2448	/ 1436		2	X	X		X						
	DSY-SD-L24-0012	/ 1450		3	X	X	X	X						
	DSY-SD-L24-1224	/ 1453		2	X	X		X						
	DSY-SD-L24-2448	/ 1456		2	X	X		X						
	DSY-SD-RB09-100411	/ 1610	AQ	5	X	X		X						
	DSY-SD-N24-0012	10/5/11 / 0830	SED	3	X	X	X	X						
	DSY-SD-N24-1224	/ 0833		2	X	X	[illegible]	X						
	DSY-SD-N24-2448	/ 0836		2	X	X		X						
	DSY-SD-DUP26-100511	/ —		2	X	X		X						
	DSY-SD-N26-0012	/ 0850		3	X	X	X	X						
	DSY-SD-N26-1224	/ 0853		2	X	X		X						

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	10/7/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000018

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client | Contact | Phone # ( ) | Fax # ( )

Address (SEE PAGE ONE) | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE61 Dzeckter SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SED616/17 / SED616/18

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	PCB	TOC	Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-N26-2448	10/5/11/0856	SED	2	X	X		X						
	DSY-SD-N28-0012	/0945		3	X	X	X	X						
	DSY-SD-N28-1224	/0948		2	X	X		X						
	DSY-SD-N28-2448	/0951		4	X	X		X						
	DSY-SD-N30-0012	/1000		3	X	X	X	X						
	DSY-SD-N30-1224	/1003		2	X	X		X						
	DSY-SD-N30-2448	/1006		2	X	X		X						
	DSY-SD-Q25-0012	/1015		3	X	X	X	X						
	DSY-SD-Q25-1224	/1018		2	X	X		X						
	DSY-SD-Q25-2448	/1021		2	X	X		X						
	DSY-SD-W26-0012	/1035		3	X	X	X	X						
	DSY-SD-W26-1224	/1038		2	X	X		X						
	DSY-SD-W26-2448	/1041		2	X	X		X						
	DSY-SD-DUP27-100511	/		2	X	X		X						
	DSY-SD-RB10-100511	/1215	AQ	5	X	X		X						
	DSY-SD-T25-0012.	/1055	SED	3	X	X	X	X						

COMMENTS

DSY-SD-N28-2448 is designated as LabQC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					0000019

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

HOLDTIME

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-N24-2448	SE6617-009	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-DUP26-100511	SE6617-010	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-1224	SE6617-018	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-0012	SE6617-017	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-2448	SE6617-016	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N28-1224	SE6617-015	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-0012	SE6617-014	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N26-2448	SE6617-013	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N30-2448	SE6617-019	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N26-0012	SE6617-011	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-Q25-0012	SE6617-020	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-1224	SE6617-008	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-0012	SE6617-007	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-L26-2448	SE6617-002	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L26-1224	SE6617-001	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L24-2448	SE6617-005	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-L24-1224	SE6617-004	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-L24-0012	SE6617-003	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-N26-1224	SE6617-012	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-19	M	MG/KG	DSY-SD-T25-2448	SE6618-010	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-2448	SE6618-005	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-1224	SE6618-004	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-0012	SE6618-003	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W24-2448	SE6618-019	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-1224	SE6618-018	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-0012	SE6618-017	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-2448	SE6618-016	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-DUP27-100511	SE6618-006	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T29-0012	SE6618-014	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T25-1224	SE6618-009	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T25-0012	SE6618-008	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-Q29-2448	SE6618-013	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-1224	SE6618-012	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-0012	SE6618-011	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q25-2448	SE6618-002	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-18	TS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample	RPD
	N24-2448	DUP26	
Lead	1640	4302	89.60

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-18 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-DUP26-100511	SE6617-010
DSY-SD-L24-0012	SE6617-003
DSY-SD-L24-1224	SE6617-004
DSY-SD-L24-2448	SE6617-005
DSY-SD-L26-1224	SE6617-001
DSY-SD-L26-2448	SE6617-002
DSY-SD-N24-0012	SE6617-007
DSY-SD-N24-1224	SE6617-008
DSY-SD-N24-2448	SE6617-009
DSY-SD-N26-0012	SE6617-011
DSY-SD-N26-1224	SE6617-012
DSY-SD-N26-2448	SE6617-013
DSY-SD-N28-0012	SE6617-014
DSY-SD-N28-1224	SE6617-015
DSY-SD-N28-2448	SE6617-016
DSY-SD-N28-2448	SE6617-016A
DSY-SD-N28-2448	SE6617-016D
DSY-SD-N28-2448	SE6617-016S
DSY-SD-N30-0012	SE6617-017
DSY-SD-N30-1224	SE6617-018
DSY-SD-N30-2448	SE6617-019
DSY-SD-Q25-0012	SE6617-020
DSY-SD-RB09-100411	SE6617-006

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Heather Mertz Name: Heather Mertz

Date: 11-8-11 Title: Analyst I

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ21A Oct 21, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
CALCIUM	10000.0	9902.00	99.0
IRON	10000.0	10170.00	101.7
LEAD	400.0	411.80	103.0
MAGNESIUM	10000.0	10280.00	102.8

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12880.00	103.0
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12740.00	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12760.00	102.1
LEAD	500.0	507.40	101.5
MAGNESIUM	12500.0	12830.00	102.6

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:57

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12950.00	103.6
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.00	100.8
MAGNESIUM	12500.0	12760.00	102.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ26A Oct 26, 2011 15:42

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9779.00	97.8
CALCIUM	10000.0	9735.00	97.4
IRON	10000.0	9899.00	99.0
LEAD	400.0	405.30	101.3
MAGNESIUM	10000.0	9996.00	100.0

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 16:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12400.00	99.2
CALCIUM	12500.0	12510.00	100.1
IRON	12500.0	12390.00	99.1
LEAD	500.0	505.80	101.2
MAGNESIUM	12500.0	12810.00	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 16:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12630.00	101.0
LEAD	500.0	513.20	102.6
MAGNESIUM	12500.0	13010.00	104.1

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 17:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12790.00	102.3
LEAD	500.0	510.30	102.1
MAGNESIUM	12500.0	12900.00	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 18:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12790.00	102.3
CALCIUM	12500.0	12370.00	99.0
IRON	12500.0	12460.00	99.7
LEAD	500.0	501.00	100.2
MAGNESIUM	12500.0	12660.00	101.3

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 19:43

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12430.00	99.4
IRON	12500.0	12640.00	101.1
LEAD	500.0	501.40	100.3
MAGNESIUM	12500.0	12690.00	101.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 20:37

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12420.00	99.4
IRON	12500.0	12510.00	100.1
LEAD	500.0	501.40	100.3
MAGNESIUM	12500.0	12670.00	101.4

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 21:32

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12590.00	100.7
CALCIUM	12500.0	12370.00	99.0
IRON	12500.0	12380.00	99.0
LEAD	500.0	497.20	99.4
MAGNESIUM	12500.0	12650.00	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 22:27

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12540.00	100.3
CALCIUM	12500.0	12320.00	98.6
IRON	12500.0	12330.00	98.6
LEAD	500.0	496.40	99.3
MAGNESIUM	12500.0	12520.00	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ27B Oct 27, 2011 15:46

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9946.00	99.5
CALCIUM	10000.0	9845.00	98.5
IRON	10000.0	10090.00	100.9
LEAD	400.0	406.00	101.5
MAGNESIUM	10000.0	9997.00	100.0

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 16:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12710.00	101.7
CALCIUM	12500.0	12700.00	101.6
IRON	12500.0	12810.00	102.5
LEAD	500.0	507.20	101.4
MAGNESIUM	12500.0	12800.00	102.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12890.00	103.1
CALCIUM	12500.0	13030.00	104.2
IRON	12500.0	13140.00	105.1
LEAD	500.0	522.30	104.5
MAGNESIUM	12500.0	13170.00	105.4

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:58

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12890.00	103.1
IRON	12500.0	13010.00	104.1
LEAD	500.0	512.50	102.5
MAGNESIUM	12500.0	12950.00	103.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ21A Oct 21, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	308.60	102.9
CALCIUM	100.0	103.80	103.8
IRON	100.0	100.50	100.5
LEAD	5.0	5.68	113.6
MAGNESIUM	100.0	107.40	107.4

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ26A Oct 26, 2011 15:51

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	297.70	99.2
CALCIUM	100.0	105.90	105.9
IRON	100.0	102.70	102.7
LEAD	5.0	5.79	115.8
MAGNESIUM	100.0	104.70	104.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ27B Oct 27, 2011 15:55

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	294.90	98.3
CALCIUM	100.0	103.30	103.3
IRON	100.0	104.80	104.8
LEAD	5.0	5.81	116.2
MAGNESIUM	100.0	103.90	103.9

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ21A Oct 21, 2011 14:51

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 16:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	6.080	J

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ26A Oct 26, 2011 15:46

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 16:09

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 17:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 17:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	5.534	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 18:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.449	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 19:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	10.710	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 20:42

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.420	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 21:36

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 22:31

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ27B Oct 27, 2011 15:50

Analyte	Result	C
ALUMINUM	-24.090	J
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 16:13

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.943	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 17:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	7.861	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 18:02

Analyte	Result	C
ALUMINUM	-18.800	J
CALCIUM	11.400	U
IRON	6.364	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-18

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ23ICS1

Matrix: SOIL **SDG Name:** DSY-18

QC Batch ID: BJ23ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
LEAD	0.40	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ21A Oct 21, 2011 15:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	495100	99.0
CALCIUM	500000	468400	93.7
IRON	200000	188500	94.3
LEAD	0	1	
MAGNESIUM	500000	451000	90.2

SAMPLE: ICSAB

File: IBJ21A Oct 21, 2011 15:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	476900	95.4
CALCIUM	500000	457200	91.4
IRON	200000	184500	92.3
LEAD	50	45	90.0
MAGNESIUM	500000	440400	88.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ26A Oct 26, 2011 15:55

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488600	97.7
CALCIUM	500000	450700	90.1
IRON	200000	180100	90.0
LEAD	0	1	
MAGNESIUM	500000	449300	89.9

SAMPLE: ICSAB

File: IBJ26A Oct 26, 2011 16:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	482800	96.6
CALCIUM	500000	441600	88.3
IRON	200000	178400	89.2
LEAD	50	47	94.0
MAGNESIUM	500000	441600	88.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ27B Oct 27, 2011 15:59

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	467600	93.5
CALCIUM	500000	441500	88.3
IRON	200000	174900	87.5
LEAD	0	3	
MAGNESIUM	500000	437100	87.4

SAMPLE: ICSAB

File: IBJ27B Oct 27, 2011 16:04

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480500	96.1
CALCIUM	500000	455400	91.1
IRON	200000	180400	90.2
LEAD	50	48	96.0
MAGNESIUM	500000	439800	88.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** DSY-SD-N28-2448S

Matrix: SOIL | **SDG Name:** DSY-18

Percent Solids: 63.0 | **Lab Sample ID:** SE6617-016S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	88.8032		390.3570		8.68	-3474.1		80	120	P

OL

Comments:

FORM V (Part 1) - IN

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-2448S

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 63.0 **Lab Sample ID:** SE6617-016A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	2732.0000		2273.0000		500	91.8		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-2448D

Matrix: SOIL **SDG Name:** DSY-18

Percent Solids: 63.0 **Lab Sample ID:** SE6617-016D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
LEAD, TOTAL		390.3570		70.0427		139.1	*	P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ23ICS1

Matrix: SOIL **SDG Name:** DSY-18

QC Batch ID: BJ23ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	10.00	10.09	100.9	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-18

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	105.90	105.9	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-N28-2448L

Matrix: SOIL **SDG Name:** DSY-18

Lab Sample ID: SE6617-016L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
LEAD, TOTAL	2273.00		2448.00		7.7		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ20ICW1

Matrix: WATER **SDG Name:** DSY-18

Method: P **Prep Date:** 10/20/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ20ICW1	LCSWBJ20ICW1	0.05	0.05	
PBWBJ20ICW1	PBWBJ20ICW1	0.05	0.05	
DSY-SD-RB09-100411	SE6617-006	0.05	0.05	A

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ23ICS1

Matrix: SOIL **SDG Name:** DSY-18

Method: P **Prep Date:** 10/23/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ23ICS1	LCSOBJ23ICS1	1	0.1	
PBSBJ23ICS1	PBSBJ23ICS1	1	0.1	
DSY-SD-L26-1224	SE6617-001	1.02	0.1	A
DSY-SD-L26-2448	SE6617-002	1.13	0.1	B
DSY-SD-L24-0012	SE6617-003	1.16	0.1	B
DSY-SD-L24-1224	SE6617-004	1.38	0.1	B
DSY-SD-L24-2448	SE6617-005	2	0.1	A
DSY-SD-N24-0012	SE6617-007	1.41	0.1	B
DSY-SD-N24-1224	SE6617-008	1.67	0.1	C
DSY-SD-N24-2448	SE6617-009	2.04	0.1	A
DSY-SD-DUP26-100511	SE6617-010	1.45	0.1	B
DSY-SD-N26-0012	SE6617-011	1.49	0.1	B
DSY-SD-N26-1224	SE6617-012	1.21	0.1	B
DSY-SD-N26-2448	SE6617-013	1.85	0.1	B
DSY-SD-N28-0012	SE6617-014	1.97	0.1	C
DSY-SD-N28-1224	SE6617-015	1.35	0.1	A
DSY-SD-N28-2448	SE6617-016	1.85	0.1	C
DSY-SD-N28-2448D	SE6617-016D	1.85	0.1	C
DSY-SD-N28-2448S	SE6617-016S	1.83	0.1	C
DSY-SD-N30-0012	SE6617-017	1.47	0.1	C
DSY-SD-N30-1224	SE6617-018	1.68	0.1	B
DSY-SD-N30-2448	SE6617-019	1.58	0.1	A
DSY-SD-Q25-0012	SE6617-020	1.59	0.1	C

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ21A

Date: 10/21/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	14:38 AL	CA	FE PB MG
Std 1		1	14:42 AL	CA	FE PB MG
ICV		1	14:47 AL	CA	FE PB MG
ICB		1	14:51 AL	CA	FE PB MG
PQL		1	14:56 AL	CA	FE PB MG
ICSA		1	15:00 AL	CA	FE PB MG
ICSAB		1	15:05 AL	CA	FE PB MG
CCV		1	15:09 AL	CA	FE PB MG
CCB		1	15:14 AL	CA	FE PB MG
ZZZZZZ		2	15:18		
ZZZZZZ		2	15:23		
ZZZZZZ		2	15:27		
PBWBJ20ICW1		1	15:32		PB
LCSWBJ20ICW1		1	15:36		PB
ZZZZZZ		1	15:41		
ZZZZZZ		5	15:45		
ZZZZZZ		1	15:50		
ZZZZZZ		1	15:54		
ZZZZZZ		1	15:58		
CCV		1	16:03 AL	CA	FE PB MG
CCB		1	16:07 AL	CA	FE PB MG
ZZZZZZ		1	16:12		
ZZZZZZ		1	16:16		
ZZZZZZ		1	16:21		
ZZZZZZ		1	16:25		
ZZZZZZ		1	16:30		
ZZZZZZ		1	16:34		
ZZZZZZ		1	16:39		
ZZZZZZ		1	16:44		
SE6617-006	DSY-SD-RB09-100411	1	16:48		PB
ZZZZZZ		1	16:53		
CCV		1	16:57 AL	CA	FE PB MG
CCB		1	17:01 AL	CA	FE PB MG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ26A

Date: 10/26/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	15:33 AL	CA	FE PB MG
Std 1		1	15:38 AL	CA	FE PB MG
ICV		1	15:42 AL	CA	FE PB MG
ICB		1	15:46 AL	CA	FE PB MG
PQL		1	15:51 AL	CA	FE PB MG
ICSA		1	15:55 AL	CA	FE PB MG
ICSAB		1	16:00 AL	CA	FE PB MG
CCV		1	16:05 AL	CA	FE PB MG
CCB		1	16:09 AL	CA	FE PB MG
ZZZZZZ		1	16:14		
ZZZZZZ		1	16:18		
ZZZZZZ		1	16:23		
ZZZZZZ		1	16:27		
ZZZZZZ		1	16:32		
ZZZZZZ		1	16:36		
ZZZZZZ		1	16:41		
ZZZZZZ		1	16:46		
ZZZZZZ		5	16:50		
ZZZZZZ		1	16:55		
CCV		1	16:59 AL	CA	FE PB MG
CCB		1	17:03 AL	CA	FE PB MG
ZZZZZZ		1	17:08		
ZZZZZZ		1	17:12		
ZZZZZZ		1	17:17		
ZZZZZZ		1	17:21		
ZZZZZZ		1	17:26		
ZZZZZZ		1	17:30		
ZZZZZZ		1	17:35		
ZZZZZZ		1	17:40		
ZZZZZZ		1	17:44		
ZZZZZZ		1	17:49		
CCV		1	17:53 AL	CA	FE PB MG
CCB		1	17:58 AL	CA	FE PB MG
ZZZZZZ		1	18:02		
ZZZZZZ		1	18:07		
ZZZZZZ		1	18:11		
ZZZZZZ		1	18:16		
ZZZZZZ		1	18:20		
ZZZZZZ		1	18:25		
ZZZZZZ		1	18:30		
ZZZZZZ		1	18:34		
ZZZZZZ		1	18:39		
ZZZZZZ		1	18:43		
CCV		1	18:48 AL	CA	FE PB MG
CCB		1	18:52 AL	CA	FE PB MG
ZZZZZZ		1	18:57		
ZZZZZZ		5	19:01		
ZZZZZZ		1	19:06		
ZZZZZZ		1	19:10		
ZZZZZZ		1	19:15		

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ26A

Date: 10/26/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time			Elements
ZZZZZZ		1	19:20			
ZZZZZZ		1	19:24			
ZZZZZZ		1	19:29			
ZZZZZZ		1	19:33			
ZZZZZZ		1	19:38			
CCV		1	19:43	AL	CA	FE PB MG
CCB		1	19:47	AL	CA	FE PB MG
ZZZZZZ		1	19:52			
ZZZZZZ		1	19:56			
PBSBJ23ICS1		1	20:01			PB
LCSOBJ23ICS1		1	20:05			PB
SE6617-001	DSY-SD-L26-1224	1	20:10			PB
SE6617-002	DSY-SD-L26-2448	1	20:14			PB
ZZZZZZ		1	20:19			
ZZZZZZ		1	20:24			
ZZZZZZ		1	20:28			
SE6617-007	DSY-SD-N24-0012	1	20:33			PB
CCV		1	20:37	AL	CA	FE PB MG
CCB		1	20:42	AL	CA	FE PB MG
SE6617-008	DSY-SD-N24-1224	1	20:46			PB
ZZZZZZ		1	20:51			
SE6617-010	DSY-SD-DUP26-100511	1	20:55			PB
ZZZZZZ		1	21:00			
SE6617-012	DSY-SD-N26-1224	1	21:04			PB
ZZZZZZ		1	21:09			
SE6617-014	DSY-SD-N28-0012	1	21:14			PB
SE6617-015	DSY-SD-N28-1224	1	21:18			PB
ZZZZZZ		1	21:23			
ZZZZZZ		5	21:27			
CCV		1	21:32	AL	CA	FE PB MG
CCB		1	21:36	AL	CA	FE PB MG
ZZZZZZ		1	21:41			
ZZZZZZ		1	21:45			
ZZZZZZ		1	21:50			
SE6617-017	DSY-SD-N30-0012	1	21:55			PB
SE6617-018	DSY-SD-N30-1224	1	21:59			PB
ZZZZZZ		1	22:04			
SE6617-020	DSY-SD-Q25-0012	1	22:08			PB
ZZZZZZ		1	22:13			
ZZZZZZ		1	22:18			
ZZZZZZ		1	22:22			
CCV		1	22:27	AL	CA	FE PB MG
CCB		1	22:31	AL	CA	FE PB MG

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-18

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time			Elements
Blank		1	15:37	AL	CA	FE PB MG
Std 1		1	15:41	AL	CA	FE PB MG
ICV		1	15:46	AL	CA	FE PB MG
ICB		1	15:50	AL	CA	FE PB MG
PQL		1	15:55	AL	CA	FE PB MG
ICSA		1	15:59	AL	CA	FE PB MG
ICSAB		1	16:04	AL	CA	FE PB MG
CCV		1	16:09	AL	CA	FE PB MG
CCB		1	16:13	AL	CA	FE PB MG
ZZZZZZ		1	16:18			
ZZZZZZ		2	16:22			
ZZZZZZ		2	16:27			
ZZZZZZ		2	16:31			
ZZZZZZ		2	16:36			
ZZZZZZ		2	16:40			
ZZZZZZ		2	16:45			
ZZZZZZ		2	16:49			
SE6617-003	DSY-SD-L24-0012	2	16:54			PB
SE6617-004	DSY-SD-L24-1224	2	16:59			PB
CCV		1	17:03	AL	CA	FE PB MG
CCB		1	17:07	AL	CA	FE PB MG
SE6617-005	DSY-SD-L24-2448	2	17:12			PB
SE6617-009	DSY-SD-N24-2448	2	17:17			PB
SE6617-011	DSY-SD-N26-0012	2	17:21			PB
SE6617-013	DSY-SD-N26-2448	2	17:26			PB
SE6617-016	DSY-SD-N28-2448	2	17:30			PB
SE6617-016L	DSY-SD-N28-2448L	10	17:35			PB
SE6617-016A	DSY-SD-N28-2448A	2	17:40			PB
SE6617-016D	DSY-SD-N28-2448D	2	17:44			PB
SE6617-016S	DSY-SD-N28-2448S	2	17:49			PB
SE6617-019	DSY-SD-N30-2448	2	17:53			PB
CCV		1	17:58	AL	CA	FE PB MG
CCB		1	18:02	AL	CA	FE PB MG

FORM XIV - IN

Sample DSY-SD-L26-1224 Pb rep result 4.3 mg/kg

$\left(\frac{35.44ug}{L}\right)\left(\frac{0.1L}{1.02g}\right)\left(\frac{1mg}{1000ug}\right)\left(\frac{1000g}{1kg}\right)\left(\frac{1}{.80}\right) = 4.338 \frac{mg}{kg}$

SE6617-001

Method Name: K6010-2011 Method Revision: 50
Analyst Name: EAM
Acquire Date: 10/26/2011 8:10:16PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.009	ug/L	0.6117	60.62	-454.0
Al3961_R		37,510	ug/L	108.6	0.2895	32,440
As1891_A		62.84	ug/L	0.5021	0.7990	13.14
Au2427_A		-1.630	ug/L	0.7068	43.35	84.05
B_2089_A		25.68	ug/L	0.3034	1.181	26.33
Ba4554_R		74.89	ug/L	0.06168	0.08236	4,378
Be3130_R		1.277	ug/L	0.01305	1.022	62.14
Ca3158_R		41,320	ug/L	128.7	0.3114	64,580
Cd2265_A		0.7703	ug/L	0.1495	19.40	153.9
Co2286_A		36.04	ug/L	0.02550	0.07075	155.5
Cr2677_A		64.74	ug/L	0.3265	0.5043	978.7
Cu3273_A		50.32	ug/L	0.1844	0.3666	645.6
Fe2599_R		114,300	ug/L	1,418	1.241	219,000
K_7664_R		3,865	ug/L	2.490	0.06443	2,482
Li6707_R		100.3	ug/L	0.7847	0.7822	1,072
Mg2025_A		16,890	ug/L	47.84	0.2833	3,163
Mn2576_R		1,107	ug/L	7.935	0.7170	12,120
Mo2020_A		9.782	ug/L	0.03957	0.4045	19.95
Na5895_R		17,400	ug/L	49.38	0.2838	33,100
Ni2316_A		82.68	ug/L	0.1905	0.2305	191.6
Pb2203_A		35.44	ug/L	0.9697	2.737	36.87
Sb2068_A		-1.885	ug/L	0.3961	21.01	1.875
Se1960_A		6.263	ug/L	1.077	17.20	3.865
Si2516_R		1,089	ug/L	26.71	2.452	620.9
Sn1899_A		13.33	ug/L	0.1328	0.9962	8.499
Sr4215_R		161.3	ug/L	0.05639	0.03496	12,540
Ti3349_A		1,099	ug/L	0.2514	0.02287	35,570
Tl1908_A		-0.5781	ug/L	0.1791	30.99	-2.399
V_2924_A		77.15	ug/L	0.1784	0.2312	1,253
Zn2062_A		221.5	ug/L	0.8869	0.4004	721.1
Y_3600_R		24,015	Cts/S	246.75	1.0275	24,015
Y_2243_A		9,176.1	Cts/S	9.6013	0.10463	9,176.1
Y_3600_A		250,680	Cts/S	406.92	0.16233	250,680

SE6617-002

Method Name: K6010-2011 Method Revision: 50
Analyst Name: EAM
Acquire Date: 10/26/2011 8:14:48PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.322	ug/L	0.4318	32.65	-719.9
Al3961_R		57,250	ug/L	429.1	0.7495	50,410
As1891_A		93.35	ug/L	2.217	2.375	19.34
Au2427_A		-0.5655	ug/L	1.066	188.5	142.1
B_2089_A		57.13	ug/L	0.4601	0.8054	56.36
Ba4554_R		105.9	ug/L	1.006	0.9496	6,264
Be3130_R		2.380	ug/L	0.05226	2.195	138.8
Ca3158_R		15,380	ug/L	168.3	1.095	24,450
Cd2265_A		2.269	ug/L	0.03944	1.738	268.6
Co2286_A		75.37	ug/L	0.04922	0.06531	315.4
Cr2677_A		107.3	ug/L	0.3866	0.3603	1,616
Cu3273_A		177.5	ug/L	0.3808	0.2145	2,410
Fe2599_R		185,300	ug/L	1,712	0.9240	361,700
K_7664_R		6,956	ug/L	101.5	1.459	4,541
Li6707_R		146.2	ug/L	0.3955	0.2706	1,593
Mg2025_A		24,710	ug/L	9.043	0.03660	4,661
Mn2576_R		1,638	ug/L	14.97	0.9145	18,260
Mo2020_A		19.25	ug/L	0.09774	0.5079	40.40

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99433	Lloyd Kahn	17-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99433	Lloyd Kahn	17-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99628	ASTM D2216	22-OCT-11	21-OCT-11	U 1 %	1 %	N/A
MBLANK	WG99672	ASTM D2216	24-OCT-11	22-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99433-2	LCS	WG99433	17-OCT-11	N/A	ug/gdrywt	400000.000	410000	103	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99433-2	LCS	WG99433	17-OCT-11	N/A	ug/gdrywt	400000.000	410000	103	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99628-2	LCS	WG99628	22-OCT-11	21-OCT-11	%	90	91.	101	80-120	
WG99672-2	LCS	WG99672	24-OCT-11	22-OCT-11	%	90	91.	101	80-120	

Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99628-4	SE6617-5	WG99628	22-OCT-11	%	70.	70.	0	20
WG99672-3	SE6617-15	WG99672	24-OCT-11	%	41.	43.	3	20

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **DECEMBER 15, 2011**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – LEAD, TOTAL ORGANIC CARBON, TOTAL SOLIDS**
CTO – WE61 NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) – DSY-19

SAMPLES: 19/Sediments/

DSY-SD-DUP27-100511
DSY-SD-Q25-1224
DSY-SD-Q29-0012
DSY-SD-Q29-2448
DSY-SD-T25-1224
DSY-SD-T29-0012
DSY-SD-T29-2448
DSY-SD-W24-1224
DSY-SD-W26-0012
DSY-SD-W26-2448
DSY-SD-DUP28-100611
DSY-SD-Q25-2448
DSY-SD-Q29-1224
DSY-SD-T25-0012
DSY-SD-T25-2448
DSY-SD-T29-1224
DSY-SD-W24-0012
DSY-SD-W24-2448
DSY-SD-W26-1224

1/Aqueous/

DSY-SD-RB10-100511

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-19, consists of nineteen (19) sediment environmental samples and one (1) rinsate blank (DSY-SD-RB10-100511). Two (2) field duplicate pairs (DSY-SD-W26-2448 / DSY-SD-DUP27-100511 and DSY-SD-W24-0012 / DSY-SD-DUP28-100611) were included within this SDG.

All samples were analyzed for lead. All samples except DSY-SD-RB10-100511 were analyzed for total solids. Samples DSY-SD-DUP28-100611, DSY-SD-Q29-0012, DSY-SD-T25-0012, DSY-SD-T29-0012, DSY-SD-W24-0012 and DSY-SD-W26-0012 were also analyzed for total organic carbon. The samples were collected by Tetra Tech on October 5 and 6, 2011 and analyzed by Katahdin Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals analyses were conducted using SW-846 method 6010C. Total solids analyses were conducted using Standard Method 2540G. Total organic carbon analyses were conducted using the Lloyd Kahn method.

All samples in this SDG were validated to EPA Region I Tier II protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results

* • Laboratory Method/Preparation Blank Analyses
* • ICP Interference Check Sample Results
• Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
• Field Duplicate Results
* • Detection Limits
* • Sample Quantitation

* - All quality control criteria were met for this parameter.

Matrix Spike Recoveries

The matrix spike percent recovery for total organic carbon was greater than the quality control limit. The positive results reported for total organic carbon were qualified as estimated, "J".

Field Duplicate Results

Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-W24-0012 / DSY-SD-DUP28-100611. The positive results reported for lead for samples DSY-SD-W24-0012 and DSY-SD-DUP28-100611 were qualified as estimated, "J".

Notes

The nondetected results were reported to the limit of detection (LOD)

All detection limits reported were below the project action limit listed in the sampling and analysis plan (SAP).

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality:. The matrix spike percent recovery for total organic carbon was greater than the quality control limit. Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-W24-0012 / DSY-SD-DUP28-100611.

The data for these analyses were reviewed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D – Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB10-100511		
SDG: DSY-19	LAB_ID	SE6618-007		
FRACTION: M	SAMP_DATE	10/5/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP27-100511			DSY-SD-DUP28-100611			DSY-SD-Q25-1224			DSY-SD-Q25-2448		
SDG: DSY-19	LAB_ID	SE6618-006			SE6618-020			SE6618-001			SE6618-002		
FRACTION: M	SAMP_DATE	10/5/2011			10/6/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	61.5			39.4			70.8			80.4		
	DUP_OF	DSY-SD-W26-2448			DSY-SD-W24-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		124			1710	J	G	23.3			2.4		

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-0012			DSY-SD-Q29-1224			DSY-SD-Q29-2448			DSY-SD-T25-0012		
SDG: DSY-19	LAB_ID	SE6618-011			SE6618-012			SE6618-013			SE6618-008		
FRACTION: M	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	39.0			46.8			73.7			38.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		56.5			63.3			22.5			64.2		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T25-1224			DSY-SD-T25-2448			DSY-SD-T29-0012			DSY-SD-T29-1224		
SDG: DSY-19	LAB_ID	SE6618-009			SE6618-010			SE6618-014			SE6618-015		
FRACTION: M	SAMP_DATE	10/5/2011			10/5/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	43.7			74.9			73.7			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		236			36.3			20.1			16		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T29-2448			DSY-SD-W24-0012			DSY-SD-W24-1224			DSY-SD-W24-2448		
SDG: DSY-19	LAB_ID	SE6618-016			SE6618-017			SE6618-018			SE6618-019		
FRACTION: M	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.1			38.8			64.3			76.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		6.6			97.3	J	G	577			5		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W26-0012			DSY-SD-W26-1224			DSY-SD-W26-2448		
SDG: DSY-19	LAB_ID	SE6618-003			SE6618-004			SE6618-005		
FRACTION: M	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	38.1			40.0			70.1		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		68			109			80.7		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP27-100511			DSY-SD-DUP28-100611						DSY-SD-Q25-1224		
SDG: DSY-19	LAB_ID	SE6618-6			SE6618-20						SE6618-1		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/6/2011						10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	61.5			39.4			39.4			70.8		
	DUP_OF	DSY-SD-W26-2448			DSY-SD-W24-0012			DSY-SD-W24-0012					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								51000	J	D			
TOTAL SOLIDS		62			39						71		

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q25-2448			DSY-SD-Q29-0012						DSY-SD-Q29-1224		
SDG: DSY-19	LAB_ID	SE6618-2			SE6618-11						SE6618-12		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/6/2011						10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	80.4			39.0			39.0			46.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								34000	J	D			
TOTAL SOLIDS		80			39						47		

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-2448			DSY-SD-T25-0012						DSY-SD-T25-1224		
SDG: DSY-19	LAB_ID	SE6618-13			SE6618-8						SE6618-9		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/5/2011						10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	73.7			38.4			38.4			43.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								37000	J	D			
TOTAL SOLIDS		74			38						44		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T25-2448			DSY-SD-T29-0012						DSY-SD-T29-1224		
SDG: DSY-19	LAB_ID	SE6618-10			SE6618-14						SE6618-15		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/6/2011						10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	74.9			73.7			73.7			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								13000	J	D			
TOTAL SOLIDS		75			74						81		

PROJ_NO: 02747	NSAMPLE	DSY-SD-T29-2448			DSY-SD-W24-0012						DSY-SD-W24-1224		
SDG: DSY-19	LAB_ID	SE6618-16			SE6618-17						SE6618-18		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/6/2011						10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	83.1			38.8			38.8			64.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								44000	J	D			
TOTAL SOLIDS		83			39						64		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W24-2448			DSY-SD-W26-0012						DSY-SD-W26-1224		
SDG: DSY-19	LAB_ID	SE6618-19			SE6618-3						SE6618-4		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/5/2011						10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	76.3			38.1			38.1			40.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								32000	J	D			
TOTAL SOLIDS		76			38						40		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W26-2448		
SDG: DSY-19	LAB_ID	SE6618-5		
FRACTION: MISC	SAMP_DATE	10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	%		
	PCT_SOLIDS	70.1		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON				
TOTAL SOLIDS		70		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-RB10-100511

Matrix: WATER **SDG Name:** DSY-19

Percent Solids: 0.00 **Lab Sample ID:** SE6618-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP27-100511

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 61.5 **Lab Sample ID:** SE6618-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	124			P	2	0.86	0.15	0.69

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP28-100611

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 39.4 **Lab Sample ID:** SE6618-020

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7439-92-1	LEAD, TOTAL	1710			P	1	1.2	0.21	0.95

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q25-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 70.8 **Lab Sample ID:** SE6618-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	23.3			P	2	0.74	0.13	0.59

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q25-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 80.4 **Lab Sample ID:** SE6618-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	2.4			P	1	0.49	0.09	0.40

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q29-0012

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 39.0 **Lab Sample ID:** SE6618-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	56.5			P	1	0.80	0.14	0.64

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q29-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 46.8 **Lab Sample ID:** SE6618-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	63.3			P	1	0.57	0.10	0.46

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-Q29-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 73.7 **Lab Sample ID:** SE6618-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	22.5			P	2	0.84	0.15	0.67

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T25-0012

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 38.4 **Lab Sample ID:** SE6618-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	64.2			P	1	0.81	0.14	0.65

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T25-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 43.7 **Lab Sample ID:** SE6618-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	236			P	1	0.69	0.12	0.55

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T25-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 74.9 **Lab Sample ID:** SE6618-010

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7439-92-1	LEAD, TOTAL	36.3			P	2	0.75	0.13	0.60

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T29-0012

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 73.6 **Lab Sample ID:** SE6618-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	20.1			P	2	0.66	0.11	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T29-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 80.9 **Lab Sample ID:** SE6618-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	16.0			P	2	0.72	0.12	0.57

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T29-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 83.1 **Lab Sample ID:** SE6618-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	6.6			P	1	0.34	0.06	0.28

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W24-0012

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 38.8 **Lab Sample ID:** SE6618-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	97.3			P	1	1.2	0.21	0.95

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W24-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 64.3 **Lab Sample ID:** SE6618-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	577			P	2	1.2	0.20	0.93

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W24-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 76.3 **Lab Sample ID:** SE6618-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	5.0			P	1	0.33	0.06	0.27

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W26-0012

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 38.1 **Lab Sample ID:** SE6618-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	68.0			P	1	0.94	0.16	0.75

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W26-1224

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 40.0 **Lab Sample ID:** SE6618-004

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7439-92-1	LEAD, TOTAL	109			P	1	0.68	0.12	0.55

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W26-2448

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 70.1 **Lab Sample ID:** SE6618-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	80.7			P	1	0.36	0.06	0.29

Comments:

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-6
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP27-100511	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	62. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:26:29	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-20
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP28-100611	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	60000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99436	18-OCT-11 12:03:54	N/A	N/A	
Toc In Soil(2)	41000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99436	18-OCT-11 12:17:02	N/A	N/A	
Toc In Soil(Avg)	51000 ug/gdrywt	1000	220	760	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	39. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:02:08	ASTM D2216	24-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-1
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q25-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	71. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:25:25	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-2
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q25-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	80. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:25:45	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-11
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q29-0012	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	35000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 10:34:25	N/A	N/A	
Toc In Soil(2)	32000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 10:44:22	N/A	N/A	
Toc In Soil(Avg)	34000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	39. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:01:04	ASTM D2216	24-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-12
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q29-1224	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	47. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:01:14	ASTM D2216	24-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-13
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-Q29-2448	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	74. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:01:23	ASTM D2216	24-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-8
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T25-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	38000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99436	18-OCT-11 10:13:19	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99436	18-OCT-11 10:24:19	N/A	N/A	
Toc In Soil(Avg)	37000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:26:40	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-9
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T25-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	44. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:26:53	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-10
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T25-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	75. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:27:00	ASTM D2216	22-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-14
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T29-0012	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	13000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99436	18-OCT-11 10:55:10	N/A	N/A	
Toc In Soil(2)	13000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99436	18-OCT-11 11:24:05	N/A	N/A	
Toc In Soil(Avg)	13000 ug/gdrywt	540	120	410	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	74. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:02:45	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500002

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-15
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T29-1224	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	81. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:03:01	ASTM D2216	24-OCT-11	

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-16
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-T29-2448	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	83. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:03:14	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-17
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W24-0012	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	44000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 11:34:43	N/A	N/A	
Toc In Soil(2)	43000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 11:49:30	N/A	N/A	
Toc In Soil(Avg)	44000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	39. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:03:35	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000824

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-18
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W24-1224	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	64. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:03:56	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000
6 Technology Way
P.O. Box 540, Scarborough, ME 04070
http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with the
melac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-19
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W24-2448	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	76. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:04:07	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000[illegible]

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-3
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W26-0012	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	31000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99436	18-OCT-11 09:12:04	N/A	N/A	
Toc In Soil(2)	34000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99436	18-OCT-11 09:38:02	N/A	N/A	
Toc In Soil(Avg)	32000 ug/gdrywt	1000	220	790	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:25:56	ASTM D2216	22-OCT-11	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-4
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W26-1224	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:26:07	ASTM D2216	22-OCT-11	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6618-5
Report Date: 16-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-19

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W26-2448	SL	05-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	70. %	1		N/A	SM2540G	WG99672	24-OCT-11 11:26:19	ASTM D2216	22-OCT-11	

Katahdin Analytical Services 5000

APPENDIX C
REGION I WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. DSY-19
No. of Samples/Matrix 19 sediment / 1 Aqueous

SOW/Method No. See validation letter
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

_____

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Terri Solomon Company Name TetraTech Phone Number _____

Date Validation Started 12-14-2011 Date Validation Completed 12-15-2011

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets:

INORG	COMPLETE SDG FILE (CSF) AUDIT	
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	
INORG-II	ICP-MS TUNE	NA
INORG-III-A/B	CALIBRATIONS	
INORG-IV-A/B	BLANKS	
INORG-IV-C.1	BLANKS	
INORG-IV-C.2	BLANKS	
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	NA
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	NA
INORG-VII	ICP-MS INTERNAL STANDARDS	NA
INORG-VIII	MATRIX SPIKES	
INORG-IX	LABORATORY DUPLICATE SAMPLES	
INORG-X	FIELD DUPLICATES	
INORG-XI	ICP SERIAL DILUTIONS	
INORG-XII-A/B	SENSITIVITY CHECK	
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	NA
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Terri Solomon

Name: Terri Solomon

Date: 12-15-2011

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Part I - Data Validation Manual, Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with PO/DV Chemist/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

see validation letter

Site:_____ Case:_____ SDG:_____

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.
** Sampling variability is not assessed in data validation.

Validator: Steven Solomon

Date: 12-15-2011

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EPA-NE - Data Validation Worksheet
INORG

~~See~~ NA

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters:_____

Missing Information	Date Lab Contacted	Date Received

Validator: Kim Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-I

see validation letter

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:

1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:

J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Lisa Sakmen Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

N/A

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			
Comments:									

Validator: Dan Solomon

Date: 12-5-2011

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EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

see validation letter

III. CALIBRATIONS

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Pam Solomon Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

see validation letter

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: Lisa Solomon Date: 12-15-2011

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EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

See validation letter

Circle the highest concentration of each contaminant.

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: Ken Sukman

Date: 12-15-2011

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EPA-NE - Data Validation Worksheet
INORG-IV-C.2

see validation letter

IV. BLANKS

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample.

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action
Comments:							

Validator: Kris Solomon

Date: 12-15-2011

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EPA NE - Data Validation Worksheet
INORG-V-A

See validation letter

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Lee Solomon

Date: 12-5-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

see validation letter

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

1. List all analytes in the ICSA that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	
Comments:										

Validator: Pam Solomon

Date: 12-15-2011

EPA NE - Data Validation Worksheet
INORG-V-B.2

See validation letter

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

2. List all affected sample results.

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action
Comments:						

Validator: Alan Solomon

Date: 12-15-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

N/A

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

List all analytes that are outside ICSAB criteria of 80-120% R.

Date	Analyte	%R	Samples Affected	Action
Comments:				

Validator: Hans Solomon

Date: 12-15-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-B

N/A

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

List all analytes that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Kim Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

N/A

VII. ICP-MS INTERNAL STANDARDS

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator: Ann Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-VIII

See validation letter

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action

Comments:

Validator: Lisa Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-IX

see validation letter

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Nora Solomon

Date 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

see validation letter

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Kevin Solomon Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

see validation letter

XI. ICP SERIAL DILUTIONS

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action

Comments:

Validator: Lori Sherman

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

NA

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Dawn Salomon Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-XIII-A

see validation letter

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N**

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action

Comments:

Validator: Alan Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

NA

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? **Y** **N**

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator: Lynn Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-XIV

see validation letter

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? _____
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Lisa Salomon

Date: 12-15-2011

APPENDIX D
SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-19
SE6618

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6618 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6618-1	DSY-SD-Q25-1224
SE6618-2	DSY-SD-Q25-2448
SE6618-3	DSY-SD-W26-0012
SE6618-4	DSY-SD-W26-1224
SE6618-5	DSY-SD-W26-2448
SE6618-6	DSY-SD-DUP27-100511
SE6618-7	DSY-SD-RB10-100511
SE6618-8	DSY-SD-T25-0012
SE6618-9	DSY-SD-T25-1224
SE6618-10	DSY-SD-T25-2448
SE6618-11	DSY-SD-Q29-0012
SE6618-12	DSY-SD-Q29-1224
SE6618-13	DSY-SD-Q29-2448
SE6618-14	DSY-SD-T29-0012
SE6618-15	DSY-SD-T29-1224
SE6618-16	DSY-SD-T29-2448
SE6618-17	DSY-SD-W24-0012
SE6618-18	DSY-SD-W24-1224
SE6618-19	DSY-SD-W24-2448
SE6618-20	DSY-SD-DUP28-100611

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

The closing CV (file 7EZ014) had a high response for Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The MS and MSD WG99552-4 and 5 had high recoveries for Aroclor 1016 which were outside of the laboratory established acceptance limits. Since the associated LCS had acceptable recoveries and the high recoveries in the MS/MSD are likely due to interference from Aroclor 1242 in the sample, the MS/MSD were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-19 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6618-7 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6618-(1-6 and 8-20) were digested for ICP analysis on 10/25/11 (QC Batch BJ25ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6618-16 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-19 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6618-16 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6618-16 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6618-16 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6618-16 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-19 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recoveries, relative to both the TOC (1) and TOC(2) results for the unspiked sample, for the matrix spike aliquot of Katahdin Sample No. SE6618-3 are outside the laboratory's acceptance limits of 75% - 125%.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond

12.01.16

Leslie Dimond
Quality Assurance Officer

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-L24-1224	SE6617-004	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-L24-0012	SE6617-003	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-N26-1224	SE6617-012	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-19	M	MG/KG	DSY-SD-T25-2448	SE6618-010	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-2448	SE6618-005	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-1224	SE6618-004	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-0012	SE6618-003	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W24-2448	SE6618-019	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-1224	SE6618-018	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-0012	SE6618-017	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-2448	SE6618-016	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-DUP27-100511	SE6618-006	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T29-0012	SE6618-014	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T25-1224	SE6618-009	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T25-0012	SE6618-008	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-Q29-2448	SE6618-013	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-1224	SE6618-012	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-0012	SE6618-011	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q25-2448	SE6618-002	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	M	MG/KG	DSY-SD-Q25-1224	SE6618-001	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-DUP28-100611	SE6618-020	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-1224	SE6618-015	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-C25-1224	SE6619-009	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-W30-0012	SE6619-001	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-2448	SE6619-006	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-1224	SE6619-005	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-18-0012	SE6619-015	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-18-1224	SE6619-016	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-18-2448	SE6619-017	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-0012	SE6619-018	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-1224	SE6619-019	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-2448	SE6619-020	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-0012	SE6619-012	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-1224	SE6619-013	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-W30-1224	SE6619-002	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C25-0012	SE6619-008	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C25-2448	SE6619-010	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-DUP29-100711	SE6619-011	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-19	TS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-N24-2448	SE6617-009	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-DUP26-100511	SE6617-010	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-1224	SE6617-018	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-0012	SE6617-017	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-2448	SE6617-016	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N28-1224	SE6617-015	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-0012	SE6617-014	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N26-2448	SE6617-013	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N30-2448	SE6617-019	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N26-0012	SE6617-011	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-Q25-0012	SE6617-020	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-1224	SE6617-008	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-0012	SE6617-007	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-L26-2448	SE6617-002	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L26-1224	SE6617-001	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L24-2448	SE6617-005	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	TS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/24/2011	10/26/2011	18	2	20
DSY-19	TS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

Katahdin ANALYTICAL SERVICES

600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
		( )	( )

Address	City	State	Zip Code
SEE PAGE ONE			

Purchase Order #	Proj. Name / No. CTO WE61 Derecktor SY	Katahdin Quote #

Bill (if different than above)	Address

Sampler (Print / Sign) Michael Horton	Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SF16e17 / SF16e18

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	Filt. ☐Y ☐N PCB	Filt. ☐Y ☐N TAC	Filt. ☐Y ☐N Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-N26-2448	10/5/11 / 0856	SED	2	X	X		X						
	DSY-SD-N28-0012	/ 0945		3	X	X	X	X						
	DSY-SD-N28-1224	/ 0948		2	X	X		X						
	DSY-SD-N28-2448	/ 0951		42	X	X		X						
	DSY-SD-N30-0012	/ 1000		3	X	X	X	X						
	DSY-SD-N30-1224	/ 1003		2	X	X		X						
	DSY-SD-N30-2448	/ 1006		2	X	X		X						
	DSY-SD-Q25-0012	/ 1015		3	X	X	X	X						
	DSY-SD-Q25-1224	/ 1018		2	X	X		X						
	DSY-SD-Q25-2448	/ 1021		2	X	X		X						
	DSY-SD-W26-0012	/ 1035		3	X	X	X	X						
	DSY-SD-W26-1224	/ 1038		2	X	X		X						
	DSY-SD-W26-2448	/ 1041		2	X	X		X						
	DSY-SD-DUP27-100511	/ —	↓	2	X	X		X						
	DSY-SD-RB10-100511	/ 1215	AQ	5	X	X		X						
	DSY-SD-T25-0012	↓ / 1055	SED	3	X	X	X	X						

COMMENTS

DSY-SD-N28-2448 is designated as LabQC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000017

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: SEE PAGE ONE | Contact | Phone # SEE PAGE ONE | Fax #

Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. STOWE61, Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE6618 / SE6619

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	TOC	Metals (Pb)						
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-T25-1224	10/5/11 / 1058	SED	2	X	X		X						
	DSY-SD-T25-2448	↓ / 1101		2	X	X		X						
	DSY-SD-Q29-0012	10/6/11 / 1045		3	X	X	X	X						
	DSY-SD-Q29-1224	/ 1048		2	X	X		X						
	DSY-SD-Q29-2448	/ 1051		2	X	X		X						
	DSY-SD-T29-0012	/ 1116		3	X	X	X	X						
	DSY-SD-T29-1224	/ 1113		2	X	X		X						
	DSY-SD-T29-2448	/ 1116		4	X	X		X						
	DSY-SD-W24-0012	/ 1225		3	X	X	X	X						
	DSY-SD-W24-1224	/ 1228		2	X	X		X						
	DSY-SD-W24-2448	/ 1231		2	X	X		X						
	DSY-SD-DUP28-100611	/ —		3	X	X	X	X						
	DSY-SD-W30-0012	/ 1245		3	X	X	X	X						
	DSY-SD-W30-1224	/ 1248		2	X	X		X						
	DSY-SD-W30-2448	/ 1251		2	X	X		X						
	DSY-SD-W28-0012	↓ / 1300	↓	3	X	X	X	X						

COMMENTS
DSY-SD-T29-2448 is designated as the lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				10/07/2018	

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample	RPD
	W26-2448	DUP 27	
Lead	80.7	124	42.31
total solids	70	62	12.12

	W24-0012	DUP 28	
Lead	97.3	1710	178.47
total solids	39	39	0.00
total organic carbon	44000	51000	14.74

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-19 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-DUP27-100511	SE6618-006
DSY-SD-DUP28-100611	SE6618-020
DSY-SD-Q25-1224	SE6618-001
DSY-SD-Q25-2448	SE6618-002
DSY-SD-Q29-0012	SE6618-011
DSY-SD-Q29-1224	SE6618-012
DSY-SD-Q29-2448	SE6618-013
DSY-SD-RB10-100511	SE6618-007
DSY-SD-T25-0012	SE6618-008
DSY-SD-T25-1224	SE6618-009
DSY-SD-T25-2448	SE6618-010
DSY-SD-T29-0012	SE6618-014
DSY-SD-T29-1224	SE6618-015
DSY-SD-T29-2448	SE6618-016
DSY-SD-T29-2448	SE6618-016A
DSY-SD-T29-2448	SE6618-016D
DSY-SD-T29-2448	SE6618-016S
DSY-SD-W24-0012	SE6618-017
DSY-SD-W24-1224	SE6618-018
DSY-SD-W24-2448	SE6618-019
DSY-SD-W26-0012	SE6618-003
DSY-SD-W26-1224	SE6618-004
DSY-SD-W26-2448	SE6618-005

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Heather Manz Name: Heather Manz

Date: 11-8-11 Title: Analyst I

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ21A Oct 21, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
CALCIUM	10000.0	9902.00	99.0
IRON	10000.0	10170.00	101.7
LEAD	400.0	411.80	103.0
MAGNESIUM	10000.0	10280.00	102.8

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12880.00	103.0
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12740.00	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12760.00	102.1
LEAD	500.0	507.40	101.5
MAGNESIUM	12500.0	12830.00	102.6

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:57

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12950.00	103.6
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.00	100.8
MAGNESIUM	12500.0	12760.00	102.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ26A Oct 26, 2011 15:42

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9779.00	97.8
CALCIUM	10000.0	9735.00	97.4
IRON	10000.0	9899.00	99.0
LEAD	400.0	405.30	101.3
MAGNESIUM	10000.0	9996.00	100.0

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 16:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12400.00	99.2
CALCIUM	12500.0	12510.00	100.1
IRON	12500.0	12390.00	99.1
LEAD	500.0	505.80	101.2
MAGNESIUM	12500.0	12810.00	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 16:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12630.00	101.0
LEAD	500.0	513.20	102.6
MAGNESIUM	12500.0	13010.00	104.1

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 17:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12790.00	102.3
LEAD	500.0	510.30	102.1
MAGNESIUM	12500.0	12900.00	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 18:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12790.00	102.3
CALCIUM	12500.0	12370.00	99.0
IRON	12500.0	12460.00	99.7
LEAD	500.0	501.00	100.2
MAGNESIUM	12500.0	12660.00	101.3

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 19:43

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12430.00	99.4
IRON	12500.0	12640.00	101.1
LEAD	500.0	501.40	100.3
MAGNESIUM	12500.0	12690.00	101.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 20:37

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12420.00	99.4
IRON	12500.0	12510.00	100.1
LEAD	500.0	501.40	100.3
MAGNESIUM	12500.0	12670.00	101.4

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 21:32

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12590.00	100.7
CALCIUM	12500.0	12370.00	99.0
IRON	12500.0	12380.00	99.0
LEAD	500.0	497.20	99.4
MAGNESIUM	12500.0	12650.00	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 22:27

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12540.00	100.3
CALCIUM	12500.0	12320.00	98.6
IRON	12500.0	12330.00	98.6
LEAD	500.0	496.40	99.3
MAGNESIUM	12500.0	12520.00	100.2

SAMPLE: CCV

File: IBJ26A Oct 26, 2011 23:21

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12580.00	100.6
CALCIUM	12500.0	12420.00	99.4
IRON	12500.0	12560.00	100.5
LEAD	500.0	498.00	99.6
MAGNESIUM	12500.0	12600.00	100.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 27, 2011 0:16

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12760.00	102.1
CALCIUM	12500.0	12490.00	99.9
IRON	12500.0	12700.00	101.6
LEAD	500.0	499.50	99.9
MAGNESIUM	12500.0	12630.00	101.0

SAMPLE: CCV

File: IBJ26A Oct 27, 2011 1:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12470.00	99.8
IRON	12500.0	12700.00	101.6
LEAD	500.0	498.50	99.7
MAGNESIUM	12500.0	12560.00	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ26A Oct 27, 2011 2:06

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12410.00	99.3
CALCIUM	12500.0	12340.00	98.7
IRON	12500.0	12530.00	100.2
LEAD	500.0	496.60	99.3
MAGNESIUM	12500.0	12500.00	100.0

SAMPLE: CCV

File: IBJ26A Oct 27, 2011 2:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12620.00	101.0
IRON	12500.0	12720.00	101.8
LEAD	500.0	492.20	98.4
MAGNESIUM	12500.0	12430.00	99.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ27B Oct 27, 2011 15:46

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9946.00	99.5
CALCIUM	10000.0	9845.00	98.5
IRON	10000.0	10090.00	100.9
LEAD	400.0	406.00	101.5
MAGNESIUM	10000.0	9997.00	100.0

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 16:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12710.00	101.7
CALCIUM	12500.0	12700.00	101.6
IRON	12500.0	12810.00	102.5
LEAD	500.0	507.20	101.4
MAGNESIUM	12500.0	12800.00	102.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12890.00	103.1
CALCIUM	12500.0	13030.00	104.2
IRON	12500.0	13140.00	105.1
LEAD	500.0	522.30	104.5
MAGNESIUM	12500.0	13170.00	105.4

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:58

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12890.00	103.1
IRON	12500.0	13010.00	104.1
LEAD	500.0	512.50	102.5
MAGNESIUM	12500.0	12950.00	103.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 18:52

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12840.00	102.7
CALCIUM	12500.0	12800.00	102.4
IRON	12500.0	12840.00	102.7
LEAD	500.0	508.90	101.8
MAGNESIUM	12500.0	12940.00	103.5

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 19:47

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12650.00	101.2
IRON	12500.0	12530.00	100.2
LEAD	500.0	508.00	101.6
MAGNESIUM	12500.0	12920.00	103.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 20:41

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12680.00	101.4
CALCIUM	12500.0	12650.00	101.2
IRON	12500.0	12420.00	99.4
LEAD	500.0	502.50	100.5
MAGNESIUM	12500.0	12830.00	102.6

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 21:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12730.00	101.8
CALCIUM	12500.0	12640.00	101.1
IRON	12500.0	12370.00	99.0
LEAD	500.0	504.30	100.9
MAGNESIUM	12500.0	12840.00	102.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ21A Oct 21, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	308.60	102.9
CALCIUM	100.0	103.80	103.8
IRON	100.0	100.50	100.5
LEAD	5.0	5.68	113.6
MAGNESIUM	100.0	107.40	107.4

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ26A Oct 26, 2011 15:51

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	297.70	99.2
CALCIUM	100.0	105.90	105.9
IRON	100.0	102.70	102.7
LEAD	5.0	5.79	115.8
MAGNESIUM	100.0	104.70	104.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ27B Oct 27, 2011 15:55

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	294.90	98.3
CALCIUM	100.0	103.30	103.3
IRON	100.0	104.80	104.8
LEAD	5.0	5.81	116.2
MAGNESIUM	100.0	103.90	103.9

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ21A Oct 21, 2011 14:51

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 16:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	6.080	J

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ26A Oct 26, 2011 15:46

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 16:09

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 17:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 17:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	5.534	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 18:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.449	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 19:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	10.710	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 20:42

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.420	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 21:36

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 22:31

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 26, 2011 23:26

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 27, 2011 0:20

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 27, 2011 1:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ26A Oct 27, 2011 2:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.614	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ26A Oct 27, 2011 2:28

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ27B Oct 27, 2011 15:50

Analyte	Result	C
ALUMINUM	-24.090	J
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 16:13

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.943	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 17:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	7.861	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 18:02

Analyte	Result	C
ALUMINUM	-18.800	J
CALCIUM	11.400	U
IRON	6.364	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 18:56

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 19:51

Analyte	Result	C
ALUMINUM	-15.440	J
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 20:46

Analyte	Result	C
ALUMINUM	-17.310	J
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 21:40

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-19

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ25ICS1

Matrix: SOIL **SDG Name:** DSY-19

QC Batch ID: BJ25ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
LEAD	0.40	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ21A Oct 21, 2011 15:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	495100	99.0
CALCIUM	500000	468400	93.7
IRON	200000	188500	94.3
LEAD	0	1	
MAGNESIUM	500000	451000	90.2

SAMPLE: ICSAB

File: IBJ21A Oct 21, 2011 15:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	476900	95.4
CALCIUM	500000	457200	91.4
IRON	200000	184500	92.3
LEAD	50	45	90.0
MAGNESIUM	500000	440400	88.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ26A Oct 26, 2011 15:55

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488600	97.7
CALCIUM	500000	450700	90.1
IRON	200000	180100	90.0
LEAD	0	1	
MAGNESIUM	500000	449300	89.9

SAMPLE: ICSAB

File: IBJ26A Oct 26, 2011 16:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	482800	96.6
CALCIUM	500000	441600	88.3
IRON	200000	178400	89.2
LEAD	50	47	94.0
MAGNESIUM	500000	441600	88.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ27B Oct 27, 2011 15:59

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	467600	93.5
CALCIUM	500000	441500	88.3
IRON	200000	174900	87.5
LEAD	0	3	
MAGNESIUM	500000	437100	87.4

SAMPLE: ICSAB

File: IBJ27B Oct 27, 2011 16:04

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480500	96.1
CALCIUM	500000	455400	91.1
IRON	200000	180400	90.2
LEAD	50	48	96.0
MAGNESIUM	500000	439800	88.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Client Field ID: DSY-SD-T29-2448S

Matrix: SOIL

SDG Name: DSY-19

Percent Solids: 83.1

Lab Sample ID: SE6618-016S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	13.1523		6.5877		6.76	97.1		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 83.1

Client Field ID: DSY-SD-T29-2448S

SDG Name: DSY-19

Lab Sample ID: SE6618-016A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	561.1000		95.2800		500	93.2		75	125	P

Comments:

FORM V (Part 2) - IN

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T29-2448D

Matrix: SOIL **SDG Name:** DSY-19

Percent Solids: 83.1 **Lab Sample ID:** SE6618-016D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
LEAD, TOTAL		6.5877		6.5464		0.6		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ25ICS1

Matrix: SOIL **SDG Name:** DSY-19

QC Batch ID: BJ25ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	10.00	10.32	103.2	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-19

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	105.90	105.9	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-T29-2448L

Matrix: SOIL **SDG Name:** DSY-19

Lab Sample ID: SE6618-016L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
LEAD, TOTAL	95.28		97.59		2.4		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ20ICW1

Matrix: WATER **SDG Name:** DSY-19

Method: P **Prep Date:** 10/20/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ20ICW1	LCSWBJ20ICW1	0.05	0.05	
PBWBJ20ICW1	PBWBJ20ICW1	0.05	0.05	
DSY-SD-RB10-100511	SE6618-007	0.05	0.05	A

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ25ICS1

Matrix: SOIL **SDG Name:** DSY-19

Method: P **Prep Date:** 10/25/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ25ICS1	LCSOBJ25ICS1	1	0.1	
PBSBJ25ICS1	PBSBJ25ICS1	1	0.1	
DSY-SD-Q25-1224	SE6618-001	1.92	0.1	B
DSY-SD-Q25-2448	SE6618-002	1.26	0.1	A
DSY-SD-W26-0012	SE6618-003	1.39	0.1	A
DSY-SD-W26-1224	SE6618-004	1.83	0.1	B
DSY-SD-W26-2448	SE6618-005	1.95	0.1	B
DSY-SD-DUP27-100511	SE6618-006	1.89	0.1	B
DSY-SD-T25-0012	SE6618-008	1.61	0.1	B
DSY-SD-T25-1224	SE6618-009	1.65	0.1	B
DSY-SD-T25-2448	SE6618-010	1.78	0.1	B
DSY-SD-Q29-0012	SE6618-011	1.6	0.1	B
DSY-SD-Q29-1224	SE6618-012	1.87	0.1	A
DSY-SD-Q29-2448	SE6618-013	1.62	0.1	A
DSY-SD-T29-0012	SE6618-014	2.07	0.1	C
DSY-SD-T29-1224	SE6618-015	1.72	0.1	B
DSY-SD-T29-2448	SE6618-016	1.74	0.1	B
DSY-SD-T29-2448D	SE6618-016D	1.78	0.1	B
DSY-SD-T29-2448S	SE6618-016S	1.78	0.1	B
DSY-SD-W24-0012	SE6618-017	1.08	0.1	C
DSY-SD-W24-1224	SE6618-018	1.34	0.1	B
DSY-SD-W24-2448	SE6618-019	1.97	0.1	A
DSY-SD-DUP28-100611	SE6618-020	1.07	0.1	A

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ21A

Date: 10/21/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time			Elements
Blank		1	14:38	AL	CA	FE PB MG
Std 1		1	14:42	AL	CA	FE PB MG
ICV		1	14:47	AL	CA	FE PB MG
ICB		1	14:51	AL	CA	FE PB MG
PQL		1	14:56	AL	CA	FE PB MG
ICSA		1	15:00	AL	CA	FE PB MG
ICSAB		1	15:05	AL	CA	FE PB MG
CCV		1	15:09	AL	CA	FE PB MG
CCB		1	15:14	AL	CA	FE PB MG
ZZZZZZ		2	15:18			
ZZZZZZ		2	15:23			
ZZZZZZ		2	15:27			
PBWBJ20ICW1		1	15:32			PB
LCSWBJ20ICW1		1	15:36			PB
ZZZZZZ		1	15:41			
ZZZZZZ		5	15:45			
ZZZZZZ		1	15:50			
ZZZZZZ		1	15:54			
ZZZZZZ		1	15:58			
CCV		1	16:03	AL	CA	FE PB MG
CCB		1	16:07	AL	CA	FE PB MG
ZZZZZZ		1	16:12			
ZZZZZZ		1	16:16			
ZZZZZZ		1	16:21			
ZZZZZZ		1	16:25			
ZZZZZZ		1	16:30			
ZZZZZZ		1	16:34			
ZZZZZZ		1	16:39			
ZZZZZZ		1	16:44			
ZZZZZZ		1	16:48			
SE6618-007	DSY-SD-RB10-100511	1	16:53			PB
CCV		1	16:57	AL	CA	FE PB MG
CCB		1	17:01	AL	CA	FE PB MG

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ26A

Date: 10/26/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	15:33 AL	CA	FE PB MG
Std 1		1	15:38 AL	CA	FE PB MG
ICV		1	15:42 AL	CA	FE PB MG
ICB		1	15:46 AL	CA	FE PB MG
PQL		1	15:51 AL	CA	FE PB MG
ICSA		1	15:55 AL	CA	FE PB MG
ICSAB		1	16:00 AL	CA	FE PB MG
CCV		1	16:05 AL	CA	FE PB MG
CCB		1	16:09 AL	CA	FE PB MG
ZZZZZZ		1	16:14		
ZZZZZZ		1	16:18		
ZZZZZZ		1	16:23		
ZZZZZZ		1	16:27		
ZZZZZZ		1	16:32		
ZZZZZZ		1	16:36		
ZZZZZZ		1	16:41		
ZZZZZZ		1	16:46		
ZZZZZZ		5	16:50		
ZZZZZZ		1	16:55		
CCV		1	16:59 AL	CA	FE PB MG
CCB		1	17:03 AL	CA	FE PB MG
ZZZZZZ		1	17:08		
ZZZZZZ		1	17:12		
ZZZZZZ		1	17:17		
ZZZZZZ		1	17:21		
ZZZZZZ		1	17:26		
ZZZZZZ		1	17:30		
ZZZZZZ		1	17:35		
ZZZZZZ		1	17:40		
ZZZZZZ		1	17:44		
ZZZZZZ		1	17:49		
CCV		1	17:53 AL	CA	FE PB MG
CCB		1	17:58 AL	CA	FE PB MG
ZZZZZZ		1	18:02		
ZZZZZZ		1	18:07		
ZZZZZZ		1	18:11		
ZZZZZZ		1	18:16		
ZZZZZZ		1	18:20		
ZZZZZZ		1	18:25		
ZZZZZZ		1	18:30		
ZZZZZZ		1	18:34		
ZZZZZZ		1	18:39		
ZZZZZZ		1	18:43		
CCV		1	18:48 AL	CA	FE PB MG
CCB		1	18:52 AL	CA	FE PB MG
ZZZZZZ		1	18:57		
ZZZZZZ		5	19:01		
ZZZZZZ		1	19:06		
ZZZZZZ		1	19:10		
ZZZZZZ		1	19:15		

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ26A

Date: 10/26/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
ZZZZZZ		1	19:20		
ZZZZZZ		1	19:24		
ZZZZZZ		1	19:29		
ZZZZZZ		1	19:33		
ZZZZZZ		1	19:38		
CCV		1	19:43 AL	CA	FE PB MG
CCB		1	19:47 AL	CA	FE PB MG
ZZZZZZ		1	19:52		
ZZZZZZ		1	19:56		
ZZZZZZ		1	20:01		
ZZZZZZ		1	20:05		
ZZZZZZ		1	20:10		
ZZZZZZ		1	20:14		
ZZZZZZ		1	20:19		
ZZZZZZ		1	20:24		
ZZZZZZ		1	20:28		
ZZZZZZ		1	20:33		
CCV		1	20:37 AL	CA	FE PB MG
CCB		1	20:42 AL	CA	FE PB MG
ZZZZZZ		1	20:46		
ZZZZZZ		1	20:51		
ZZZZZZ		1	20:55		
ZZZZZZ		1	21:00		
ZZZZZZ		1	21:04		
ZZZZZZ		1	21:09		
ZZZZZZ		1	21:14		
ZZZZZZ		1	21:18		
ZZZZZZ		1	21:23		
ZZZZZZ		5	21:27		
CCV		1	21:32 AL	CA	FE PB MG
CCB		1	21:36 AL	CA	FE PB MG
ZZZZZZ		1	21:41		
ZZZZZZ		1	21:45		
ZZZZZZ		1	21:50		
ZZZZZZ		1	21:55		
ZZZZZZ		1	21:59		
ZZZZZZ		1	22:04		
ZZZZZZ		1	22:08		
ZZZZZZ		1	22:13		
ZZZZZZ		1	22:18		
ZZZZZZ		1	22:22		
CCV		1	22:27 AL	CA	FE PB MG
CCB		1	22:31 AL	CA	FE PB MG
ZZZZZZ		5	22:36		
ZZZZZZ		1	22:40		
ZZZZZZ		1	22:45		
ZZZZZZ		1	22:49		
ZZZZZZ		1	22:54		
ZZZZZZ		1	22:58		
ZZZZZZ		2	23:03		
ZZZZZZ		10	23:07		

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ26A

Date: 10/26/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time			Elements
ZZZZZZ		2	23:12			
ZZZZZZ		2	23:17			
CCV		1	23:21	AL	CA	FE PB MG
CCB		1	23:26	AL	CA	FE PB MG
ZZZZZZ		2	23:30			
ZZZZZZ		1	23:35			
ZZZZZZ		1	23:39			
ZZZZZZ		1	23:44			
ZZZZZZ		1	23:48			
ZZZZZZ		1	23:53			
ZZZZZZ		1	23:58			
PBSBJ25ICS1		1	0:02			PB
LCSOBJ25ICS1		1	0:07			PB
ZZZZZZ		1	0:11			
CCV		1	0:16	AL	CA	FE PB MG
CCB		1	0:20	AL	CA	FE PB MG
SE6618-002	DSY-SD-Q25-2448	1	0:25			PB
SE6618-003	DSY-SD-W26-0012	1	0:29			PB
SE6618-004	DSY-SD-W26-1224	1	0:34			PB
SE6618-005	DSY-SD-W26-2448	1	0:39			PB
ZZZZZZ		1	0:43			
SE6618-008	DSY-SD-T25-0012	1	0:48			PB
SE6618-009	DSY-SD-T25-1224	1	0:52			PB
ZZZZZZ		1	0:57			
SE6618-011	DSY-SD-Q29-0012	1	1:01			PB
SE6618-012	DSY-SD-Q29-1224	1	1:06			PB
CCV		1	1:11	AL	CA	FE PB MG
CCB		1	1:15	AL	CA	FE PB MG
ZZZZZZ		1	1:20			
ZZZZZZ		1	1:24			
ZZZZZZ		1	1:29			
SE6618-016	DSY-SD-T29-2448	1	1:34			PB
SE6618-016L	DSY-SD-T29-2448L	5	1:38			PB
SE6618-016A	DSY-SD-T29-2448A	1	1:43			PB
SE6618-016D	DSY-SD-T29-2448D	1	1:47			PB
SE6618-016S	DSY-SD-T29-2448S	1	1:52			PB
SE6618-017	DSY-SD-W24-0012	1	1:56			PB
ZZZZZZ		1	2:01			
CCV		1	2:06	AL	CA	FE PB MG
CCB		1	2:10	AL	CA	FE PB MG
SE6618-019	DSY-SD-W24-2448	1	2:15			PB
SE6618-020	DSY-SD-DUP28-100611	1	2:19			PB
CCV		1	2:24	AL	CA	FE PB MG
CCB		1	2:28	AL	CA	FE PB MG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	15:37 AL	CA	FE PB MG
Std 1		1	15:41 AL	CA	FE PB MG
ICV		1	15:46 AL	CA	FE PB MG
ICB		1	15:50 AL	CA	FE PB MG
PQL		1	15:55 AL	CA	FE PB MG
ICSA		1	15:59 AL	CA	FE PB MG
ICSAB		1	16:04 AL	CA	FE PB MG
CCV		1	16:09 AL	CA	FE PB MG
CCB		1	16:13 AL	CA	FE PB MG
ZZZZZZ		1	16:18		
ZZZZZZ		2	16:22		
ZZZZZZ		2	16:27		
ZZZZZZ		2	16:31		
ZZZZZZ		2	16:36		
ZZZZZZ		2	16:40		
ZZZZZZ		2	16:45		
ZZZZZZ		2	16:49		
ZZZZZZ		2	16:54		
ZZZZZZ		2	16:59		
CCV		1	17:03 AL	CA	FE PB MG
CCB		1	17:07 AL	CA	FE PB MG
ZZZZZZ		2	17:12		
ZZZZZZ		2	17:17		
ZZZZZZ		2	17:21		
ZZZZZZ		2	17:26		
ZZZZZZ		2	17:30		
ZZZZZZ		10	17:35		
ZZZZZZ		2	17:40		
ZZZZZZ		2	17:44		
ZZZZZZ		2	17:49		
ZZZZZZ		2	17:53		
CCV		1	17:58 AL	CA	FE PB MG
CCB		1	18:02 AL	CA	FE PB MG
ZZZZZZ		1	18:07		
ZZZZZZ		1	18:11		
ZZZZZZ		1	18:16		
ZZZZZZ		5	18:20		
ZZZZZZ		1	18:25		
ZZZZZZ		1	18:29		
ZZZZZZ		1	18:34		
ZZZZZZ		1	18:38		
ZZZZZZ		1	18:43		
ZZZZZZ		1	18:47		
CCV		1	18:52 AL	CA	FE PB MG
CCB		1	18:56 AL	CA	FE PB MG
ZZZZZZ		1	19:01		
ZZZZZZ		1	19:06		
ZZZZZZ		1	19:10		
ZZZZZZ		1	19:15		
ZZZZZZ		1	19:19		

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-19

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
ZZZZZZ		1	19:24		
ZZZZZZ		1	19:28		
ZZZZZZ		1	19:33		
ZZZZZZ		1	19:37		
ZZZZZZ		1	19:42		
CCV		1	19:47 AL	CA	FE PB MG
CCB		1	19:51 AL	CA	FE PB MG
ZZZZZZ		1	19:56		
ZZZZZZ		1	20:00		
ZZZZZZ		1	20:05		
ZZZZZZ		1	20:09		
ZZZZZZ		1	20:14		
SE6618-001	DSY-SD-Q25-1224	2	20:18		PB
SE6618-006	DSY-SD-DUP27-100511	2	20:23		PB
SE6618-010	DSY-SD-T25-2448	2	20:28		PB
SE6618-013	DSY-SD-Q29-2448	2	20:32		PB
SE6618-014	DSY-SD-T29-0012	2	20:37		PB
CCV		1	20:41 AL	CA	FE PB MG
CCB		1	20:46 AL	CA	FE PB MG
SE6618-015	DSY-SD-T29-1224	2	20:50		PB
SE6618-018	DSY-SD-W24-1224	2	20:55		PB
ZZZZZZ		1	20:59		
ZZZZZZ		1	21:04		
ZZZZZZ		2	21:09		
ZZZZZZ		5	21:13		
ZZZZZZ		10	21:18		
ZZZZZZ		1	21:22		
ZZZZZZ		1	21:27		
ZZZZZZ		1	21:31		
CCV		1	21:36 AL	CA	FE PB MG
CCB		1	21:40 AL	CA	FE PB MG

Sample DSY-SD-W26-0012 Pb reported result 68mg/kg

$\left(\frac{360.6\,ug}{L}\right)\left(\frac{0.1\,L}{1.39\,g}\right)\left(\frac{1\,mg}{1000\,ug}\right)\left(\frac{1000\,g}{1\,kg}\right)\left(\frac{1}{3.81}\right) = 68.1\,mg/kg$

SE6618-003

Method Name: K6010-2011 Method Revision: 50
Analyst Name: EAM
Acquire Date: 10/27/2011 12:29:54AM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		6.700	ug/L	0.1983	2.960	-523.4
Al3961_R		81,370	ug/L	804.5	0.9887	71,040
As1891_A		57.37	ug/L	2.259	3.937	8.310
Au2427_A		-1.719	ug/L	1.581	91.98	122.2
B_2089_A		249.2	ug/L	2.873	1.153	234.1
Ba4554_R		247.6	ug/L	1.847	0.7459	14,390
Be3130_R		5.034	ug/L	0.04760	0.9456	301.2
Ca3158_R		47,460	ug/L	293.3	0.6179	74,930
Cd2265_A		3.063	ug/L	0.01784	0.5825	252.5
Co2286_A		41.71	ug/L	0.4709	1.129	197.2
Cr2677_A		296.4	ug/L	9.035	3.048	4,355
Cu3273_A		544.0	ug/L	17.50	3.218	7,527
Fe2599_R		165,400	ug/L	1,715	1.037	320,200
K_7664_R		22,600	ug/L	167.0	0.7386	14,610
Li6707_R		182.7	ug/L	2.300	1.259	1,974
Mg2025_A		43,640	ug/L	453.1	1.038	8,114
Mn2576_R		1,543	ug/L	11.24	0.7281	17,070
Mo2020_A		12.44	ug/L	0.1067	0.8578	25.38
Na5895_R		84,490	ug/L	609.7	0.7216	162,200
Ni2316_A		139.4	ug/L	1.078	0.7733	323.2
Pb2203_A		360.6	ug/L	2.628	0.7285	389.3
Sb2068_A		18.65	ug/L	2.048	10.98	11.12
Se1960_A		6.959	ug/L	0.3514	5.050	4.458
Si2516_R		3,399	ug/L	19.00	0.5591	1,940
Sn1899_A		56.53	ug/L	0.5585	0.9881	31.61
Sr4215_R		316.9	ug/L	2.777	0.8762	24,960
Ti3349_A		3,573	ug/L	109.7	3.070	114,400
Tl1908_A		-2.835	ug/L	0.4138	14.60	-5.063
V_2924_A		304.5	ug/L	9.710	3.189	4,846
Zn2062_A		1,168	ug/L	14.60	1.250	3,771
Y_3600_R		24,254	Cts/S	27.826	0.11473	24,254
Y_2243_A		9,104.4	Cts/S	68.040	0.74733	9,104.4
Y_3600_A		247,870	Cts/S	5,742.4	2.3167	247,870

SE6618-004

Method Name: K6010-2011 Method Revision: 50
Analyst Name: EAM
Acquire Date: 10/27/2011 12:34:30AM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		6.789	ug/L	0.2439	3.592	-696.4
Al3961_R		107,700	ug/L	382.2	0.3550	95,790
As1891_A		86.13	ug/L	0.4719	0.5479	15.22
Au2427_A		0.2326	ug/L	0.08485	36.49	167.3
B_2089_A		324.1	ug/L	0.7318	0.2258	305.1
Ba4554_R		336.7	ug/L	0.3860	0.1146	19,900
Be3130_R		6.718	ug/L	0.05875	0.8744	418.3
Ca3158_R		72,920	ug/L	43.58	0.05977	117,300
Cd2265_A		8.180	ug/L	0.05964	0.7291	393.6
Co2286_A		56.90	ug/L	0.06995	0.1229	266.0
Cr2677_A		470.0	ug/L	4.358	0.9273	6,797
Cu3273_A		1,187	ug/L	11.76	0.9911	16,300
Fe2599_R		212,800	ug/L	350.0	0.1645	419,700
K_7664_R		29,820	ug/L	58.81	0.1972	19,640
Li6707_R		239.8	ug/L	0.3227	0.1346	2,642
Mg2025_A		57,020	ug/L	101.0	0.1771	10,650
Mn2576_R		2,019	ug/L	5.296	0.2624	22,750
Mo2020_A		20.77	ug/L	0.1738	0.8369	43.17

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG99436	Lloyd Kahn	18-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG99436	Lloyd Kahn	18-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG99672	ASTM D2216	24-OCT-11	22-OCT-11	U 1 %	1 %
MBLANK	WG99708	ASTM D2216	25-OCT-11	24-OCT-11	U 1 %	1 %
MBLANK	WG99718	ASTM D2216	26-OCT-11	24-OCT-11	U 1 %	1 %

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99436-2	LCS	WG99436	18-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99436-2	LCS	WG99436	18-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99672-2	LCS	WG99672	24-OCT-11	22-OCT-11	%	90	91.	101	80-120	
WG99708-2	LCS	WG99708	25-OCT-11	24-OCT-11	%	90	92.	102	80-120	
WG99718-2	LCS	WG99718	26-OCT-11	24-OCT-11	%	90	91.	101	80-120	

Quality Control Report

Duplicate Sample Summary Report

Toc In Soil(1)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99436-3	SE6618-3	WG99436	18-OCT-11	ug/gdrywt	31000	35000	12	30

Toc In Soil(2)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99436-3	SE6618-3	WG99436	18-OCT-11	ug/gdrywt	34000	32000	4	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99672-4	SE6618-1	WG99672	24-OCT-11	%	71.	71.	0	20
WG99708-3	SE6618-16	WG99708	25-OCT-11	%	83.	82.	2	20

Katahdin
ANALYTICAL SERVICES

nelac
Cert No E87604

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1) TOC(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99436-4	MS	SE6618-3	WG99436	18-OCT-11	ug/gdrywt	46268.15	31000	96000	140*	75 - 125

Toc In Soil(2) TOC(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99436-4	MS	SE6618-3	WG99436	18-OCT-11	ug/gdrywt	46268.15	34000	96000	134*	75 - 125

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **DECEMBER 15, 2011**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – COPPER, LEAD, ZINC, TOTAL ORGANIC CARBON, TOTAL SOLIDS**
CTO – WE61 NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) – DSY-20

SAMPLES: 19/Sediments/

DSY-SD-18-0012
DSY-SD-18-1224
DSY-SD-18-2448
DSY-SD-C09-0012
DSY-SD-C09-1224
DSY-SD-C09-2448
DSY-SD-C21-0012
DSY-SD-C21-1224
DSY-SD-C21-2448
DSY-SD-C25-0012
DSY-SD-C25-1224
DSY-SD-C25-2448
DSY-SD-DUP29-100711
DSY-SD-W28-0012
DSY-SD-W28-1224
DSY-SD-W28-2448
DSY-SD-W30-0012
DSY-SD-W30-1224
DSY-SD-W30-2448

1/Aqueous/

DSY-SD-RB11-100611

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-20, consists of nineteen (19) sediment environmental samples and one (1) rinsate blank (DSY-SD-RB11-100611). One (1) field duplicate pair (DSY-SD-C25-1224 / DSY-SD-DUP29-100711) was included within this SDG.

All samples were analyzed for lead. Samples DSY-SD-C09-1224 and DSY-SD-C09-2448 were also analyzed for copper and zinc. All samples except DSY-SD-RB11-100611 were analyzed for total solids. Samples DSY-SD-18-0012, DSY-SD-C09-0012, DSY-SD-C21-0012, DSY-SD-C25-0012, DSY-SD-W28-0012 and DSY-SD-W30-0012 were also analyzed for total organic carbon. The samples were collected by Tetra Tech on October 6 and 7, 2011 and analyzed by Katahdin Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals analyses were conducted using SW-846 method 6010C. Total solids analyses were conducted using Standard Method 2540G. Total organic carbon analyses were conducted using the Lloyd Kahn method.

All samples in this SDG were validated to EPA Region I Tier II protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results

* • Laboratory Method/Preparation Blank Analyses
* • ICP Interference Check Sample Results
• Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
• Field Duplicate Results
* • Detection Limits
* • Sample Quantitation

* - All quality control criteria were met for this parameter.

Matrix Spike Recoveries

The average matrix spike percent recovery for total organic carbon was greater than the quality control limit. The positive results reported for total organic carbon were qualified as estimated, "J".

Field Duplicate Results

Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-C25-1224 / DSY-SD-DUP29-100711. The positive results reported for lead were qualified as estimated, "J".

Notes

The nondetected results were reported to the limit of detection (LOD)

All detection limits reported were below the project action limit listed in the sampling and analysis plan (SAP).

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: The average matrix spike percent recovery for total organic carbon was greater than the quality control limit. Field duplicate imprecision (RPD > 50%) was noted for lead for sample pair DSY-SD-C25-1224 / DSY-SD-DUP29-100711.

The data for these analyses were reviewed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D – Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB11-100611		
SDG: DSY-20	LAB_ID	SE6619-007		
FRACTION: M	SAMP_DATE	10/6/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012			DSY-SD-18-1224			DSY-SD-18-2448			DSY-SD-C09-0012		
SDG: DSY-20	LAB_ID	SE6619-015			SE6619-016			SE6619-017			SE6619-018		
FRACTION: M	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	78.1			82.0			87.9			74.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		14.1	J	G	10	J	G	8.1	J	G	15.9	J	G
ZINC													

PROJ_NO: 02747 SDG: DSY-20 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C09-1224			DSY-SD-C09-2448			DSY-SD-C21-0012			DSY-SD-C21-1224		
	LAB_ID	SE6619-019			SE6619-020			SE6619-012			SE6619-013		
	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	77.8			77.5			61.2			66.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		3.2			75.1								
LEAD		4	J	G	85.9	J	G	320	J	G	88.4	J	G
ZINC		20.8			468								

PROJ_NO: 02747 SDG: DSY-20 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C21-2448			DSY-SD-C25-0012			DSY-SD-C25-1224			DSY-SD-C25-2448		
	LAB_ID	SE6619-014			SE6619-008			SE6619-009			SE6619-010		
	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.8			41.5			87.5			82.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		12	J	G	198	J	G	12.7	J	G	3.6	J	G
ZINC													

PROJ_NO: 02747 SDG: DSY-20 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP29-100711			DSY-SD-W28-0012			DSY-SD-W28-1224			DSY-SD-W28-2448		
	LAB_ID	SE6619-011			SE6619-004			SE6619-005			SE6619-006		
	SAMP_DATE	10/7/2011			10/6/2011			10/6/2011			10/6/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	69.2			37.3			53.5			77.7		
	DUP_OF	DSY-SD-C25-1224											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		124	J	G	66.2	J	G	94.8	J	G	28	J	G
ZINC													

PROJ_NO: 02747 SDG: DSY-20 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W30-0012			DSY-SD-W30-1224			DSY-SD-W30-2448		
	LAB_ID	SE6619-001			SE6619-002			SE6619-003		
	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	66.7			83.1			80.5		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER										
LEAD		36.8	J	G	21.7	J	G	9.7	J	G
ZINC										

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012						DSY-SD-18-1224			DSY-SD-18-2448		
SDG: DSY-20	LAB_ID	SE6619-15						SE6619-16			SE6619-17		
FRACTION: MISC	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	78.1			78.1			82.0			87.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					19000	J	D						
TOTAL SOLIDS		78						82			88		

PROJ_NO: 02747 SDG: DSY-20 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C09-0012						DSY-SD-C09-1224			DSY-SD-C09-2448		
	LAB_ID	SE6619-18						SE6619-19			SE6619-20		
	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	74.5			74.5			77.8			77.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					13000	J	D						
TOTAL SOLIDS		74						78			78		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C21-0012						DSY-SD-C21-1224			DSY-SD-C21-2448		
SDG: DSY-20	LAB_ID	SE6619-12						SE6619-13			SE6619-14		
FRACTION: MISC	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	61.2			61.2			66.5			85.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					24000	J	D						
TOTAL SOLIDS		61						66			86		

PROJ_NO: 02747 SDG: DSY-20 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C25-0012						DSY-SD-C25-1224			DSY-SD-C25-2448		
	LAB_ID	SE6619-8						SE6619-9			SE6619-10		
	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	41.5			41.5			87.5			82.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					38000	J	D						
TOTAL SOLIDS		42						88			82		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP29-100711			DSY-SD-W28-0012						DSY-SD-W28-1224		
SDG: DSY-20	LAB_ID	SE6619-11			SE6619-4						SE6619-5		
FRACTION: MISC	SAMP_DATE	10/7/2011			10/6/2011						10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	69.2			37.3			37.3			53.5		
	DUP_OF	DSY-SD-C25-1224											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								38000	J	D			
TOTAL SOLIDS		69			37						53		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W28-2448			DSY-SD-W30-0012						DSY-SD-W30-1224		
SDG: DSY-20	LAB_ID	SE6619-6			SE6619-1						SE6619-2		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/6/2011						10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	77.7			66.7			66.7			83.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON								20000	J	D			
TOTAL SOLIDS		78			67						83		

PROJ_NO: 02747 SDG: DSY-20 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W30-2448		
	LAB_ID	SE6619-3		
	SAMP_DATE	10/6/2011		
	QC_TYPE	NM		
	UNITS	%		
	PCT_SOLIDS	80.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON				
TOTAL SOLIDS		80		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-RB11-100611

Matrix: WATER **SDG Name:** DSY-20

Percent Solids: 0.00 **Lab Sample ID:** SE6619-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-18-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 78.1 **Lab Sample ID:** SE6619-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	14.1			P	1	0.44	0.08	0.35

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-18-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 82.0 **Lab Sample ID:** SE6619-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	10			P	2	0.90	0.16	0.72

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-18-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 87.9 **Lab Sample ID:** SE6619-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	8.1			P	1	0.56	0.10	0.45

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C09-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 74.5 **Lab Sample ID:** SE6619-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	15.9			P	1	0.39	0.07	0.31

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C09-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 77.8 **Lab Sample ID:** SE6619-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	3.2			P	1	2.7	0.17	1.1
7439-92-1	LEAD, TOTAL	4.0			P	1	0.54	0.09	0.43
7440-66-6	ZINC, TOTAL	20.8			P	1	2.7	0.18	1.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C09-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 77.5 **Lab Sample ID:** SE6619-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	75.1			P	1	2.5	0.16	1.0
7439-92-1	LEAD, TOTAL	85.9			P	1	0.50	0.09	0.40
7440-66-6	ZINC, TOTAL	468			P	1	2.5	0.17	1.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C21-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 61.2 **Lab Sample ID:** SE6619-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	320			P	1	0.58	0.10	0.46

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C21-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 66.5 **Lab Sample ID:** SE6619-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	88.4			P	1	0.50	0.09	0.40

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C21-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 85.8 **Lab Sample ID:** SE6619-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	12.0			P	2	0.93	0.16	0.75

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C25-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 41.5 **Lab Sample ID:** SE6619-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	198			P	1	1.1	0.19	0.85

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C25-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 87.5 **Lab Sample ID:** SE6619-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	12.7			P	2	0.80	0.14	0.64

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C25-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 82.0 **Lab Sample ID:** SE6619-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	3.6			P	1	0.46	0.08	0.36

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP29-100711

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 69.2 **Lab Sample ID:** SE6619-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	124			P	1	0.47	0.08	0.37

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W28-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 37.3 **Lab Sample ID:** SE6619-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	66.2			P	1	1.1	0.19	0.86

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W28-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 53.4 **Lab Sample ID:** SE6619-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	94.8			P	1	0.69	0.12	0.55

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W28-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 77.7 **Lab Sample ID:** SE6619-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	28.0			P	1	0.47	0.08	0.38

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-0012

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 66.6 **Lab Sample ID:** SE6619-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	36.8			P	1	0.60	0.10	0.48

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-1224

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 83.1 **Lab Sample ID:** SE6619-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	21.7			P	1	0.44	0.08	0.36

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-2448

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 80.5 **Lab Sample ID:** SE6619-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	9.7			P	1	0.47	0.08	0.38

Comments:

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-15
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-18-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	20000 ug/gdrywt	510	110	380	LLOYD KAHN	WG99436	18-OCT-11 14:40:58	N/A	N/A	
Toc In Soil(2)	17000 ug/gdrywt	510	110	380	LLOYD KAHN	WG99436	18-OCT-11 14:54:30	N/A	N/A	
Toc In Soil(Avg)	19000 ug/gdrywt	510	110	380	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	78. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:03:31	ASTM D2216	24-OCT-11	

[redacted] Technology Way
P.O. Box 540, Scarborough, ME 04070

http://www.katahdinlab.com

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-16
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-18-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	82. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:03:42	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000021

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-17
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-18-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	88. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:03:57	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500024

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-18
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C09-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	16000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99436	18-OCT-11 15:19:16	N/A	N/A	
Toc In Soil(2)	9500 ug/gdrywt	540	110	400	LLOYD KAHN	WG99436	18-OCT-11 15:31:08	N/A	N/A	
Toc In Soil(Avg)	13000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	74. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:04:07	ASTM D2216	24-OCT-11	

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-19
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C09-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	78. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:04:19	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500002

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-20
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C09-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	78. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:04:25	ASTM D2216	24-OCT-11	

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-12
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C21-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	26000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99436	18-OCT-11 14:15:55	N/A	N/A	
Toc In Soil(2)	23000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99436	18-OCT-11 14:28:12	N/A	N/A	
Toc In Soil(Avg)	24000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	61.%	1		N/A	SM2540G	WG99718	26-OCT-11 08:02:58	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000[illegible]

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-13
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C21-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	66. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:03:09	ASTM D2216	24-OCT-11	

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-14
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C21-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	86. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:03:18	ASTM D2216	24-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-8
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C25-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	39000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99436	18-OCT-11 13:50:59	N/A	N/A	
Toc In Soil(2)	38000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99436	18-OCT-11 14:04:43	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	960	200	720	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	42. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:06:50	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000025

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-9
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description
DSY-SD-C25-1224

Matrix	Date Sampled	Date Received
SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	88. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:06:59	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-10
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C25-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	82. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:07:19	ASTM D2216	24-OCT-11	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-11
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP29-100711	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	69. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:08:09	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000d88

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-4
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W28-0012	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99436	18-OCT-11 13:08:42	N/A	N/A	
Toc In Soil(2)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99436	18-OCT-11 13:18:41	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	37. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:06:06	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000824

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-5
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W28-1224	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	53. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:06:19	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500003

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-6
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W28-2448	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	78. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:06:28	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 50000

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-1
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W30-0012	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	22000 ug/gdrywt	600	130	450	LLOYD KAHN	WG99436	18-OCT-11 12:32:43	N/A	N/A	
Toc In Soil(2)	19000 ug/gdrywt	600	130	450	LLOYD KAHN	WG99436	18-OCT-11 12:44:27	N/A	N/A	
Toc In Soil(Avg)	20000 ug/gdrywt	600	130	450	LLOYD KAHN	WG99436	18-OCT-11 08:42:48	N/A	N/A	
Total Solids	67. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:05:32	ASTM D2216	24-OCT-11	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-2
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W30-1224	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	83. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:05:43	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 5000000

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6619-3
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-20

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-W30-2448	SL	06-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	80. %	1		N/A	SM2540G	WG99708	25-OCT-11 13:05:54	ASTM D2216	24-OCT-11	

APPENDIX C
REGION I WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. DSY-20
No. of Samples/Matrix Sediment (19)
Aqueous (1)

SOW/Method No. see validation letter
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Jane Solomon Company Name _____ Phone Number _____

Date Validation Started 12-5-2011 Date Validation Completed 12-5-2011

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets:

INORG	COMPLETE SDG FILE (CSF) AUDIT	
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	
INORG-II	ICP-MS TUNE	NA
INORG-III-A/B	CALIBRATIONS	
INORG-IV-A/B	BLANKS	
INORG-IV-C.1	BLANKS	
INORG-IV-C.2	BLANKS	
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	NA
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	NA
INORG-VII	ICP-MS INTERNAL STANDARDS	NA
INORG-VIII	MATRIX SPIKES	
INORG-IX	LABORATORY DUPLICATE SAMPLES	
INORG-X	FIELD DUPLICATES	
INORG-XI	ICP SERIAL DILUTIONS	
INORG-XII-A/B	SENSITIVITY CHECK	
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	NA
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Terri Solomon

Name: Terri Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

See validation letter

Site:_____ Case:_____ SDG:_____

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Mary Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG

NA

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters:_____

Missing Information	Date Lab Contacted	Date Received

Validator: Helen Salmon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-I

see validation letter

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Dan Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

NA

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			

Comments:

Validator: Lisa Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

See validation letter

III. CALIBRATIONS

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Helen Salomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

see validation letter

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: John Silvern

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

See validation letter

Circle the highest concentration of each contaminant.

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: Helen Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-IV-C.2

IV. BLANKS

see validation letter

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample.

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action

Comments:

Validator: [signature]

Date: 12-15-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-A

see validation letter

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Lew Solomon

Date: 12-15-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

See validation letter

1. List all analytes in the ICSA that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	

Comments:

Validator: Kris Solomon

Date: 12-15-2011

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

see validation letter

2. List all affected sample results.

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action

Comments:

Validator: Ken Silamon

Date: 12-15-2011

EPA NE - Data Validation Worksheet
INORG-VI-A

NA

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

List all analytes that are outside ICSAB criteria of 80-120% R.

Date	Analyte	%R	Samples Affected	Action
Comments:				

Validator: Dave Soloman

Date: 12-15-2011

EPA NE - Data Validation Worksheet
INORG-VI-B

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

NA

List all analytes that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Helen Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

VII. ICP-MS INTERNAL STANDARDS

NA

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator Helen Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-VIII

see validation letter

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action
Comments:								

Validator: Helen Solomon

Date: 2-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IX

See validation letter

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Ann Salamon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

See Validation Letter

Use a separate worksheet for each field duplicate pair.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Lisa Solomon

Date: 2-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

XI. ICP SERIAL DILUTIONS

see validation letter

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action

Comments:

Validator: Drew Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

NA

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Diane Solomon

Date: 12-15-2011

EPA-NE - Data Validation Worksheet
INORG-XIII-A

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

see validation letter

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N**

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action

Comments:

Validator: Nelson Salomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

NA

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? Y N

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator: Dawn Solomon

Date: 12-15-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIV

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

See Validation Letter

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? _____
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Kim Solomon

Date: 12-11-2011

APPENDIX D
SUPPORT DOCUMENTATION

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-20
SE6619

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6619 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6619-1	DSY-SD-W30-0012
SE6619-2	DSY-SD-W30-1224
SE6619-3	DSY-SD-W30-2448
SE6619-4	DSY-SD-W28-0012
SE6619-5	DSY-SD-W28-1224
SE6619-6	DSY-SD-W28-2448
SE6619-7	DSY-SD-RB11-100611
SE6619-8	DSY-SD-C25-0012
SE6619-9	DSY-SD-C25-1224
SE6619-10	DSY-SD-C25-2448
SE6619-11	DSY-SD-DUP29-100711
SE6619-12	DSY-SD-C21-0012
SE6619-13	DSY-SD-C21-1224
SE6619-14	DSY-SD-C21-2448
SE6619-15	DSY-SD-18-0012
SE6619-16	DSY-SD-18-1224
SE6619-17	DSY-SD-18-2448
SE6619-18	DSY-SD-C09-0012
SE6619-19	DSY-SD-C09-1224
SE6619-20	DSY-SD-C09-2448

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-20 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6619-7 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6619-(1-6 and 8-20) were digested for ICP analysis on 10/26/11 (QC Batch BJ26ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6619-3 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-20 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6619-3 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6619-3 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6619-3 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6619-3 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the

concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-20 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recovery, relative to the TOC (2) result for the unspiked sample, for the matrix spike (136%) aliquot of Katahdin Sample No. SE6619-15 is outside the laboratory's acceptance limits of 75% - 125%. The matrix spike recovery relative to the TOC(1) result for the unspiked sample is within the laboratory's acceptance limits.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
11.30.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE		SEE PAGE ONE ( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTOWE61, Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton /	

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE16618 / SE16619

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ☐Y ☐N PAH	Filt. ☐Y ☐N PCB	Filt. ☐Y ☐N TOC	Filt. ☐Y ☐N Metals (Pb)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-T25-1224	10/5/11 / 1058	SED	2	X	X		X						
	DSY-SD-T25-2448	↓ / 1101		2	X	X		X						
	DSY-SD-Q29-0012	10/6/11 / 1045		3	X	X	X	X						
	DSY-SD-Q29-1224	/ 1048		2	X	X		X						
	DSY-SD-Q29-2448	/ 1051		2	X	X		X						
	DSY-SD-T29-0012	/ 1116		3	X	X	X	X						
	DSY-SD-T29-1224	/ 1113		2	X	X		X						
	DSY-SD-T29-2448	/ 1116		4	X	X		X						
	DSY-SD-W24-0012	/ 1225		3	X	X	X	X						
	DSY-SD-W24-1224	/ 1228		2	X	X		X						
	DSY-SD-W24-2448	/ 1231		2	X	X		X						
	DSY-SD-DUP28-100611	/ —		3	X	X	X	X						
	DSY-SD-W30-0012	/ 1245		3	X	X	(X)	(X)						
	DSY-SD-W30-1224	/ 1248		2	X	X		(X)						
	DSY-SD-W30-2448	/ 1251		2	X	X		(X)						
	DSY-SD-W28-0012	↓ / 1300	↓	3	X	X	(X)	(X)						

COMMENTS

DSY-SD-T29-2448 is designated as the lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					10/7/11

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client | Contact | Phone # ( ) | Fax # ( )

Address: SEE PAGE ONE | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE61, Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SEDE19

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)							
	DSY-SD-W28-1224	10/6/11/1303	SED	2	X	X	X							
	DSY-SD-W28-2448	10/6/11/1306	SED	2	X	X	X							
	DSY-~~RB11-~~SD-RB11-100611	10/6/11/1430	AQ	5	X	X	X							
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Michael Horton	10/7/11 1300	Andrew Harlow			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8999

Address 250 Andover St. Suite 200 City Wilmington State MA Zip Code 01887

Purchase Order # Proj. Name / No. CTO WE61 Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SED619 / SED620

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)					
	DSY-SD-C25-0012	10/7/11 / 0800	SED	3	X	X	X	X						
	DSY-SD-C25-1224	/ 0803		2	X	X		X						
	DSY-SD-C25-2448	/ 0806		2	X	X		X						
	DSY-SD-DUP29-100711	/ —		2	X	X		X						
	DSY-SD-C21-0012	/ 0840		3	X	X	X	X						
	DSY-SD-C21-1224	/ 0843		2	X	X		X						
	DSY-SD-C21-2448	/ 0846		2	X	X		X						
	DSY-SD-18-0012	/ 1000		3	X	X	X	X						
	DSY-SD-18-1224	/ 1003		2	X	X		X						
	DSY-SD-18-2448	/ 1006		2	X	X		X						
	DSY-SD-C09-0012	/ 1020		3	X	X	X	X						
	DSY-SD-C09-1224	/ 1023		2	X	X		X	X					
	DSY-SD-C09-2448	/ 1026		2	X	X			X					
	DSY-SD-DUP30-100711	/ —		2	X	X			X					
	DSY-SD-C29-0012	/ 1125		3	X	X	X	X						
	DSY-SD-C29-1224	/ 1128		2	X	X		X						

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

AS COC1

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	M	MG/KG	DSY-SD-Q25-1224	SE6618-001	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-DUP28-100611	SE6618-020	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-1224	SE6618-015	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-C25-1224	SE6619-009	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-W30-0012	SE6619-001	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-2448	SE6619-006	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-1224	SE6619-005	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-18-0012	SE6619-015	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-18-1224	SE6619-016	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-18-2448	SE6619-017	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-0012	SE6619-018	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-1224	SE6619-019	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-2448	SE6619-020	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-0012	SE6619-012	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-1224	SE6619-013	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-W30-1224	SE6619-002	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C25-0012	SE6619-008	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C25-2448	SE6619-010	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-DUP29-100711	SE6619-011	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	TS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/24/2011	10/26/2011	18	2	20
DSY-19	TS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-19	TS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	TS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-21	TS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-22	TS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample	RPD
	C25-1224	DUP 29	
Lead	12.7	124	162.84
total solids	88	69	24.20

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-20 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-18-0012	SE6619-015
DSY-SD-18-1224	SE6619-016
DSY-SD-18-2448	SE6619-017
DSY-SD-C09-0012	SE6619-018
DSY-SD-C09-1224	SE6619-019
DSY-SD-C09-2448	SE6619-020
DSY-SD-C21-0012	SE6619-012
DSY-SD-C21-1224	SE6619-013
DSY-SD-C21-2448	SE6619-014
DSY-SD-C25-0012	SE6619-008
DSY-SD-C25-1224	SE6619-009
DSY-SD-C25-2448	SE6619-010
DSY-SD-DUP29-100711	SE6619-011
DSY-SD-RB11-100611	SE6619-007
DSY-SD-W28-0012	SE6619-004
DSY-SD-W28-1224	SE6619-005
DSY-SD-W28-2448	SE6619-006
DSY-SD-W30-0012	SE6619-001
DSY-SD-W30-1224	SE6619-002
DSY-SD-W30-2448	SE6619-003
DSY-SD-W30-2448	SE6619-003A
DSY-SD-W30-2448	SE6619-003D
DSY-SD-W30-2448	SE6619-003S

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: Heather Manz

Date: 11-8-11 Title: Analyst I

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ21A Oct 21, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
CALCIUM	10000.0	9902.00	99.0
IRON	10000.0	10170.00	101.7
LEAD	400.0	411.80	103.0
MAGNESIUM	10000.0	10280.00	102.8

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12880.00	103.0
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12740.00	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12760.00	102.1
LEAD	500.0	507.40	101.5
MAGNESIUM	12500.0	12830.00	102.6

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:57

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12950.00	103.6
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.00	100.8
MAGNESIUM	12500.0	12760.00	102.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 17:51

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	13090.00	104.7
IRON	12500.0	12990.00	103.9
LEAD	500.0	500.30	100.1
MAGNESIUM	12500.0	12660.00	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ27B Oct 27, 2011 15:46

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9946.00	99.5
CALCIUM	10000.0	9845.00	98.5
COPPER	400.0	399.50	99.9
IRON	10000.0	10090.00	100.9
LEAD	400.0	406.00	101.5
MAGNESIUM	10000.0	9997.00	100.0
ZINC	400.0	403.70	100.9

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 16:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12710.00	101.7
CALCIUM	12500.0	12700.00	101.6
COPPER	500.0	505.50	101.1
IRON	12500.0	12810.00	102.5
LEAD	500.0	507.20	101.4
MAGNESIUM	12500.0	12800.00	102.4
ZINC	500.0	501.40	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12890.00	103.1
CALCIUM	12500.0	13030.00	104.2
COPPER	500.0	505.50	101.1
IRON	12500.0	13140.00	105.1
LEAD	500.0	522.30	104.5
MAGNESIUM	12500.0	13170.00	105.4
ZINC	500.0	511.80	102.4

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 17:58

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12890.00	103.1
COPPER	500.0	507.50	101.5
IRON	12500.0	13010.00	104.1
LEAD	500.0	512.50	102.5
MAGNESIUM	12500.0	12950.00	103.6
ZINC	500.0	509.40	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 18:52

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12840.00	102.7
CALCIUM	12500.0	12800.00	102.4
COPPER	500.0	501.10	100.2
IRON	12500.0	12840.00	102.7
LEAD	500.0	508.90	101.8
MAGNESIUM	12500.0	12940.00	103.5
ZINC	500.0	513.40	102.7

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 19:47

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	495.30	99.1
IRON	12500.0	12530.00	100.2
LEAD	500.0	508.00	101.6
MAGNESIUM	12500.0	12920.00	103.4
ZINC	500.0	515.50	103.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 20:41

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12680.00	101.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	493.20	98.6
IRON	12500.0	12420.00	99.4
LEAD	500.0	502.50	100.5
MAGNESIUM	12500.0	12830.00	102.6
ZINC	500.0	517.50	103.5

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 21:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12730.00	101.8
CALCIUM	12500.0	12640.00	101.1
COPPER	500.0	489.00	97.8
IRON	12500.0	12370.00	99.0
LEAD	500.0	504.30	100.9
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	521.30	104.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 22:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12790.00	102.3
CALCIUM	12500.0	12570.00	100.6
COPPER	500.0	490.60	98.1
IRON	12500.0	12310.00	98.5
LEAD	500.0	501.20	100.2
MAGNESIUM	12500.0	12740.00	101.9
ZINC	500.0	520.00	104.0

SAMPLE: CCV

File: IBJ27B Oct 27, 2011 23:25

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12440.00	99.5
CALCIUM	12500.0	12380.00	99.0
COPPER	500.0	476.30	95.3
IRON	12500.0	11990.00	95.9
LEAD	500.0	493.30	98.7
MAGNESIUM	12500.0	12580.00	100.6
ZINC	500.0	515.20	103.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ27B Oct 28, 2011 0:20

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12360.00	98.9
CALCIUM	12500.0	12290.00	98.3
COPPER	500.0	476.90	95.4
IRON	12500.0	11900.00	95.2
LEAD	500.0	496.10	99.2
MAGNESIUM	12500.0	12650.00	101.2
ZINC	500.0	522.20	104.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 18:02

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12650.00	101.2
IRON	12500.0	12560.00	100.5
LEAD	500.0	504.30	100.9
MAGNESIUM	12500.0	12730.00	101.8

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 18:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12140.00	97.1
CALCIUM	12500.0	12370.00	99.0
IRON	12500.0	12320.00	98.6
LEAD	500.0	495.70	99.1
MAGNESIUM	12500.0	12560.00	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ28A Oct 28, 2011 16:44

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9785.00	97.9
CALCIUM	10000.0	9767.00	97.7
IRON	10000.0	9849.00	98.5
LEAD	400.0	406.80	101.7
MAGNESIUM	10000.0	10040.00	100.4

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 17:07

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12650.00	101.2
IRON	12500.0	12550.00	100.4
LEAD	500.0	507.80	101.6
MAGNESIUM	12500.0	12830.00	102.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ21A Oct 21, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	308.60	102.9
CALCIUM	100.0	103.80	103.8
IRON	100.0	100.50	100.5
LEAD	5.0	5.68	113.6
MAGNESIUM	100.0	107.40	107.4

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ27B Oct 27, 2011 15:55

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	294.90	98.3
CALCIUM	100.0	103.30	103.3
COPPER	25.0	26.27	105.1
IRON	100.0	104.80	104.8
LEAD	5.0	5.81	116.2
MAGNESIUM	100.0	103.90	103.9
ZINC	20.0	21.10	105.5

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ28A Oct 28, 2011 16:53

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	313.40	104.5
CALCIUM	100.0	101.90	101.9
IRON	100.0	100.90	100.9
LEAD	5.0	4.12	82.4
MAGNESIUM	100.0	111.00	111.0

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ21A Oct 21, 2011 14:51

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 16:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	6.080	J

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ27B Oct 27, 2011 15:50

Analyte	Result	C
ALUMINUM	-24.090	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 16:13

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	4.943	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ27B Oct 27, 2011 17:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.892	J
IRON	7.861	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 18:02

Analyte	Result	C
ALUMINUM	-18.800	J
CALCIUM	11.400	U
COPPER	0.951	J
IRON	6.364	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 18:56

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 19:51

Analyte	Result	C
ALUMINUM	-15.440	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

Pb only

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 20:46

Analyte	Result	C
ALUMINUM	-17.310	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.228	J

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 21:40

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 22:35

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.732	J
IRON	3.098	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

Pb only

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ27B Oct 27, 2011 23:30

Analyte	Result	C
ALUMINUM	-18.070	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ27B Oct 28, 2011 0:24

Analyte	Result	C
ALUMINUM	-22.160	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ28A Oct 28, 2011 16:48

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 17:11

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.497	J
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 18:06

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 19:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.167	J
LEAD	1.330	U
MAGNESIUM	5.500	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-20

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ26ICS1

Matrix: SOIL **SDG Name:** DSY-20

QC Batch ID: BJ26ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ21A Oct 21, 2011 15:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	495100	99.0
CALCIUM	500000	468400	93.7
IRON	200000	188500	94.3
LEAD	0	1	
MAGNESIUM	500000	451000	90.2

SAMPLE: ICSAB

File: IBJ21A Oct 21, 2011 15:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	476900	95.4
CALCIUM	500000	457200	91.4
IRON	200000	184500	92.3
LEAD	50	45	90.0
MAGNESIUM	500000	440400	88.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ27B Oct 27, 2011 15:59

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	467600	93.5
CALCIUM	500000	441500	88.3
COPPER	0	10	
IRON	200000	174900	87.5
LEAD	0	3	
MAGNESIUM	500000	437100	87.4
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ27B Oct 27, 2011 16:04

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480500	96.1
CALCIUM	500000	455400	91.1
COPPER	500	530	106.0
IRON	200000	180400	90.2
LEAD	50	48	96.0
MAGNESIUM	500000	439800	88.0
ZINC	1000	929	92.9

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ28A Oct 28, 2011 16:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	482000	96.4
CALCIUM	500000	443000	88.6
IRON	200000	176900	88.4
LEAD	0	2	
MAGNESIUM	500000	439500	87.9

SAMPLE: ICSAB

File: IBJ28A Oct 28, 2011 17:02

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	484000	96.8
CALCIUM	500000	447900	89.6
IRON	200000	179800	89.9
LEAD	50	49	98.0
MAGNESIUM	500000	442300	88.5

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-2448S

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 80.5 **Lab Sample ID:** SE6619-003S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	17.7662		9.7316		9.34	86.0		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-2448S

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 80.5 **Lab Sample ID:** SE6619-003A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	586.2000		103.4000		500	96.6		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-W30-2448D

Matrix: SOIL **SDG Name:** DSY-20

Percent Solids: 80.5 **Lab Sample ID:** SE6619-003D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
LEAD, TOTAL		9.7316		10.0827		3.5		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ26ICS1

Matrix: SOIL **SDG Name:** DSY-20

QC Batch ID: BJ26ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.44	97.8	80	120
LEAD	10.00	10.52	105.2	80	120
ZINC	50.00	51.59	103.2	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-20

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	105.90	105.9	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Client Field ID: DSY-SD-W30-2448L

SDG Name: DSY-20

Lab Sample ID: SE6619-003L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
LEAD, TOTAL	103.40		107.00		3.5		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ20ICW1

Matrix: WATER **SDG Name:** DSY-20

Method: P **Prep Date:** 10/20/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ20ICW1	LCSWBJ20ICW1	0.05	0.05	
PBWBJ20ICW1	PBWBJ20ICW1	0.05	0.05	
DSY-SD-RB11-100611	SE6619-007	0.05	0.05	A

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ26ICS1

Matrix: SOIL **SDG Name:** DSY-20

Method: P **Prep Date:** 10/26/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ26ICS1	LCSOBJ26ICS1	1	0.1	
PBSBJ26ICS1	PBSBJ26ICS1	1	0.1	
DSY-SD-W30-0012	SE6619-001	1.25	0.1	C
DSY-SD-W30-1224	SE6619-002	1.35	0.1	A
DSY-SD-W30-2448	SE6619-003	1.32	0.1	A
DSY-SD-W30-2448D	SE6619-003D	1.38	0.1	A
DSY-SD-W30-2448S	SE6619-003S	1.33	0.1	A
DSY-SD-W28-0012	SE6619-004	1.25	0.1	A
DSY-SD-W28-1224	SE6619-005	1.36	0.1	A
DSY-SD-W28-2448	SE6619-006	1.36	0.1	A
DSY-SD-C25-0012	SE6619-008	1.13	0.1	C
DSY-SD-C25-1224	SE6619-009	1.42	0.1	A
DSY-SD-C25-2448	SE6619-010	1.34	0.1	A
DSY-SD-DUP29-100711	SE6619-011	1.55	0.1	A
DSY-SD-C21-0012	SE6619-012	1.42	0.1	C
DSY-SD-C21-1224	SE6619-013	1.51	0.1	B
DSY-SD-C21-2448	SE6619-014	1.25	0.1	B
DSY-SD-18-0012	SE6619-015	1.47	0.1	C
DSY-SD-18-1224	SE6619-016	1.36	0.1	A
DSY-SD-18-2448	SE6619-017	1.01	0.1	B
DSY-SD-C09-0012	SE6619-018	1.73	0.1	B
DSY-SD-C09-1224	SE6619-019	1.2	0.1	A
DSY-SD-C09-2448	SE6619-020	1.28	0.1	B

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ21A

Date: 10/21/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	14:38 AL	CA	FE PB MG
Std 1		1	14:42 AL	CA	FE PB MG
ICV		1	14:47 AL	CA	FE PB MG
ICB		1	14:51 AL	CA	FE PB MG
PQL		1	14:56 AL	CA	FE PB MG
ICSA		1	15:00 AL	CA	FE PB MG
ICSAB		1	15:05 AL	CA	FE PB MG
CCV		1	15:09 AL	CA	FE PB MG
CCB		1	15:14 AL	CA	FE PB MG
ZZZZZZ		2	15:18		
ZZZZZZ		2	15:23		
ZZZZZZ		2	15:27		
PBWBJ20ICW1		1	15:32		PB
LCSWBJ20ICW1		1	15:36		PB
ZZZZZZ		1	15:41		
ZZZZZZ		5	15:45		
ZZZZZZ		1	15:50		
ZZZZZZ		1	15:54		
ZZZZZZ		1	15:58		
CCV		1	16:03 AL	CA	FE PB MG
CCB		1	16:07 AL	CA	FE PB MG
ZZZZZZ		1	16:12		
ZZZZZZ		1	16:16		
ZZZZZZ		1	16:21		
ZZZZZZ		1	16:25		
ZZZZZZ		1	16:30		
ZZZZZZ		1	16:34		
ZZZZZZ		1	16:39		
ZZZZZZ		1	16:44		
ZZZZZZ		1	16:48		
ZZZZZZ		1	16:53		
CCV		1	16:57 AL	CA	FE PB MG
CCB		1	17:01 AL	CA	FE PB MG
SE6619-007	DSY-SD-RB11-100611	1	17:06		PB
ZZZZZZ		1	17:10		
ZZZZZZ		1	17:15		
ZZZZZZ		1	17:19		
ZZZZZZ		1	17:24		
ZZZZZZ		1	17:28		
ZZZZZZ		1	17:33		
ZZZZZZ		1	17:37		
ZZZZZZ		1	17:42		
ZZZZZZ		1	17:46		
CCV		1	17:51 AL	CA	FE PB MG
CCB		1	17:55 AL	CA	FE PB MG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	15:37 AL	CA	CU FE PB MG	ZN
Std 1		1	15:41 AL	CA	CU FE PB MG	ZN
ICV		1	15:46 AL	CA	CU FE PB MG	ZN
ICB		1	15:50 AL	CA	CU FE PB MG	ZN
PQL		1	15:55 AL	CA	CU FE PB MG	ZN
ICSA		1	15:59 AL	CA	CU FE PB MG	ZN
ICSAB		1	16:04 AL	CA	CU FE PB MG	ZN
CCV		1	16:09 AL	CA	CU FE PB MG	ZN
CCB		1	16:13 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:18			
ZZZZZZ		2	16:22			
ZZZZZZ		2	16:27			
ZZZZZZ		2	16:31			
ZZZZZZ		2	16:36			
ZZZZZZ		2	16:40			
ZZZZZZ		2	16:45			
ZZZZZZ		2	16:49			
ZZZZZZ		2	16:54			
ZZZZZZ		2	16:59			
CCV		1	17:03 AL	CA	CU FE PB MG	ZN
CCB		1	17:07 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	17:12			
ZZZZZZ		2	17:17			
ZZZZZZ		2	17:21			
ZZZZZZ		2	17:26			
ZZZZZZ		2	17:30			
ZZZZZZ		10	17:35			
ZZZZZZ		2	17:40			
ZZZZZZ		2	17:44			
ZZZZZZ		2	17:49			
ZZZZZZ		2	17:53			
CCV		1	17:58 AL	CA	CU FE PB MG	ZN
CCB		1	18:02 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:07			
ZZZZZZ		1	18:11			
ZZZZZZ		1	18:16			
ZZZZZZ		5	18:20			
ZZZZZZ		1	18:25			
ZZZZZZ		1	18:29			
ZZZZZZ		1	18:34			
ZZZZZZ		1	18:38			
ZZZZZZ		1	18:43			
ZZZZZZ		1	18:47			
CCV		1	18:52 AL	CA	CU FE PB MG	ZN
CCB		1	18:56 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	19:01			
ZZZZZZ		1	19:06			
ZZZZZZ		1	19:10			
ZZZZZZ		1	19:15			
ZZZZZZ		1	19:19			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		1	19:24			
ZZZZZZ		1	19:28			
ZZZZZZ		1	19:33			
ZZZZZZ		1	19:37			
ZZZZZZ		1	19:42			
CCV		1	19:47 AL	CA	CU FE PB MG	ZN
CCB		1	19:51 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	19:56			
ZZZZZZ		1	20:00			
ZZZZZZ		1	20:05			
ZZZZZZ		1	20:09			
ZZZZZZ		1	20:14			
ZZZZZZ		2	20:18			
ZZZZZZ		2	20:23			
ZZZZZZ		2	20:28			
ZZZZZZ		2	20:32			
ZZZZZZ		2	20:37			
CCV		1	20:41 AL	CA	CU FE PB MG	ZN
CCB		1	20:46 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	20:50			
ZZZZZZ		2	20:55			
ZZZZZZ		1	20:59			
ZZZZZZ		1	21:04			
ZZZZZZ		2	21:09			
ZZZZZZ		5	21:13			
ZZZZZZ		10	21:18			
PBSBJ26ICS1		1	21:22		CU PB	ZN
LCSOBJ26ICS1		1	21:27		CU PB	ZN
SE6619-001	DSY-SD-W30-0012	1	21:31		PB	
CCV		1	21:36 AL	CA	CU FE PB MG	ZN
CCB		1	21:40 AL	CA	CU FE PB MG	ZN
SE6619-002	DSY-SD-W30-1224	1	21:45		PB	
SE6619-003	DSY-SD-W30-2448	1	21:50		PB	
SE6619-003L	DSY-SD-W30-2448L	5	21:54		PB	
SE6619-003A	DSY-SD-W30-2448A	1	21:59		PB	
SE6619-003D	DSY-SD-W30-2448D	1	22:03		PB	
SE6619-003S	DSY-SD-W30-2448S	1	22:08		PB	
SE6619-004	DSY-SD-W28-0012	1	22:12		PB	
SE6619-005	DSY-SD-W28-1224	1	22:17		PB	
SE6619-006	DSY-SD-W28-2448	1	22:21		PB	
SE6619-008	DSY-SD-C25-0012	1	22:26		PB	
CCV		1	22:30 AL	CA	CU FE PB MG	ZN
CCB		1	22:35 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	22:39			
SE6619-010	DSY-SD-C25-2448	1	22:44		PB	
SE6619-011	DSY-SD-DUP29-100711	1	22:49		PB	
SE6619-012	DSY-SD-C21-0012	1	22:53		PB	
SE6619-013	DSY-SD-C21-1224	1	22:58		PB	
ZZZZZZ		1	23:02			
SE6619-015	DSY-SD-18-0012	1	23:07		PB	
ZZZZZZ		1	23:12			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ27B

Date: 10/27/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements							
SE6619-017	DSY-SD-18-2448	1	23:16					PB			
SE6619-018	DSY-SD-C09-0012	1	23:21					PB			
CCV		1	23:25	AL		CA	CU	FE	PB	MG	ZN
CCB		1	23:30	AL		CA	CU	FE	PB	MG	ZN
SE6619-019	DSY-SD-C09-1224	1	23:34				CU		PB		ZN
SE6619-020	DSY-SD-C09-2448	1	23:39				CU		PB		ZN
ZZZZZZ		1	23:43								
ZZZZZZ		1	23:48								
ZZZZZZ		1	23:52								
ZZZZZZ		1	23:57								
ZZZZZZ		1	0:02								
ZZZZZZ		1	0:06								
ZZZZZZ		1	0:11								
ZZZZZZ		1	0:15								
CCV		1	0:20	AL		CA	CU	FE	PB	MG	ZN
CCB		1	0:24	AL		CA	CU	FE	PB	MG	ZN

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-20

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ28A

Date: 10/28/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	16:35 AL	CA	FE PB MG
Std 1		1	16:40 AL	CA	FE PB MG
ICV		1	16:44 AL	CA	FE PB MG
ICB		1	16:48 AL	CA	FE PB MG
PQL		1	16:53 AL	CA	FE PB MG
ICSA		1	16:57 AL	CA	FE PB MG
ICSAB		1	17:02 AL	CA	FE PB MG
CCV		1	17:07 AL	CA	FE PB MG
CCB		1	17:11 AL	CA	FE PB MG
ZZZZZZ		1	17:16		
ZZZZZZ		1	17:20		
ZZZZZZ		1	17:25		
ZZZZZZ		1	17:29		
ZZZZZZ		1	17:34		
ZZZZZZ		1	17:38		
ZZZZZZ		1	17:43		
ZZZZZZ		1	17:48		
ZZZZZZ		1	17:53		
ZZZZZZ		1	17:57		
CCV		1	18:02 AL	CA	FE PB MG
CCB		1	18:06 AL	CA	FE PB MG
ZZZZZZ		2	18:11		
ZZZZZZ		2	18:15		
ZZZZZZ		1	18:20		
SE6619-009	DSY-SD-C25-1224	2	18:24		PB
SE6619-014	DSY-SD-C21-2448	2	18:29		PB
SE6619-016	DSY-SD-18-1224	2	18:33		PB
ZZZZZZ		1	18:38		
ZZZZZZ		1	18:43		
ZZZZZZ		1	18:47		
ZZZZZZ		1	18:52		
CCV		1	18:56 AL	CA	FE PB MG
CCB		1	19:01 AL	CA	FE PB MG

Sample 30DS4-SD-C04-2448 Cu rep result 75.1 ~~30~~ mg/kg

$\left(\frac{745\,ug}{L}\right)\left(\frac{0.1\,L}{1.28\,g}\right)\left(\frac{1\,mg}{1000\,ug}\right)\left(\frac{1000\,g}{1\,kg}\right)\left(\frac{1}{.775}\right) = 75.1\ mg/kg$

SE6619-020

Method Name: K6010-2011 Method Revision: 52
Analyst Name: EAM
Acquire Date: 10/27/2011 11:39:19PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		8.054	ug/L	1.070	13.29	-474.3
Al3961_R		69,700	ug/L	169.7	0.2435	61,630
As1891_A		52.81	ug/L	1.283	2.430	7.967
Au2427_A		2.112	ug/L	0.6918	32.75	124.6
B_2089_A		221.4	ug/L	0.1785	0.08063	212.3
Ba4554_R		444.3	ug/L	0.8593	0.1934	25,740
Be3130_R		4.284	ug/L	0.04321	1.009	264.1
Ca3158_R		32,100	ug/L	54.83	0.1708	53,430
Cd2265_A		10.51	ug/L	0.5111	4.863	342.6
Co2286_A		43.06	ug/L	0.2208	0.5129	196.5
Cr2677_A		480.3	ug/L	7.955	1.656	7,146
Cu3273_A		745.0	ug/L	12.20	1.638	10,680
Fe2599_R		144,000	ug/L	5,351	3.717	302,400
K_7664_R		18,690	ug/L	49.70	0.2659	12,540
Li6707_R		141.5	ug/L	0.3404	0.2406	1,542
Mg2025_A		44,740	ug/L	139.5	0.3119	8,284
Mn2576_R		1,654	ug/L	4.086	0.2471	19,700
Mo2020_A		17.53	ug/L	0.1328	0.7576	37.52
Na5895_R		73,970	ug/L	51.33	0.06940	143,900
Ni2316_A		202.1	ug/L	0.4590	0.2271	473.8
Pb2203_A		852.2	ug/L	4.644	0.5449	934.6
Sb2068_A		104.9	ug/L	2.606	2.484	43.54
Se1960_A		2.266	ug/L	0.8859	39.10	3.624
Si2516_R		3,244	ug/L	6.264	0.1931	1,975
Sn1899_A		114.5	ug/L	1.690	1.476	63.01
Sr4215_R		270.8	ug/L	0.2728	0.1008	21,680
Ti3349_A		3,135	ug/L	48.97	1.562	100,400
Tl1908_A		-3.901	ug/L	1.474	37.78	-5.574
V_2924_A		360.4	ug/L	5.926	1.644	5,724
Zn2062_A		4,640	ug/L	14.13	0.3046	14,490
Y_3600_R		25,124	Cts/S	106.90	0.42548	25,124
Y_2243_A		9,025.4	Cts/S	28.562	0.31646	9,025.4
Y_3600_A		248,260	Cts/S	3,048.6	1.2279	248,260

SE6822-002

Method Name: K6010-2011 Method Revision: 52
Analyst Name: EAM
Acquire Date: 10/27/2011 11:43:55PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.276	ug/L	0.1306	10.23	-188.3
Al3961_R		94.80	ug/L	3.007	3.172	114.8
As1891_A		9.578	ug/L	0.1257	1.312	-0.4974
Au2427_A		0.2933	ug/L	1.365	465.3	36.00
B_2089_A		9.496	ug/L	0.3193	3.363	10.88
Ba4554_R		88.14	ug/L	0.4541	0.5152	5,163
Be3130_R		-0.01884	ug/L	0.07201	382.2	-2.360
Ca3158_R		10,680	ug/L	7.922	0.07418	17,700
Cd2265_A		0.1476	ug/L	0.02203	14.93	54.11
Co2286_A		2.323	ug/L	0.05981	2.575	16.42
Cr2677_A		1.172	ug/L	0.2089	17.83	16.78
Cu3273_A		1.554	ug/L	0.1695	10.91	-6.348
Fe2599_R		43,130	ug/L	337.8	0.7832	90,390
K_7664_R		606.0	ug/L	8.384	1.384	386.5
Li6707_R		11.21	ug/L	1.720	15.34	110.3
Mg2025_A		4,411	ug/L	35.46	0.8038	817.1
Mn2576_R		496.8	ug/L	3.627	0.7302	5,908
Mo2020_A		0.5479	ug/L	0.03227	5.891	1.094

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99436	Lloyd Kahn	18-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99436	Lloyd Kahn	18-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99708	ASTM D2216	25-OCT-11	24-OCT-11	U 1 %	1 %	N/A
MBLANK	WG99718	ASTM D2216	26-OCT-11	24-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99436-2	LCS	WG99436	18-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99436-2	LCS	WG99436	18-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99708-2	LCS	WG99708	25-OCT-11	24-OCT-11	%	90	92.	102	80-120	
WG99718-2	LCS	WG99718	26-OCT-11	24-OCT-11	%	90	91.	101	80-120	

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Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99708-4	SE6619-11	WG99708	25-OCT-11	%	69.	70.	2	20

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Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99436-5	MS	SE6619-15	WG99436	18-OCT-11	ug/gdrywt	19067.28	20000	43000	121	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99436-5	MS	SE6619-15	WG99436	18-OCT-11	ug/gdrywt	19067.28	17000	43000	136*	75 - 125

Average M.S. recovery 128.5%

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Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **DECEMBER 19, 2011**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – COPPER, LEAD, ZINC, TOTAL ORGANIC CARBON, TOTAL SOLIDS**
CTO – WE61 NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) – DSY-21

SAMPLES: 10/Sediments/

DSY-SD-C13-0012
DSY-SD-C13-2448
DSY-SD-C17-1224
DSY-SD-C29-0012
DSY-SD-C29-2448
DSY-SD-C13-1224
DSY-SD-C17-0012
DSY-SD-C17-2448
DSY-SD-C29-1224
DSY-SD-DUP30-100711

1/Aqueous/

DSY-SD-RB12-100711

Overview

The sample set for NAVSTA Newport, CTO WE61, SDG DSY-21, consists of ten (10) sediment environmental samples and one (1) rinsate blank (DSY-SD-RB12-100711). One (1) field duplicate sample (DSY-SD-DUP30-100711) was included within this SDG. The original sample, DSY-SD-C09-2448, associated with the field duplicate is in SDG DSY-20.

All samples were analyzed for lead. Sample DSY-SD-DUP30-100711 was also analyzed for copper and zinc. All samples except DSY-SD-RB12-100711 were analyzed for total solids. Samples DSY-SD-C13-0012, DSY-SD-C17-0012 and DSY-SD-C29-0012 were also analyzed for total organic carbon. The samples were collected by Tetra Tech on October 7, 2011 and analyzed by Katahdin Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. TAL metals analyses were conducted using SW-846 method 6010C. Total solids analyses were conducted using Standard Method 2540G. Total organic carbon analyses were conducted using the Lloyd Kahn method.

All samples in this SDG were validated to EPA Region I Tier II protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
  • Laboratory Method/Preparation Blank Analyses
* • ICP Interference Check Sample Results
* • Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Sample Recoveries

- ICP Serial Dilution Results
- Field Duplicate Results
* • Detection Limits
* • Sample Quantitation

* - All quality control criteria were met for this parameter.

ICP Serial Dilution Results

The ICP serial dilution percent difference (results > 50X IDL) was > 10% quality control limit for lead. The positive results reported for lead were qualified as estimated, "J".

Field Duplicate Results

Field duplicate imprecision (RPD > 50%) was noted for copper, lead and zinc for sample pair DSY-SD-C09-2448 (SDG DSY-20) / DSY-SD-DUP30-100711. The positive results reported for copper, lead and zinc were qualified as estimated, "J".

Notes

The nondetected results were reported to the limit of detection (LOD)

All detection limits reported were below the project action limit listed in the sampling and analysis plan (SAP).

The following contaminants were detected in the laboratory preparation blank at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Copper	0.393 mg/kg	1.965 mg/kg
Lead	0.208 mg/kg	1.04 mg/kg
Zinc	0.374 mg/kg	1.87 mg/kg

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation actions were warranted as all sample results were greater than the action level.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: The ICP serial dilution percent difference (results > 50X IDL) was > 10% quality control limit for lead. Field duplicate imprecision (RPD > 50%) was noted for copper, lead and zinc for sample pair DSY-SD-C09-2448 (SDG DSY-20) / DSY-SD-DUP30-100711.

The data for these analyses were reviewed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D – Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB12-100711		
SDG: DSY-21	LAB_ID	SE6620-011		
FRACTION: M	SAMP_DATE	10/7/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-C13-0012			DSY-SD-C13-1224			DSY-SD-C13-2448			DSY-SD-C17-0012		
SDG: DSY-21	LAB_ID	SE6620-004			SE6620-005			SE6620-006			SE6620-008		
FRACTION: M	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	67.7			78.8			77.8			71.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		19.2	J	GI	4.5	J	GI	4.7	J	GI	22.5	J	GI
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-C17-1224			DSY-SD-C17-2448			DSY-SD-C29-0012			DSY-SD-C29-1224		
SDG: DSY-21	LAB_ID	SE6620-009			SE6620-010			SE6620-002			SE6620-003		
FRACTION: M	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	82.5			79.7			40.8			49.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		3.6	J	GI	3.7	J	GI	209	J	GI	759	J	GI
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-C29-2448			DSY-SD-DUP30-100711		
SDG: DSY-21	LAB_ID	SE6620-007			SE6620-001		
FRACTION: M	SAMP_DATE	10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	71.2			77.9		
	DUP_OF				DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER					3.4	J	G
LEAD		11.7	J	GI	3.7	J	GI
ZINC					21.1	J	GI

PROJ_NO: 02747	NSAMPLE	DSY-SD-C13-0012						DSY-SD-C13-1224			DSY-SD-C13-2448		
SDG: DSY-21	LAB_ID	SE6620-4						SE6620-5			SE6620-6		
FRACTION: MISC	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	67.7			67.7			78.8			77.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					14000								
TOTAL SOLIDS		68						79			78		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C17-0012						DSY-SD-C17-1224			DSY-SD-C17-2448		
SDG: DSY-21	LAB_ID	SE6620-8						SE6620-9			SE6620-10		
FRACTION: MISC	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	71.8			71.8			82.5			79.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					10000								
TOTAL SOLIDS		72						82			80		

PROJ_NO: 02747	NSAMPLE	DSY-SD-C29-0012						DSY-SD-C29-1224			DSY-SD-C29-2448		
SDG: DSY-21	LAB_ID	SE6620-2						SE6620-3			SE6620-7		
FRACTION: MISC	SAMP_DATE	10/7/2011						10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	40.8			40.8			49.1			71.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					36000								
TOTAL SOLIDS		41						49			71		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP30-100711		
SDG: DSY-21	LAB_ID	SE6620-1		
FRACTION: MISC	SAMP_DATE	10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	%		
	PCT_SOLIDS	77.9		
	DUP_OF	DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON				
TOTAL SOLIDS		78		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-RB12-100711

Matrix: WATER **SDG Name:** DSY-21

Percent Solids: 0.00 **Lab Sample ID:** SE6620-011

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-0012

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 67.7 **Lab Sample ID:** SE6620-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	19.2		*	P	1	0.55	0.10	0.44

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-1224

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 78.8 **Lab Sample ID:** SE6620-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.5		*	P	1	0.48	0.08	0.38

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-2448

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 77.8 **Lab Sample ID:** SE6620-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	4.7		*	P	1	0.36	0.06	0.29

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C17-0012

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 71.8 **Lab Sample ID:** SE6620-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	22.5		*	P	1	0.55	0.10	0.44

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C17-1224

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 82.5 **Lab Sample ID:** SE6620-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	3.6		*	P	1	0.47	0.08	0.38

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C17-2448

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 79.7 **Lab Sample ID:** SE6620-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	3.7		*	P	1	0.49	0.09	0.40

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C29-0012

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 40.8 **Lab Sample ID:** SE6620-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	209		*	P	1	0.83	0.15	0.67

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C29-1224

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 49.1 **Lab Sample ID:** SE6620-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	759		*	P	1	0.83	0.15	0.67

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C29-2448

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 71.2 **Lab Sample ID:** SE6620-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	11.7		*	P	1	0.59	0.10	0.47

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP30-100711

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 77.9 **Lab Sample ID:** SE6620-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	3.4			P	1	2.4	0.15	0.98
7439-92-1	LEAD, TOTAL	3.7		*	P	1	0.49	0.09	0.39
7440-66-6	ZINC, TOTAL	21.1			P	1	2.4	0.16	0.98

Comments:

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-4
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C13-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	15000 ug/gdrywt	590	120	440	LLOYD KAHN	WG99546	19-OCT-11 11:15:34	N/A	N/A	
Toc In Soil(2)	14000 ug/gdrywt	590	120	440	LLOYD KAHN	WG99546	19-OCT-11 11:28:54	N/A	N/A	
Toc In Soil(Avg)	14000 ug/gdrywt	590	120	440	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	68. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:05:25	ASTM D2216	24-OCT-11	

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-5
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C13-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	79. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:05:37	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500002

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-6
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C13-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	78. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:05:52	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500002

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-8
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C17-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	11000 ug/gdrywt	560	120	420	LLOYD KAHN	WG99546	19-OCT-11 11:40:12	N/A	N/A	
Toc In Soil(2)	10000 ug/gdrywt	560	120	420	LLOYD KAHN	WG99546	19-OCT-11 12:10:54	N/A	N/A	
Toc In Soil(Avg)	10000 ug/gdrywt	560	120	420	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	72. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:06:11	ASTM D2216	24-OCT-11	

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-9
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C17-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	82. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:06:22	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500006

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with the NELAC
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-10
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C17-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	80. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:06:32	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500008

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-2
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C29-0012	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	35000 ug/gdrywt	980	210	740	LLOYD KAHN	WG99546	19-OCT-11 10:53:29	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	980	210	740	LLOYD KAHN	WG99546	19-OCT-11 11:04:35	N/A	N/A	
Toc In Soil(Avg)	36000 ug/gdrywt	980	210	740	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	41. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:04:57	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500008

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-3
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C29-1224	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	49. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:05:16	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500003

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-7
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-C29-2448	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	71. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:06:01	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500084

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6620-1
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-21

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP30-100711	SL	07-OCT-11	07-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	78. %	1		N/A	SM2540G	WG99718	26-OCT-11 08:04:42	ASTM D2216	24-OCT-11	

Katahdin Analytical Services 500006

APPENDIX C
REGION I WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Newport
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. DSY-21
No. of Samples/Matrix 10 Sediment / Aqueous

SOW/Method No. See validation letter
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

_____

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Terri Solomon Company Name Tetra Tech Phone Number _____

Date Validation Started 12-19-2011 Date Validation Completed 12-19-2011

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets:

INORG	COMPLETE SDG FILE (CSF) AUDIT	
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	
INORG-II	ICP-MS TUNE	NA
INORG-III-A/B	CALIBRATIONS	
INORG-IV-A/B	BLANKS	
INORG-IV-C.1	BLANKS	
INORG-IV-C.2	BLANKS	
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	NA
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	NA
INORG-VII	ICP-MS INTERNAL STANDARDS	NA
INORG-VIII	MATRIX SPIKES	
INORG-IX	LABORATORY DUPLICATE SAMPLES	
INORG-X	FIELD DUPLICATES	
INORG-XI	ICP SERIAL DILUTIONS	
INORG-XII-A/B	SENSITIVITY CHECK	
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	NA
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Terri Solomon

Name: Terri Solomon 12/19/2011

Date: 12-19-2011

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

see validation letter

Site:_____ Case:_____ SDG:_____

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Tim Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG

NA

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters: _____

Missing Information	Date Lab Contacted	Date Received

Validator: Ann Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-I

see validation letter

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Alan Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

NA

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			

Comments:

Validator: Lisa Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

See validation letter

III. CALIBRATIONS

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Steve Solomon Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

see validation letter

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: Dawn Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

sdg validation letter

C.1 Blank Contamination Worksheet

Circle the highest concentration of each contaminant.

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: Laura Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-IV-C.2

IV. BLANKS

see validation letter

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample.

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action

Comments:

Validator: Steven Solomon

Date: 12-19-2011

EPA NE - Data Validation Worksheet
INORG-V-A

see validation letter

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Alan Solomon

Date: 12-19-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

see validation letter

1. List all analytes in the ICSA that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	

Comments:

Validator: Kevin Solomon

Date: 12-19-2011

EPA NE - Data Validation Worksheet
INORG-V-B.2

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

See Validation letter

2. List all affected sample results.

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action

Comments:

Validator: Laura Solomon

Date: 12-19-2011

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

NA

List all analytes that are outside ICSAB criteria of 80-120% R.

Date	Analyte	%R	Samples Affected	Action

Comments:

Validator: Laura Solomon

Date: 12-19-2011

EPA NE - Data Validation Worksheet
INORG-VI-B

NA

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

List all analytes that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Kim Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

N/A

VII. ICP-MS INTERNAL STANDARDS

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator: Dawn Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-VIII

see validation letter

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action

Comments:

Validator: Lisa Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-IX

see validation letter

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Nina Solomon

Date 2-9-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

see validation letter

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Ann Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

see validation letter

XI. ICP SERIAL DILUTIONS

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action

Comments:

Validator: Lisa Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

see validation letter

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Russ Solomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-XIII-A

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

See validation letter

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N**

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action

Comments:

Validator: Nora Solomon

Date: 12-19-2011

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

NA

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? **Y** **N**

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator: Nina Salomon

Date: 12-19-2011

EPA-NE - Data Validation Worksheet
INORG-XIV

see validation letter

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? _____
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Lisa Solomon

Date: 12-19-2011

APPENDIX D
SUPPORT DOCUMENTATION

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-21
SE6620

Sample Receipt

The following samples were received on October 7, 2011 and were logged in under Katahdin Analytical Services work order number SE6620 for a hardcopy due date of October 26, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6620-1	DSY-SD-DUP30-100711
SE6620-2	DSY-SD-C29-0012
SE6620-3	DSY-SD-C29-1224
SE6620-4	DSY-SD-C13-0012
SE6620-5	DSY-SD-C13-1224
SE6620-6	DSY-SD-C13-2448
SE6620-7	DSY-SD-C29-2448
SE6620-8	DSY-SD-C17-0012
SE6620-9	DSY-SD-C17-1224
SE6620-10	DSY-SD-C17-2448
SE6620-11	DSY-SD-RB12-100711

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-21 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

The opening calibration verification standard (CV) (file 7EK122) had a low response for DCB on both channels, as well as a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recovery of DCB may be biased low.

The closing CV (file 7EK137) had a high response for TCX and a low response for DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK183) had a high response for TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG98971-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-21 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6620-11 was digested for ICP analysis on 10/20/11 (QC Batch BJ20ICW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SE6620-(1-10) were digested for ICP analysis on 10/23/11 (QC Batch BJ23ICS2) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6620-6 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-21 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6620-6 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6620-6 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in a post-digestion spike of SE6620-6 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6620-6 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-21 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.09.11

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

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Page ___ of ___

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8455

Address	City	State	Zip Code
250 Andover St. Suite 200	Wilmington	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61	

Bill (if different than above) Address

Sampler (Print / Sign) Michael Horton

Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER

REMARKS: SE0019 / SE0020

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	Filt. ☐Y ☐N PCB	Filt. ☐Y ☐N TOC	Filt. ☐Y ☐N Metals (Pb)	Filt. ☐Y ☐N Metals (Pb, Cu, Zn)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-C25-0012	10/7/11 / 0800	SED	3	X	X	X	X						
	DSY-SD-C25-1224	/ 0803		2	X	X		X						
	DSY-SD-C25-2448	/ 0806		2	X	X		X						
	DSY-SD-DUP29-100711	/ —		2	X	X		X						
	DSY-SD-C21-0012	/ 0840		3	X	X	X	X						
	DSY-SD-C21-1224	/ 0843		2	X	X		X						
	DSY-SD-C21-2448	/ 0846		2	X	X		X						
	DSY-SD-18-0012	/ 1000		3	X	X	X	X						
	DSY-SD-18-1224	/ 1003		2	X	X		X						
	DSY-SD-18-2448	/ 1006		2	X	X		X						
	DSY-SD-C09-0012	/ 1020		3	X	X	X	X						
	DSY-SD-C09-1224	/ 1023		2	X	X		X MP	X					
	DSY-SD-C09-2448	/ 1026		2	X	X			X					
	DSY-SD-DUP30-100711	/ —		2	X	X			X					
	DSY-SD-C29-0012	/ 1125		3	X	X	X	X						
	DSY-SD-C29-1224	↓ / 1128	↓	2	X	X		X						

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone # ( )	Fax # ( )
Address	City	State	Zip Code
Purchase Order #	Proj. Name / No. CTO WE61, Derachter SY		Katahdin Quote #
Bill (if different than above)	Address		
Sampler (Print / Sign) Michael Horton			Copies To:

LAB USE ONLY WORK ORDER #:

KATAHDIN PROJECT NUMBER ____

REMARKS: SED620

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)
	DSY-SD-C13-0012	10/7/11 / 1100	SED	3	X	X	X	X
	DSY-SD-C13-1224	/ 1103		2	X	X		X
	DSY-SD-C13-2448	/ 1106		2	X	X		X
	DSY-SD-C29-2448	/ 1131		2	X	X		X
	DSY-SD-C17-0012	/ 1150		3	X	X	X	X
	DSY-SD-C17-1224	/ 1153		2	X	X		X
	DSY-SD-C17-2448	/ 1156		2	X	X		X
	DSY-SD-RB12-100711	10/7/11 / 1245	AQ	5	X	X		X
		/						
		/						
		/						
		/						
		/						
		/						
		/						
		/						

COMMENTS DSY-SD-C13-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/7/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					000017

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SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TOC	MG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-22	TOC	MG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	TS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-21	TS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-22	TS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15

Field Duplicate Calculations

Parameters	Original Sample	Duplicate Sample	RPD
	C09-2448	DUP 30	
copper	75.1	3.4	182.68
lead	85.9	3.7	183.48
zinc	468	21.1	182.74
total solids	88	77.9	12.18

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-21 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-C13-0012	SE6620-004
DSY-SD-C13-1224	SE6620-005
DSY-SD-C13-2448	SE6620-006
DSY-SD-C13-2448	SE6620-006A
DSY-SD-C13-2448	SE6620-006D
DSY-SD-C13-2448	SE6620-006S
DSY-SD-C17-0012	SE6620-008
DSY-SD-C17-1224	SE6620-009
DSY-SD-C17-2448	SE6620-010
DSY-SD-C29-0012	SE6620-002
DSY-SD-C29-1224	SE6620-003
DSY-SD-C29-2448	SE6620-007
DSY-SD-DUP30-100711	SE6620-001
DSY-SD-RB12-100711	SE6620-011

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Heather Mann Name: Heather Mann

Date: 11-9-11 Title: Analyst I

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ21A Oct 21, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
CALCIUM	10000.0	9902.00	99.0
IRON	10000.0	10170.00	101.7
LEAD	400.0	411.80	103.0
MAGNESIUM	10000.0	10280.00	102.8

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12880.00	103.0
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12740.00	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12760.00	102.1
LEAD	500.0	507.40	101.5
MAGNESIUM	12500.0	12830.00	102.6

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 16:57

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12780.00	102.2
CALCIUM	12500.0	12950.00	103.6
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.00	100.8
MAGNESIUM	12500.0	12760.00	102.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ21A Oct 21, 2011 17:51

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	13090.00	104.7
IRON	12500.0	12990.00	103.9
LEAD	500.0	500.30	100.1
MAGNESIUM	12500.0	12660.00	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ24A Oct 24, 2011 13:36

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9875.00	98.8
CALCIUM	10000.0	9752.00	97.5
COPPER	400.0	398.40	99.6
IRON	10000.0	9941.00	99.4
LEAD	400.0	407.70	101.9
MAGNESIUM	10000.0	10030.00	100.3
ZINC	400.0	403.60	100.9

SAMPLE: CCV

File: IBJ24A Oct 24, 2011 13:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12750.00	102.0
CALCIUM	12500.0	12570.00	100.6
COPPER	500.0	500.30	100.1
IRON	12500.0	12680.00	101.4
LEAD	500.0	509.90	102.0
MAGNESIUM	12500.0	12750.00	102.0
ZINC	500.0	502.60	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ24A Oct 24, 2011 14:52

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12530.00	100.2
CALCIUM	12500.0	12520.00	100.2
COPPER	500.0	501.50	100.3
IRON	12500.0	12540.00	100.3
LEAD	500.0	507.50	101.5
MAGNESIUM	12500.0	12780.00	102.2
ZINC	500.0	501.70	100.3

SAMPLE: CCV

File: IBJ24A Oct 24, 2011 15:46

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	13020.00	104.2
COPPER	500.0	501.30	100.3
IRON	12500.0	12800.00	102.4
LEAD	500.0	511.60	102.3
MAGNESIUM	12500.0	12830.00	102.6
ZINC	500.0	494.50	98.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ24A Oct 24, 2011 16:40

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12540.00	100.3
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	482.90	96.6
IRON	12500.0	12600.00	100.8
LEAD	500.0	510.90	102.2
MAGNESIUM	12500.0	12900.00	103.2
ZINC	500.0	501.00	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ21A Oct 21, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	308.60	102.9
CALCIUM	100.0	103.80	103.8
IRON	100.0	100.50	100.5
LEAD	5.0	5.68	113.6
MAGNESIUM	100.0	107.40	107.4

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ24A Oct 24, 2011 13:45

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	307.00	102.3
CALCIUM	100.0	101.10	101.1
COPPER	25.0	27.81	111.2
IRON	100.0	101.40	101.4
LEAD	5.0	5.66	113.2
MAGNESIUM	100.0	105.40	105.4
ZINC	20.0	20.89	104.5

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ21A Oct 21, 2011 14:51

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 16:07

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	6.080	J

SAMPLE: CCB

File: IBJ21A Oct 21, 2011 17:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ24A Oct 24, 2011 13:40

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	2.116	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ24A Oct 24, 2011 14:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.821	J
IRON	4.231	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ24A Oct 24, 2011 14:57

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.764	J
LEAD	1.469	J
MAGNESIUM	6.226	J
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ24A Oct 24, 2011 15:50

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	5.783	J
LEAD	1.615	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ24A Oct 24, 2011 16:45

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.141	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-21

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ23ICS2

Matrix: SOIL **SDG Name:** DSY-21

QC Batch ID: BJ23ICS2

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	0.393	J
LEAD	0.208	J
ZINC	0.374	J

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ21A Oct 21, 2011 15:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	495100	99.0
CALCIUM	500000	468400	93.7
IRON	200000	188500	94.3
LEAD	0	1	
MAGNESIUM	500000	451000	90.2

SAMPLE: ICSAB

File: IBJ21A Oct 21, 2011 15:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	476900	95.4
CALCIUM	500000	457200	91.4
IRON	200000	184500	92.3
LEAD	50	45	90.0
MAGNESIUM	500000	440400	88.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ24A Oct 24, 2011 13:49

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	494100	98.8
CALCIUM	500000	462200	92.4
COPPER	0	7	
IRON	200000	182600	91.3
LEAD	0	2	
MAGNESIUM	500000	450900	90.2
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ24A Oct 24, 2011 13:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488400	97.7
CALCIUM	500000	452000	90.4
COPPER	500	524	104.8
IRON	200000	183800	91.9
LEAD	50	48	96.0
MAGNESIUM	500000	440000	88.0
ZINC	1000	929	92.9

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 77.8

Client Field ID: DSY-SD-C13-2448S

SDG Name: DSY-21

Lab Sample ID: SE6620-006S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	10.4477		4.6670		7.14	81.0		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-2448S

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 77.8 **Lab Sample ID:** SE6620-006A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	538.7000		64.6700		500	94.8		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-2448D

Matrix: SOIL **SDG Name:** DSY-21

Percent Solids: 77.8 **Lab Sample ID:** SE6620-006D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
LEAD, TOTAL		4.6670		3.3742		32.2	*	P

Comments:

OK
<35%

FORM VI - IN

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ23ICS2

Matrix: SOIL **SDG Name:** DSY-21

QC Batch ID: BJ23ICS2

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	26.26	105.0	80	120
LEAD	10.00	10.46	104.6	80	120
ZINC	50.00	52.19	104.4	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ20ICW1

Matrix: WATER **SDG Name:** DSY-21

QC Batch ID: BJ20ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	105.90	105.9	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-C13-2448L

Matrix: SOIL **SDG Name:** DSY-21

Lab Sample ID: SE6620-006L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
LEAD, TOTAL	64.67		74.60		15.4		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ20ICW1

Matrix: WATER **SDG Name:** DSY-21

Method: P **Prep Date:** 10/20/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ20ICW1	LCSWBJ20ICW1	0.05	0.05	
PBWBJ20ICW1	PBWBJ20ICW1	0.05	0.05	
DSY-SD-RB12-100711	SE6620-011	0.05	0.05	G

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ23ICS2

Matrix: SOIL **SDG Name:** DSY-21

Method: P **Prep Date:** 10/23/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ23ICS2	LCSOBJ23ICS2	1	0.1	
PBSBJ23ICS2	PBSBJ23ICS2	1	0.1	
DSY-SD-DUP30-100711	SE6620-001	1.31	0.1	B
DSY-SD-C29-0012	SE6620-002	1.47	0.1	C
DSY-SD-C29-1224	SE6620-003	1.22	0.1	A
DSY-SD-C13-0012	SE6620-004	1.34	0.1	C
DSY-SD-C13-1224	SE6620-005	1.32	0.1	A
DSY-SD-C13-2448	SE6620-006	1.78	0.1	B
DSY-SD-C13-2448D	SE6620-006D	1.68	0.1	B
DSY-SD-C13-2448S	SE6620-006S	1.8	0.1	B
DSY-SD-C29-2448	SE6620-007	1.19	0.1	A
DSY-SD-C17-0012	SE6620-008	1.27	0.1	B
DSY-SD-C17-1224	SE6620-009	1.29	0.1	A
DSY-SD-C17-2448	SE6620-010	1.27	0.1	B

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ21A

Date: 10/21/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements
Blank		1	14:38 AL	CA	FE PB MG
Std 1		1	14:42 AL	CA	FE PB MG
ICV		1	14:47 AL	CA	FE PB MG
ICB		1	14:51 AL	CA	FE PB MG
PQL		1	14:56 AL	CA	FE PB MG
ICSA		1	15:00 AL	CA	FE PB MG
ICSAB		1	15:05 AL	CA	FE PB MG
CCV		1	15:09 AL	CA	FE PB MG
CCB		1	15:14 AL	CA	FE PB MG
ZZZZZZ		2	15:18		
ZZZZZZ		2	15:23		
ZZZZZZ		2	15:27		
PBWBJ20ICW1		1	15:32		PB
LCSWBJ20ICW1		1	15:36		PB
ZZZZZZ		1	15:41		
ZZZZZZ		5	15:45		
ZZZZZZ		1	15:50		
ZZZZZZ		1	15:54		
ZZZZZZ		1	15:58		
CCV		1	16:03 AL	CA	FE PB MG
CCB		1	16:07 AL	CA	FE PB MG
ZZZZZZ		1	16:12		
ZZZZZZ		1	16:16		
ZZZZZZ		1	16:21		
ZZZZZZ		1	16:25		
ZZZZZZ		1	16:30		
ZZZZZZ		1	16:34		
ZZZZZZ		1	16:39		
ZZZZZZ		1	16:44		
ZZZZZZ		1	16:48		
ZZZZZZ		1	16:53		
CCV		1	16:57 AL	CA	FE PB MG
CCB		1	17:01 AL	CA	FE PB MG
ZZZZZZ		1	17:06		
SE6620-011	DSY-SD-RB12-100711	1	17:10		PB
ZZZZZZ		1	17:15		
ZZZZZZ		1	17:19		
ZZZZZZ		1	17:24		
ZZZZZZ		1	17:28		
ZZZZZZ		1	17:33		
ZZZZZZ		1	17:37		
ZZZZZZ		1	17:42		
ZZZZZZ		1	17:46		
CCV		1	17:51 AL	CA	FE PB MG
CCB		1	17:55 AL	CA	FE PB MG

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-21

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ24A

Date: 10/24/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
Blank		1	13:27 AL	CA	CU FE PB MG	ZN
Std 1		1	13:32 AL	CA	CU FE PB MG	ZN
ICV		1	13:36 AL	CA	CU FE PB MG	ZN
ICB		1	13:40 AL	CA	CU FE PB MG	ZN
PQL		1	13:45 AL	CA	CU FE PB MG	ZN
ICSA		1	13:49 AL	CA	CU FE PB MG	ZN
ICSAB		1	13:54 AL	CA	CU FE PB MG	ZN
CCV		1	13:59 AL	CA	CU FE PB MG	ZN
CCB		1	14:03 AL	CA	CU FE PB MG	ZN
PBSBJ23ICS2		1	14:08		CU PB	ZN
LCSOBJ23ICS2		1	14:12		CU PB	ZN
ZZZZZZ		1	14:17			
ZZZZZZ		1	14:21			
ZZZZZZ		1	14:26			
ZZZZZZ		1	14:30			
ZZZZZZ		1	14:35			
ZZZZZZ		5	14:39			
ZZZZZZ		1	14:44			
ZZZZZZ		1	14:48			
CCV		1	14:52 AL	CA	CU FE PB MG	ZN
CCB		1	14:57 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:01			
SE6620-001	DSY-SD-DUP30-100711	1	15:06		CU PB	ZN
SE6620-002	DSY-SD-C29-0012	1	15:10		PB	
SE6620-003	DSY-SD-C29-1224	1	15:15		PB	
SE6620-004	DSY-SD-C13-0012	1	15:19		PB	
SE6620-005	DSY-SD-C13-1224	1	15:24		PB	
SE6620-006	DSY-SD-C13-2448	1	15:28		PB	
SE6620-006L	DSY-SD-C13-2448L	5	15:33		PB	
SE6620-006A	DSY-SD-C13-2448A	1	15:37		PB	
SE6620-006D	DSY-SD-C13-2448D	1	15:41		PB	
CCV		1	15:46 AL	CA	CU FE PB MG	ZN
CCB		1	15:50 AL	CA	CU FE PB MG	ZN
SE6620-006S	DSY-SD-C13-2448S	1	15:55		PB	
SE6620-007	DSY-SD-C29-2448	1	15:59		PB	
SE6620-008	DSY-SD-C17-0012	1	16:04		PB	
SE6620-009	DSY-SD-C17-1224	1	16:08		PB	
SE6620-010	DSY-SD-C17-2448	1	16:13		PB	
ZZZZZZ		1	16:17			
ZZZZZZ		1	16:22			
ZZZZZZ		2	16:26			
ZZZZZZ		1	16:31			
ZZZZZZ		1	16:36			
CCV		1	16:40 AL	CA	CU FE PB MG	ZN
CCB		1	16:45 AL	CA	CU FE PB MG	ZN

FORM XIV - IN

Sample DSY-SD-C17-2448 Pb rep result

$\left(\frac{37.59\,ug}{L}\right)\left(\frac{0.1\,L}{1.27\,g}\right)\left(\frac{1\,mg}{1000\,ug}\right)\left(\frac{1000\,g}{1\,kg}\right)\left(\frac{1}{.797}\right) = 3.71\,mg/kg$ 3.7 mg/kg

SE6620-010

Method Name: K6010-2011 Method Revision: 46
Analyst Name: EAM
Acquire Date: 10/24/2011 4:13:27PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.994	ug/L	0.3184	15.97	-1,174
Al3961_R		55,060	ug/L	164.8	0.2993	43,940
As1891_A		56.54	ug/L	1.828	3.233	10.13
Au2427_A		-2.718	ug/L	0.06508	2.395	80.07
B_2089_A		81.43	ug/L	0.4750	0.5833	82.89
Ba4554_R		81.05	ug/L	0.2483	0.3064	4,488
Be3130_R		2.409	ug/L	0.07616	3.161	77.47
Ca3158_R		20,900	ug/L	111.2	0.5322	28,620
Cd2265_A		0.6742	ug/L	0.03270	4.850	166.0
Co2286_A		34.08	ug/L	0.2629	0.7714	167.8
Cr2677_A		107.6	ug/L	0.1975	0.1836	1,501
Cu3273_A		51.88	ug/L	0.5274	1.017	695.4
Fe2599_R		121,800	ug/L	298.7	0.2452	202,900
K_7664_R		9,466	ug/L	15.25	0.1611	5,789
Li6707_R		147.1	ug/L	0.1019	0.06928	1,425
Mg2025_A		26,360	ug/L	79.51	0.3016	4,792
Mn2576_R		949.2	ug/L	1.220	0.1285	8,783
Mo2020_A		4.716	ug/L	0.1726	3.659	8.937
Na5895_R		32,180	ug/L	165.1	0.5130	56,440
Ni2316_A		94.49	ug/L	0.2146	0.2271	217.5
Pb2203_A		37.59	ug/L	0.1592	0.4236	34.05
Sb2068_A		-1.126	ug/L	1.074	95.37	2.443
Se1960_A		2.896	ug/L	2.894	99.92	2.564
Si2516_R		3,219	ug/L	22.44	0.6971	1,565
Sn1899_A		14.07	ug/L	0.5988	4.255	8.777
Sr4215_R		147.6	ug/L	0.6461	0.4376	10,540
Ti3349_A		2,552	ug/L	2.987	0.1171	82,820
Tl1908_A		-0.3977	ug/L	1.539	386.9	-3.298
V_2924_A		136.2	ug/L	0.1680	0.1233	2,200
Zn2062_A		232.0	ug/L	1.009	0.4351	802.1
Y_3600_R		21,566	Cts/S	185.66	0.86085	21,566
Y_2243_A		8,839.1	Cts/S	5.4272	0.061400	8,839.1
Y_3600_A		244,830	Cts/S	1,058.0	0.43213	244,830

SE6749-002

Method Name: K6010-2011 Method Revision: 46
Analyst Name: EAM
Acquire Date: 10/24/2011 4:17:56PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.8458	ug/L	0.2816	33.30	-169.2
Al3961_R		115.4	ug/L	0.8015	0.6948	114.1
As1891_A		-1.822	ug/L	1.517	83.27	-2.737
Au2427_A		-0.5428	ug/L	0.1229	22.65	10.96
B_2089_A		35.60	ug/L	0.1714	0.4814	39.18
Ba4554_R		7.236	ug/L	0.03096	0.4278	492.7
Be3130_R		0.02312	ug/L	0.1012	437.6	-7.212
Ca3158_R		314.7	ug/L	1.629	0.5176	384.4
Cd2265_A		1.078	ug/L	0.03359	3.116	34.89
Co2286_A		3.056	ug/L	0.1047	3.427	18.98
Cr2677_A		19.03	ug/L	0.2635	1.385	280.0
Cu3273_A		55.25	ug/L	0.6115	1.107	794.2
Fe2599_R		14,880	ug/L	165.9	1.115	24,850
K_7664_R		114.6	ug/L	16.08	14.03	57.56
Li6707_R		4.387	ug/L	0.5584	12.73	-31.96
Mg2025_A		84.58	ug/L	2.245	2.655	11.79
Mn2576_R		227.1	ug/L	3.079	1.356	2,107
Mo2020_A		22.44	ug/L	0.009856	0.04391	45.17

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99718	ASTM D2216	26-OCT-11	24-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99718-2	LCS	WG99718	26-OCT-11	24-OCT-11	%	90	91.	101	80-120	

Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99718-4	SE6620-10	WG99718	26-OCT-11	%	80.	80.	0	20
WG99718-3	SE6620-6	WG99718	26-OCT-11	%	78.	79.	1	20

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S.PARKER** **DATE:** **January 16, 2012**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- LEAD, COPPER, ZINC, AND TOC**
CTO WE61, NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) DSY-22

SAMPLES: 23/Soil/

DSY-SD-DUP31-101211	DSY-SD-DUP32-101211	DSY-SD-G01-0
DSY-SD-G01-1224	DSY-SD-G01-2448	DSY-SD-G05-0012
DSY-SD-G05-1224	DSY-SD-G05-2448	DSY-SD-G09-0012
DSY-SD-G09-1224	DSY-SD-G09-2448	DSY-SD-G13-0012
DSY-SD-G13-1224	DSY-SD-G13-2448	DSY-SD-G17-0012
DSY-SD-G17-1224	DSY-SD-G17-2448	DSY-SD-G21-0012
DSY-SD-G21-1224	DSY-SD-G21-2448	DSY-SD-G25-0012
DSY-SD-G25-1224	DSY-SD-G25-2448	

OVERVIEW

The sample set for CTO WE61, NAVSTA Newport, SDG DSY-22, consists of twenty three (23) soil environmental samples. This SDG contained two field duplicate pairs: DSY-SD-DUP31-101211/DSY-SD-G05-2448 and DSY-SD-DUP32-101211/DSY-SD-G17-2448.

All samples were analyzed for lead, copper, zinc. Seven samples were analyzed for total organic carbon (TOC). The samples were collected by Tetra Tech NUS on October 12th, 2011 and analyzed by Katahdin Analytical Services. All metals analyses were conducted by EPA method 6010C. TOC analyses were conducted using method Llyod Kahn. Tier 2 data validation was performed on all analyses. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blanks
* • ICP Interference Analysis
* • Laboratory Control Sample Results
  • Matrix Spike Results
* • Field Duplicate Results
* • Laboratory Duplicate Results
* • ICP-MS Internal Standard Recoveries
* • ICP Serial Dilution Results
* • Detection Limits
* • Analyte Quantitation

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

TO: S. PARKER
SDG: DSY-22
DATE: 1/16/2012

METALS:

The matrix spike had a percent recovery < 80% for lead. All samples were affected. Positive results were qualified as estimated (J).

Field duplicate pair DSY-SD-DUP31-101211/DSY-SD-G05-2448 had a relative percent difference > 50% for zinc. Positive zinc results were qualified as estimated (J). Only the field duplicate pair was qualified as the other field duplicate pair in the SDG was within quality control limits.

TOC:

The matrix spike had a percent recovery >125% for TOC. All samples were affected. Positive results were qualified as estimated (J).

ADDITIONAL COMMENTS

Positive results greater than the MDL but less than the LOQ were qualified as estimated (J). Non-detected results were reported to the Limit of Detection (LOD).

The following analyte weas detected in the preparation blank at the following maximum concentration:

Analytes	Maximum Concentration	Action Level
Lead (1)	0.107 mg/kg	0.535mg/kg

(1) Maximum concentration found in preparation blank affecting samples in preparation batch BJ31ICS1.

Action levels of 5X the maximum contaminant concentration for were established to evaluate blank contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the blank action level were qualified as non-detect (U). Rinsate blank results were not qualified due to method blank contamination.

Sample DSY-SD-G21-2448 was analyzed at a 2X dilution for zinc.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: Field duplicate pair DSY-SD-DUP31-101211/DSY-SD-G05-2448 were qualified for zinc non-compliances. Matrix spike non-compliances for lead and TOC resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to the EPA Region I, "National Functional Guidelines for Inorganic Review", (11/08) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist 1/ Data Validator

TO: S. PARKER
SDG: DSY-22
DATE: 1/16/2012

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Regional Worksheets
Appendix D – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012			DSY-SD-G01-1224		
SDG: DSY-22	LAB_ID	SE6767-007			SE6767-017			SE6767-001			SE6767-002		
FRACTION: M	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	35.9			32.2			38.2			36.2		
	DUP_OF	DSY-SD-G05-2448			DSY-SD-G17-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		98.4			86.6			36.4			37.1		
LEAD		80	J	D	92.4	J	D	368	J	D	47.7	J	D
ZINC		314	J	G	175			111			110		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G01-2448			DSY-SD-G05-0012			DSY-SD-G05-1224			DSY-SD-G05-2448		
	LAB_ID	SE6767-003			SE6767-004			SE6767-005			SE6767-006		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	35.2			42.3			33.4			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		102			40.1			46.6			90		
LEAD		74.5	J	D	43.8	J	D	62.8	J	D	75.8	J	D
ZINC		172			124			145			182	J	G

PROJ_NO: 02747 SDG: DSY-22 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G09-0012			DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012		
	LAB_ID	SE6767-008			SE6767-009			SE6767-010			SE6767-011		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	35.6			32.5			32.6			38.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		51.3			53			79.6			56.1		
LEAD		61.7	J	D	63.4	J	D	82.2	J	D	54.4	J	D
ZINC		166			161			183			152		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012			DSY-SD-G17-1224		
	LAB_ID	SE6767-012			SE6767-013			SE6767-014			SE6767-015		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	30.9			30.1			36.7			30.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		55			57.7			45.6			54.7		
LEAD		56.5	J	D	68.3	J	D	48.6	J	D	60.6	J	D
ZINC		144			167			137			154		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G17-2448			DSY-SD-G21-0012			DSY-SD-G21-1224			DSY-SD-G21-2448		
	LAB_ID	SE6767-016			SE6767-018			SE6767-019			SE6767-020		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	31.8			30.6			34.0			37.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		80.5			56.5			49			89.8		
LEAD		64.1	J	D	53.1	J	D	49.3	J	D	75.3	J	D
ZINC		167			159			135			183		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G25-0012			DSY-SD-G25-1224			DSY-SD-G25-2448		
	LAB_ID	SE6767-021			SE6767-022			SE6767-023		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	36.7			35.5			35.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		69.2			260			284		
LEAD		49.7	J	D	199	J	D	212	J	D
ZINC		162			675			738		

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012					
	LAB_ID	SE6767-7			SE6767-17			SE6767-1					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	35.9			32.2			38.2			38.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											43000	J	D
TOTAL SOLIDS		36			32			38					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G01-1224			DSY-SD-G01-2448			DSY-SD-G05-0012					
	LAB_ID	SE6767-2			SE6767-3			SE6767-4					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	36.2			35.2			42.3			42.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											38000	J	D
TOTAL SOLIDS		36			35			42					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G05-1224			DSY-SD-G05-2448			DSY-SD-G09-0012					
	LAB_ID	SE6767-5			SE6767-6			SE6767-8					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	33.4			34.5			35.6			35.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											44000	J	D
TOTAL SOLIDS		33			34			36					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012					
	LAB_ID	SE6767-9			SE6767-10			SE6767-11					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	32.5			32.6			38.9			38.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											34000	J	D
TOTAL SOLIDS		32			33			39					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012					
	LAB_ID	SE6767-12			SE6767-13			SE6767-14					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	30.9			30.1			36.7			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											54000	J	D
TOTAL SOLIDS		31			30			37					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G17-1224			DSY-SD-G17-2448			DSY-SD-G21-0012					
	LAB_ID	SE6767-15			SE6767-16			SE6767-18					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	30.1			31.8			30.6			30.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											53000	J	D
TOTAL SOLIDS		30			32			30					

PROJ_NO: 02747 SDG: DSY-22 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G21-1224			DSY-SD-G21-2448			DSY-SD-G25-0012					
	LAB_ID	SE6767-19			SE6767-20			SE6767-21					
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	34.0			37.3			36.7			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON											46000	J	D
TOTAL SOLIDS		34			37			37					

PROJ_NO: 02747	NSAMPLE	DSY-SD-G25-1224			DSY-SD-G25-2448		
SDG: DSY-22	LAB_ID	SE6767-22			SE6767-23		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	%			%		
	PCT_SOLIDS	35.5			35.2		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON							
TOTAL SOLIDS		36			35		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP31-101211

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 35.9 **Lab Sample ID:** SE6767-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	98.4			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	80.0		N	P	1	1.1	0.19	0.89
7440-66-6	ZINC, TOTAL	314			P	1	5.6	0.37	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP32-101211

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 32.2 **Lab Sample ID:** SE6767-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	86.6			P	1	3.9	0.24	1.6
7439-92-1	LEAD, TOTAL	92.4		N	P	1	0.78	0.14	0.63
7440-66-6	ZINC, TOTAL	175			P	1	3.9	0.26	1.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G01-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 38.2 **Lab Sample ID:** SE6767-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	36.4			P	1	4.6	0.29	1.8
7439-92-1	LEAD, TOTAL	368		N	P	1	0.92	0.16	0.74
7440-66-6	ZINC, TOTAL	111			P	1	4.6	0.31	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G01-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 36.2 **Lab Sample ID:** SE6767-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	37.1			P	1	6.0	0.37	2.4
7439-92-1	LEAD, TOTAL	47.7		N	P	1	1.2	0.21	0.96
7440-66-6	ZINC, TOTAL	110			P	1	6.0	0.40	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G01-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 35.2 **Lab Sample ID:** SE6767-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	102			P	1	5.3	0.33	2.1
7439-92-1	LEAD, TOTAL	74.5		N	P	1	1.1	0.18	0.85
7440-66-6	ZINC, TOTAL	172			P	1	5.3	0.36	2.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G05-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 42.3 **Lab Sample ID:** SE6767-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	40.1			P	1	3.1	0.20	1.2
7439-92-1	LEAD, TOTAL	43.8		N	P	1	0.63	0.11	0.50
7440-66-6	ZINC, TOTAL	124			P	1	3.1	0.21	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G05-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 33.4 **Lab Sample ID:** SE6767-005

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7440-50-8	COPPER, TOTAL	46.6			P	1	7.1	0.44	2.8
7439-92-1	LEAD, TOTAL	62.8		N	P	1	1.4	0.25	1.1
7440-66-6	ZINC, TOTAL	145			P	1	7.1	0.48	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G05-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 34.5 **Lab Sample ID:** SE6767-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	90.0			P	1	4.3	0.27	1.7
7439-92-1	LEAD, TOTAL	75.8		N	P	1	0.87	0.15	0.69
7440-66-6	ZINC, TOTAL	182			P	1	4.3	0.29	1.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G09-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 35.6 **Lab Sample ID:** SE6767-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	51.3			P	1	5.2	0.32	2.1
7439-92-1	LEAD, TOTAL	61.7		N	P	1	1.0	0.18	0.83
7440-66-6	ZINC, TOTAL	166			P	1	5.2	0.35	2.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G09-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 32.5 **Lab Sample ID:** SE6767-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	53.0			P	1	6.1	0.38	2.4
7439-92-1	LEAD, TOTAL	63.4		N	P	1	1.2	0.21	0.97
7440-66-6	ZINC, TOTAL	161			P	1	6.1	0.41	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G09-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 32.6 **Lab Sample ID:** SE6767-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	79.6			P	1	5.0	0.31	2.0
7439-92-1	LEAD, TOTAL	82.2		N	P	1	1.0	0.18	0.81
7440-66-6	ZINC, TOTAL	183			P	1	5.0	0.34	2.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G13-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 38.9 **Lab Sample ID:** SE6767-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	56.1			P	1	4.3	0.27	1.7
7439-92-1	LEAD, TOTAL	54.4		N	P	1	0.86	0.15	0.69
7440-66-6	ZINC, TOTAL	152			P	1	4.3	0.29	1.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G13-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 30.9 **Lab Sample ID:** SE6767-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	55.0			P	1	7.3	0.46	2.9
7439-92-1	LEAD, TOTAL	56.5		N	P	1	1.5	0.26	1.2
7440-66-6	ZINC, TOTAL	144			P	1	7.3	0.49	2.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G13-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 30.1 **Lab Sample ID:** SE6767-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	57.7			P	1	6.8	0.42	2.7
7439-92-1	LEAD, TOTAL	68.3		N	P	1	1.4	0.24	1.1
7440-66-6	ZINC, TOTAL	167			P	1	6.8	0.46	2.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G17-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 36.7 **Lab Sample ID:** SE6767-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	45.6			P	1	4.8	0.30	1.9
7439-92-1	LEAD, TOTAL	48.6		N	P	1	0.97	0.17	0.77
7440-66-6	ZINC, TOTAL	137			P	1	4.8	0.32	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G17-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 30.1 **Lab Sample ID:** SE6767-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	54.7			P	1	6.6	0.41	2.6
7439-92-1	LEAD, TOTAL	60.6		N	P	1	1.3	0.23	1.0
7440-66-6	ZINC, TOTAL	154			P	1	6.6	0.44	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G17-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 31.8 **Lab Sample ID:** SE6767-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	80.5			P	1	5.4	0.34	2.2
7439-92-1	LEAD, TOTAL	64.1		N	P	1	1.1	0.19	0.87
7440-66-6	ZINC, TOTAL	167			P	1	5.4	0.37	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 30.6 **Lab Sample ID:** SE6767-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	56.5			P	1	6.4	0.40	2.6
7439-92-1	LEAD, TOTAL	53.1		N	P	1	1.3	0.22	1.0
7440-66-6	ZINC, TOTAL	159			P	1	6.4	0.43	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 34.0 **Lab Sample ID:** SE6767-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	49.0			P	1	4.8	0.30	1.9
7439-92-1	LEAD, TOTAL	49.3		N	P	1	0.96	0.17	0.76
7440-66-6	ZINC, TOTAL	135			P	1	4.8	0.32	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 37.3 **Lab Sample ID:** SE6767-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	89.8			P	1	5.0	0.31	2.0
7439-92-1	LEAD, TOTAL	75.3		N	P	1	1.0	0.18	0.80
7440-66-6	ZINC, TOTAL	183			P	2	10	0.68	4.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G25-0012

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 36.7 **Lab Sample ID:** SE6767-021

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	69.2			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	49.7		N	P	1	1.1	0.20	0.90
7440-66-6	ZINC, TOTAL	162			P	1	5.6	0.38	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G25-1224

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 35.5 **Lab Sample ID:** SE6767-022

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7440-50-8	COPPER, TOTAL	260			P	1	5.0	0.31	2.0
7439-92-1	LEAD, TOTAL	199		N	P	1	1.0	0.17	0.80
7440-66-6	ZINC, TOTAL	675			P	1	5.0	-0.34	2.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G25-2448

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 35.2 **Lab Sample ID:** SE6767-023

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	284			P	1	6.2	0.39	2.5
7439-92-1	LEAD, TOTAL	212		N	P	1	1.2	0.22	1.0
7440-66-6	ZINC, TOTAL	738			P	1	6.2	0.42	2.5

Comments:

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-7
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP31-101211	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:00	ASTM D2216	26-OCT-11	

Katahdin Analytical Services 500005

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-17
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP32-101211	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:37:22	ASTM D2216	26-OCT-11	

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-1
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G01-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	42000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99546	19-OCT-11 12:25:45	N/A	N/A	
Toc In Soil(2)	44000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99546	19-OCT-11 12:37:41	N/A	N/A	
Toc In Soil(Avg)	43000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:23:43	ASTM D2216	26-OCT-11	

Katahdin
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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-2
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G01-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:24:03	ASTM D2216	26-OCT-11	

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-3
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G01-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:24:16	ASTM D2216	26-OCT-11	

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-4
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G05-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	42000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99546	19-OCT-11 12:56:33	N/A	N/A	
Toc In Soil(2)	34000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99546	19-OCT-11 13:06:54	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	42. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:24:25	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-5
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G05-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	33. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:24:36	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-6
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G05-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:24:49	ASTM D2216	26-OCT-11	

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-8
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G09-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	42000 ug/gdrywt	1100	240	840	LLOYD KAHN	WG99546	19-OCT-11 13:18:40	N/A	N/A	
Toc In Soil(2)	47000 ug/gdrywt	1100	240	840	LLOYD KAHN	WG99546	19-OCT-11 13:30:01	N/A	N/A	
Toc In Soil(Avg)	44000 ug/gdrywt	1100	240	840	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	36. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:09	ASTM D2216	26-OCT-11	

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-9
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G09-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:17	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-10
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G09-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	33. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:33	ASTM D2216	26-OCT-11	

Katahdin Analytical Services 500088

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-11
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G13-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	34000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99546	19-OCT-11 13:44:09	N/A	N/A	
Toc In Soil(2)	34000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99546	19-OCT-11 13:54:40	N/A	N/A	
Toc In Soil(Avg)	34000 ug/gdrywt	1000	220	770	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	39. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:44	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-12
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G13-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	31. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:25:54	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-13
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G13-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	30. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:26:03	ASTM D2216	26-OCT-11	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-14
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G17-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	38000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 14:42:05	N/A	N/A	
Toc In Soil(2)	71000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 14:58:22	N/A	N/A	
Toc In Soil(Avg)	54000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	37. %	1		N/A	SM2540G	WG99854	27-OCT-11 09:26:12	ASTM D2216	26-OCT-11	

Technology Way
P.O. Box 540, Scarborough, ME 04070
http://www.katahdinlab.com

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-15
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G17-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	30. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:36:52	ASTM D2216	26-OCT-11	

Technology Way
P.O. Box 540, Scarborough, ME 04070
http://www.katahdinlab.com

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-16
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G17-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:37:10	ASTM D2216	26-OCT-11	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-18
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G21-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	54000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99546	19-OCT-11 15:08:09	N/A	N/A	
Toc In Soil(2)	52000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99546	19-OCT-11 15:19:24	N/A	N/A	
Toc In Soil(Avg)	53000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	30. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:37:33	ASTM D2216	26-OCT-11	

Katahdin Analytical Services 50000

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-19
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G21-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:37:43	ASTM D2216	26-OCT-11	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-20
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G21-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	37. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:37:54	ASTM D2216	26-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-21
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G25-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	48000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 15:32:34	N/A	N/A	
Toc In Soil(2)	44000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 15:44:47	N/A	N/A	
Toc In Soil(Avg)	46000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	37. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:17	ASTM D2216	26-OCT-11	

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-22
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G25-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:26	ASTM D2216	26-OCT-11	

Katahdin Analytical Services 500003

Katahdin
ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6767-23
Report Date: 21-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-22

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G25-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:38	ASTM D2216	26-OCT-11	

APPENDIX C

REGIONAL WORKSHEETS

REGION I, EPA-NE INORGANIC REGIONAL DATA ASSESSMENT (IRDA)*

CASE #: _____ SITE NAME: NAVSTA Newport

LAB NAME: Katahdin Analytical # OF SAMPLES/MATRIX: 23/Soil

SDG #: DSY-22 VALIDATION CONTRACTOR: _____

SOW #/CONTRACT #: _____ VALIDATOR'S NAME: Megan Carson

EPA-NE DV TIER LEVEL: _____ DATE DP REC'D BY EPA-NE: _____

PO: **ACTION _____ FYI _____ DV COMPLETION DATE: _____

ANALYTICAL DATA QUALITY SUMMARY

See DV Report

		ICP-AES	ICP- MS	HG	CN
I.	Preservation and Technical Holding Times				
II.	ICP-MS Tune				
III.	Calibrations				
IV.	Blanks				
V.	ICP-AES Interference Check Sample (ICS)				
VI.	ICP-MS Interference Check Sample (ICS)				
VII.	ICP-MS Internal Standards				
VIII.	Matrix Spikes				
IX.	Laboratory Duplicate Samples				
X.	Field Duplicates				
XI.	ICP Serial Dilutions				
XII.	Sensitivity Check				
XIII.	Performance Evaluation Samples/Accuracy Check				
XIV.	Analyte Quantitation and Reported Quantitation Limits				
XV.	System Performance				
XVI.	Overall Evaluation of Data				

o = Data had no problems or were qualified due to minor contractual problems.
m = Data were qualified due to major contractual problems.
z = Data were rejected as unusable due to major contractual problems.

ACTION ITEMS: (z items) _____

AREAS OF CONCERN: (m items) _____

COMMENTS: _____

* This form assesses the analytical data quality in terms of contractual compliance only. It does not assess sampling errors and/or non-contractual analytical issues that affect data quality.

** Check "ACTION" only if contractual defects resulted in reduced payment/data rejection recommendations.

Validator: Megan Carson Date: 1/3/11

INSTRUCTIONS ON REVERSE SIDE

DRAFT 11/08

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name _____
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. DS4-22
No. of Samples/Matrix 23/Soil

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. See DV Report

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Megan Curran Company Name Tetratech Phone Number _____

Date Validation Started _____ Date Validation Completed _____

EPA-NE - Data Validation Worksheet
INORG-I

See DV Report

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times.

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator:_____ Date:_____

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

See DV Report

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			
Comments:									

Validator:_____ Date:_____

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

See DV Report

III. CALIBRATIONS

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

_____

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

See DV Report

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

_____

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

See DV Report

Circle the highest concentration of each contaminant.

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
INORG-IV-C.2

See DV Report

IV. BLANKS

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample.

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action
Comments:							

Validator: _____ Date: _____

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-A

See DV Report

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria.

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator:_____ Date:_____

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

See DV Report

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

1. List all analytes in the ICSA that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	
Comments:										

Validator:_____ Date:_____

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.2

See DV Report

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

2. List all affected sample results.

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action
Comments:						

Validator:_____ Date:_____

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

See DV Report

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

List all analytes that are outside ICSAB criteria of 80-120% R.

Date	Analyte	%R	Samples Affected	Action
Comments:				

Validator:_____ Date:_____

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-B

See DV Report

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

List all analytes that are outside ICSA criteria.

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator:_____ Date:_____

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

See DV Report

VII. ICP-MS INTERNAL STANDARDS

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action
Comments:					

Validator:_____ Date:_____

EPA-NE - Data Validation Worksheet
INORG-VIII

See DV Report

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action
Comments:								

Validator:_____ Date:_____

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IX

See DUReport

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator:_____ Date:_____

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

SEDU Report

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: _____ Date: _____

EPA-NE - Data Validation Worksheet
INORG-XI

XI. ICP SERIAL DILUTIONS

See DV Report

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action
Comments:						

Validator:_____ Date:_____

APPENDIX D

SUPPORT DOCUMENTATION

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
Tetra Tech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8481

Address	City	State	Zip Code
250 ANDOVER ST. SUITE 200	WILMINGTON	MA	01887

Purchase Order # | Proj. Name / No. CTO WE61 Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton / MH | Copies To:

LAB USE ONLY WORK ORDER #: SE6767

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-G01-0012	10/12/11/ 0920	SED	3	X	X	X	X						
	DSY-SD-G01-1224	/0923		2	X	X	X							
	DSY-SD-G01-2448	/0926		2	X	X	X							
	DSY-SD-G05-0012	/1205		3	X	X	X	X						
	DSY-SD-G05-1224	/1208		2	X	X	X							
	DSY-SD-G05-2448	/1211		2	X	X	X							
	DSY-SD-DUP31-101211	/—		2	X	X	X							
	DSY-SD-G09-0012	/1240		3	X	X	X	X						
	DSY-SD-G09-1224	/1243		2	X	X	X							
	DSY-SD-G09-2448	/1246		2	X	X	X							
	DSY-SD-G13-0012	/1310		3	X	X	X	X						
	DSY-SD-G13-1224	/1313		2	X	X	X							
	DSY-SD-G13-2448	/1316		2	X	X	X							
	DSY-SD-G17-0012	/1325		3	X	X	X	X						
	DSY-SD-G17-1224	/1328		2	X	X	X							
	DSY-SD-G17-2448	/1331		2	X	X	X							

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

0000913

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )
Address	**City**	**State**	**Zip Code**
Purchase Order #	**Proj. Name / No.** CTO WE 61, Derecktor SY	**Katahdin Quote #**	
Bill (if different than above)	**Address**		
Sampler (Print / Sign) Michael Horton		**Copies To:**	

LAB USE ONLY WORK ORDER #: SE6767 / SE6768
KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Asbestos (Filt. ☐Y ☐N)
	DSY-SD-DUP32-101211	10/12/11 / —	SED	2	X	X	X		
	DSY-SD-G21-0012	/1345		3	X	X	X	X	
	DSY-SD-G21-1224	/1348		2	X	X	X		
	DSY-SD-G21-2448	/1351		24	X	X	X		
	DSY-SD-G25-0012	/1405		3	X	X	X	X	
	DSY-SD-G25-1224	/1408		2	X	X	X		
	DSY-SD-G25-2448	/1411		2	X	X	X		
	DSY-SD-AA01-0012	/1420		34	X	X	X	X	X
	DSY-SD-AA01-1224	/1423		23	X	X	X		X
	DSY-SD-AA01-2448	/1428		23	X	X	X		X
	DSY-SD-DUP33-101211	/ —		23	X	X	X		X
	DSY-SD-AA05-0012	/1445		34	X	X	X	X	X
	DSY-SD-AA05-1224	/1448		23	X	X	X		X
	DSY-SD-AA05-2448	/1451	↓	3	X	X	X		X
	DSY-SD-RB13-101211	/1600	AQ	5	X	X	X		
		/							

COMMENTS DSY-SD-G21-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-22
SE6767

Sample Receipt

The following samples were received on October 13, 2011 and were logged in under Katahdin Analytical Services work order number SE6767 for a hardcopy due date of November 1, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6767-1	DSY-SD-G01-0012
SE6767-2	DSY-SD-G01-1224
SE6767-3	DSY-SD-G01-2448
SE6767-4	DSY-SD-G05-0012
SE6767-5	DSY-SD-G05-1224
SE6767-6	DSY-SD-G05-2448
SE6767-7	DSY-SD-DUP31-101211
SE6767-8	DSY-SD-G09-0012
SE6767-9	DSY-SD-G09-1224
SE6767-10	DSY-SD-G09-2448
SE6767-11	DSY-SD-G13-0012
SE6767-12	DSY-SD-G13-1224
SE6767-13	DSY-SD-G13-2448
SE6767-14	DSY-SD-G17-0012
SE6767-15	DSY-SD-G17-1224
SE6767-16	DSY-SD-G17-2448
SE6767-17	DSY-SD-DUP32-101211
SE6767-18	DSY-SD-G21-0012
SE6767-19	DSY-SD-G21-1224
SE6767-20	DSY-SD-G21-2448
SE6767-21	DSY-SD-G25-0012
SE6767-22	DSY-SD-G25-1224
SE6767-23	DSY-SD-G25-2448

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-22 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6767-20 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

Sample SE6767-10 was lost due to a laboratory accident during concentration and the sample was reextracted 12 days out of hold time.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. Sample SE6767-10 and the associated method blank WG101758-1 were spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

Sample SE6767-3 was manually integrated for the surrogate fluorene-d10. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on

the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6767-14 had a low recovery for one surrogate, which was outside the laboratory established acceptance limits. The sample was reextracted twenty-two days out of hold time, analyzed and had acceptable surrogate recoveries. The results for both extractions are reported.

Sample SE6767-19 had low recoveries for two surrogates and no recovery for another surrogate, which were outside the laboratory established acceptance limits. The sample was reextracted twenty-two days out of hold time, analyzed and had acceptable surrogate recoveries. The results for both extractions are reported.

Sample SE6767-10 was lost due to a laboratory accident during concentration and the sample was reextracted 12 days out of hold time.

Samples SE6767-1, 15 and 18 were manually integrated for the analytes benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The CV (file N2574) had a high response for the analyte fluoranthene. The CV (file N2613) had high responses for the analytes pyrene, benzo(g,h,i)perylene and the surrogate terphenyl-d14. The CV (file N2682) had a low response for the analyte indeno(1,2,3-cd)pyrene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

8082 Analysis

Surrogate recoveries for all samples and QC, as well as spike recoveries for the laboratory control samples and laboratory control sample duplicates (LCS/LCSDs), were evaluated using laboratory established acceptance limits.

Samples SE6767-2, 4, 6, 7, 11, 12, 13, 14, 15, 16, 18, 19, 22 and 23 were manually integrated for Aroclor 1254 and/or the surrogate TCX. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6767-22 had a %RPD for Aroclor 1254 that was outside of the method acceptance limits of 40%. This analyte is flagged with a "J" qualifier on the report of analysis (ROA).

Samples SE6767-1, 6, 21, 22 and 23 had low recoveries for the surrogate DCB on one channel, which were outside of the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channel, no further action was taken.

The LCS WG100155-2 had low recoveries for the surrogate DCB on channel A, which were outside of the laboratory established acceptance limits. Since the recovery for DCB was acceptable on channel B and the spike recoveries were acceptable, no further action was taken.

The MS/MSD WG100155-4 and 5 had low recoveries for the surrogate TCX on one or both channels and DBC on both channels, which were outside of the laboratory established acceptance limits. Since the spike recoveries were acceptable, no further action was taken.

Sample SE6767-3 had low recoveries for the surrogates TCX and DCB on channel A, which were outside of the laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

Sample SE6767-8 had low recoveries for the surrogate DCB on both channels, which were outside the laboratory established acceptance limits.

The opening/closing calibration verification standards (CVs) (files 7EK107 and 7EK153) had high responses for the surrogate TCX on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK122) had low responses for the surrogate DCB on both channels and a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recoveries for DCB may be biased low for the associated samples.

The opening CV (file 7EK268) had low responses for Aroclor 1260 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK283) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016 and DCB were acceptable on channel B, the associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The opening/closing CVs (files 7EK286 and 7EK557) had high responses for Aroclor 1254 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CVs (files 7EK539 and 7EK566) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016, Aroclor 1260 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016, Aroclor 1260 and DCB were acceptable on channel B, the

associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The opening/closing CV (file 7EK554) had high responses for the surrogate TCX on both channels and high responses for Aroclor 1016 and the surrogate DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for Aroclor 1016 and DCB were acceptable on channel B, the associated samples were not reanalyzed. The recoveries for TCX may be biased high for the associated samples.

The LCS WG99856-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. The LCS also had low recoveries for the surrogate TCX on both channels, which were outside of the laboratory established acceptance limits. Since the LCSD had acceptable surrogate and spike recoveries, the associated samples were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-22 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6767-(1-20) were digested for ICP analysis on 10/27/11 (QC Batch BJ27ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6767-20 was prepared in duplicate and with a matrix-spiked aliquot.

Solid-matrix Katahdin Sample Numbers SE6767-(21-23) were digested for ICP analysis on 10/31/11 (QC Batch BJ31ICS1) in accordance with USEPA Method 3050B.

ICP analyses of SDG DSY-22 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Number SE6767-20 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added). The measured recovery of lead in a post-digestion spike of Katahdin Sample Number SE6444-10 is within the project acceptance criteria (75% - 125% recovery of the added element).

The duplicate analysis of Katahdin Sample Number SE6767-20 is within the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample Number SE6767-20 is within the project acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all analytes.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-22 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recoveries, relative to both the TOC (1) and TOC(2) results for the unspiked sample, for the matrix spike aliquot of Katahdin Sample No. SE6767-11 are outside the laboratory's acceptance limits of 75% - 125%.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.07.11

Leslie Dimond
Quality Assurance Officer

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP31-101211	UNITS	DSY-SD-G05-2448	RPD	D
M	COPPER	98.4	MG/KG	90	8.92	8.40
M	LEAD	80	MG/KG	75.8	5.39	4.20
M	ZINC	314	MG/KG	182	53.23	132.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-22

FRACTION	CHEMICAL	DSY-SD-DUP32-101211	UNITS	DSY-SD-G17-2448	RPD	D
M	COPPER	86.6	MG/KG	80.5	7.30	6.10
M	LEAD	92.4	MG/KG	64.1	36.17	28.30
M	ZINC	175	MG/KG	167	4.68	8.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Client: Tetra Tech	KAS PM: JC	Sampled By:	
Project:	KIMS Entry By: GN	Delivered By: --	
KAS Work Order#: SE6767/SE6768	KIMS Review By: GN	Received By: Andrew Ha	
SDG #:	Cooler: 1 of 13	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

AA0S-0012 - no T°C jar in cooler.

Client: Tetra Tech	KAS PM: JC		
Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767 / SE6768	KIMS Review By: DR	Received By: Andrew Hulo	
SDG #:	Cooler: 2 of 3	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Client: Tetra Tech	KAS PM: JC	Sampled By:	
Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Hatlen	
SDG #:	Cooler: 3 of 13	Date/Time Rec.: 10/13/11 18:03	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 0.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2*				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	M	MG/KG	DSY-SD-G25-0012	SE6767-021	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP32-101211	SE6767-017	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/31/2011	15	4	19
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-1224	SE6767-005	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-0012	SE6767-001	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-2448	SE6767-006	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-2448	SE6767-016	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-0012	SE6767-011	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-1224	SE6767-019	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-2448	SE6767-010	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-1224	SE6767-015	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-0012	SE6767-004	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-2448	SE6767-003	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-1224	SE6767-012	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-2448	SE6767-013	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-0012	SE6767-014	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-1224	SE6767-002	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-23	M	MG/KG	DSY-SD-AA01-0012	SE6768-001	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM XI - IN

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ27ICS1

Matrix: SOIL **SDG Name:** DSY-22

Method: P **Prep Date:** 10/27/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ27ICS1	LCSOBJ27ICS1	1	0.1	
PBSBJ27ICS1	PBSBJ27ICS1	1	0.1	
DSY-SD-G01-0012	SE6767-001	1.42	0.1	B
DSY-SD-G01-1224	SE6767-002	1.15	0.1	B
DSY-SD-G01-2448	SE6767-003	1.34	0.1	A
DSY-SD-G05-0012	SE6767-004	1.88	0.1	B
DSY-SD-G05-1224	SE6767-005	1.06	0.1	B
DSY-SD-G05-2448	SE6767-006	1.67	0.1	B
DSY-SD-DUP31-101211	SE6767-007	1.25	0.1	A
DSY-SD-G09-0012	SE6767-008	1.36	0.1	B
DSY-SD-G09-1224	SE6767-009	1.27	0.1	A
DSY-SD-G09-2448	SE6767-010	1.52	0.1	B
DSY-SD-G13-0012	SE6767-011	1.49	0.1	A
DSY-SD-G13-1224	SE6767-012	1.1	0.1	A
DSY-SD-G13-2448	SE6767-013	1.22	0.1	A
DSY-SD-G17-0012	SE6767-014	1.41	0.1	C
DSY-SD-G17-1224	SE6767-015	1.26	0.1	A
DSY-SD-G17-2448	SE6767-016	1.44	0.1	A
DSY-SD-DUP32-101211	SE6767-017	1.98	0.1	B
DSY-SD-G21-0012	SE6767-018	1.27	0.1	C
DSY-SD-G21-1224	SE6767-019	1.54	0.1	A
DSY-SD-G21-2448	SE6767-020	1.33	0.1	C
DSY-SD-G21-2448D	SE6767-020D	1.3	0.1	C
DSY-SD-G21-2448S	SE6767-020S	1.34	0.1	C

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ27ICS1

Matrix: SOIL **SDG Name:** DSY-22

QC Batch ID: BJ27ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** DSY-SD-G21-2448S

Matrix: SOIL | **SDG Name:** DSY-22

Percent Solids: 37.3 | **Lab Sample ID:** SE6767-020S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	140.4901		89.8260		49.98	101.4		80	120	P
LEAD, TOTAL	82.5589		75.2846		19.99	36.4	N	80	120	P
ZINC, TOTAL	288.8563		183.4988		99.95	105.4		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-2448S

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 37.3 **Lab Sample ID:** SE6767-020A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	918.2000		446.0000		500	94.4		75	125	P
LEAD, TOTAL	829.1000		373.8000		500	91.1		75	125	P
ZINC, TOTAL	916.5000		455.5500		500	92.2		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-2448D

Matrix: SOIL **SDG Name:** DSY-22

Percent Solids: 37.3 **Lab Sample ID:** SE6767-020D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
COPPER, TOTAL		89.8260		96.3496		7.0		P
LEAD, TOTAL		75.2846		67.5024		10.9		P
ZINC, TOTAL		183.4988		186.6825		1.7		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ27ICS1

Matrix: SOIL **SDG Name:** DSY-22

QC Batch ID: BJ27ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.80	99.2	80	120
LEAD	10.00	9.73	97.3	80	120
ZINC	50.00	50.32	100.6	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G21-2448L

Matrix: SOIL **SDG Name:** DSY-22

Lab Sample ID: SE6767-020L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
COPPER, TOTAL	446.00		477.40		7.0		P
LEAD, TOTAL	373.80		401.60		7.4		P
ZINC, TOTAL	455.55		459.80		0.9		P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ31ICS1

Matrix: SOIL **SDG Name:** DSY-22

Method: P **Prep Date:** 10/31/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ31ICS1	LCSOBJ31ICS1	1	0.1	
PBSBJ31ICS1	PBSBJ31ICS1	1	0.1	
DSY-SD-G25-0012	SE6767-021	1.21	0.1	C
DSY-SD-G25-1224	SE6767-022	1.41	0.1	B
DSY-SD-G25-2448	SE6767-023	1.14	0.1	A

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-22

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.107	J
ZINC	1.0	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-22

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.56	98.2	80	120
LEAD	10.00	9.68	96.8	80	120
ZINC	50.00	49.03	98.1	80	120

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ28A

Date: 10/28/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
Blank		1	16:35 AL	CA	CU FE PB MG	ZN
Std 1		1	16:40 AL	CA	CU FE PB MG	ZN
ICV		1	16:44 AL	CA	CU FE PB MG	ZN
ICB		1	16:48 AL	CA	CU FE PB MG	ZN
PQL		1	16:53 AL	CA	CU FE PB MG	ZN
ICSA		1	16:57 AL	CA	CU FE PB MG	ZN
ICSAB		1	17:02 AL	CA	CU FE PB MG	ZN
CCV		1	17:07 AL	CA	CU FE PB MG	ZN
CCB		1	17:11 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	17:16			
ZZZZZZ		1	17:20			
ZZZZZZ		1	17:25			
ZZZZZZ		1	17:29			
ZZZZZZ		1	17:34			
ZZZZZZ		1	17:38			
ZZZZZZ		1	17:43			
ZZZZZZ		1	17:48			
ZZZZZZ		1	17:53			
ZZZZZZ		1	17:57			
CCV		1	18:02 AL	CA	CU FE PB MG	ZN
CCB		1	18:06 AL	CA	CU FE PB MG	ZN
ZZZZZZ		2	18:11			
ZZZZZZ		2	18:15			
ZZZZZZ		1	18:20			
ZZZZZZ		2	18:24			
ZZZZZZ		2	18:29			
ZZZZZZ		2	18:33			
PBSBJ27ICS1		1	18:38		CU PB	ZN
LCSOBJ27ICS1		1	18:43		CU PB	ZN
SE6767-001	DSY-SD-G01-0012	1	18:47		CU PB	ZN
SE6767-002	DSY-SD-G01-1224	1	18:52		CU PB	ZN
CCV		1	18:56 AL	CA	CU FE PB MG	ZN
CCB		1	19:01 AL	CA	CU FE PB MG	ZN
SE6767-003	DSY-SD-G01-2448	1	19:05		CU PB	ZN
SE6767-004	DSY-SD-G05-0012	1	19:10		CU PB	ZN
SE6767-005	DSY-SD-G05-1224	1	19:14		CU PB	ZN
SE6767-006	DSY-SD-G05-2448	1	19:19		CU PB	ZN
SE6767-007	DSY-SD-DUP31-101211	1	19:23		CU PB	ZN
SE6767-008	DSY-SD-G09-0012	1	19:28		CU PB	ZN
SE6767-009	DSY-SD-G09-1224	1	19:32		CU PB	ZN
SE6767-010	DSY-SD-G09-2448	1	19:37		CU PB	ZN
SE6767-011	DSY-SD-G13-0012	1	19:41		CU PB	ZN
SE6767-012	DSY-SD-G13-1224	1	19:46		CU PB	ZN
CCV		1	19:50 AL	CA	CU FE PB MG	ZN
CCB		1	19:55 AL	CA	CU FE PB MG	ZN
SE6767-013	DSY-SD-G13-2448	1	19:59		CU PB	ZN
SE6767-014	DSY-SD-G17-0012	1	20:04		CU PB	ZN
SE6767-015	DSY-SD-G17-1224	1	20:08		CU PB	ZN
SE6767-016	DSY-SD-G17-2448	1	20:13		CU PB	ZN
SE6767-017	DSY-SD-DUP32-101211	1	20:17		CU PB	ZN

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ28A

Date: 10/28/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements					
SE6767-018	DSY-SD-G21-0012	1	20:22			CU	PB			ZN
SE6767-019	DSY-SD-G21-1224	1	20:26			CU	PB			ZN
SE6767-020	DSY-SD-G21-2448	1	20:31			CU	PB			
SE6767-020L	DSY-SD-G21-2448L	5	20:36			CU	PB			
SE6767-020A	DSY-SD-G21-2448A	1	20:40			CU	PB			
CCV		1	20:45	AL	CA	CU	FE	PB	MG	ZN
CCB		1	20:49	AL	CA	CU	FE	PB	MG	ZN
SE6767-020D	DSY-SD-G21-2448D	1	20:54			CU	PB			
SE6767-020S	DSY-SD-G21-2448S	1	20:58			CU	PB			
ZZZZZZ		1	21:03							
ZZZZZZ		1	21:07							
ZZZZZZ		1	21:12							
ZZZZZZ		1	21:16							
ZZZZZZ		1	21:21							
ZZZZZZ		1	21:25							
ZZZZZZ		1	21:30							
ZZZZZZ		1	21:34							
CCV		1	21:39	AL	CA	CU	FE	PB	MG	ZN
CCB		1	21:43	AL	CA	CU	FE	PB	MG	ZN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ28A Oct 28, 2011 16:44

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9785.00	97.9
CALCIUM	10000.0	9767.00	97.7
COPPER	400.0	394.50	98.6
IRON	10000.0	9849.00	98.5
LEAD	400.0	406.80	101.7
MAGNESIUM	10000.0	10040.00	100.4
ZINC	400.0	403.70	100.9

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 17:07

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	494.30	98.9
IRON	12500.0	12550.00	100.4
LEAD	500.0	507.80	101.6
MAGNESIUM	12500.0	12830.00	102.6
ZINC	500.0	501.00	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 18:02

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12550.00	100.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	492.30	98.5
IRON	12500.0	12560.00	100.5
LEAD	500.0	504.30	100.9
MAGNESIUM	12500.0	12730.00	101.8
ZINC	500.0	503.00	100.6

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 18:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12140.00	97.1
CALCIUM	12500.0	12370.00	99.0
COPPER	500.0	490.80	98.2
IRON	12500.0	12320.00	98.6
LEAD	500.0	495.70	99.1
MAGNESIUM	12500.0	12560.00	100.5
ZINC	500.0	500.90	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 19:50

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12060.00	96.5
CALCIUM	12500.0	12250.00	98.0
COPPER	500.0	487.90	97.6
IRON	12500.0	12280.00	98.2
LEAD	500.0	492.10	98.4
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 20:45

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12250.00	98.0
CALCIUM	12500.0	12230.00	97.8
COPPER	500.0	494.10	98.8
IRON	12500.0	12480.00	99.8
LEAD	500.0	492.90	98.6
MAGNESIUM	12500.0	12500.00	100.0
ZINC	500.0	505.70	101.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ28A Oct 28, 2011 21:39

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12360.00	98.9
CALCIUM	12500.0	12170.00	97.4
COPPER	500.0	496.40	99.3
IRON	12500.0	12580.00	100.6
LEAD	500.0	489.10	97.8
MAGNESIUM	12500.0	12430.00	99.4
ZINC	500.0	511.00	102.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ28A Oct 28, 2011 16:53

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	313.40	104.5
CALCIUM	100.0	101.90	101.9
COPPER	25.0	26.28	105.1
IRON	100.0	100.90	100.9
LEAD	5.0	4.12	82.4
MAGNESIUM	100.0	111.00	111.0
ZINC	20.0	20.80	104.0

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ28A Oct 28, 2011 16:48

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 17:11

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.726	J
IRON	3.497	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 18:06

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 19:01

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	4.167	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 19:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	5.007	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 20:49

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	-0.194	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ28A Oct 28, 2011 21:43

Analyte	Result	C
ALUMINUM	14.830	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ28A Oct 28, 2011 16:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	482000	96.4
CALCIUM	500000	443000	88.6
COPPER	0	1	
IRON	200000	176900	88.4
LEAD	0	2	
MAGNESIUM	500000	439500	87.9
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ28A Oct 28, 2011 17:02

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	484000	96.8
CALCIUM	500000	447900	89.6
COPPER	500	509	101.8
IRON	200000	179800	89.9
LEAD	50	49	98.0
MAGNESIUM	500000	442300	88.5
ZINC	1000	929	92.9

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ31A

Date: 10/31/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
Blank		1	16:46 AL	CA	FE	MG	ZN
Std 1		1	16:51 AL	CA	FE	MG	ZN
ICV		1	16:55 AL	CA	FE	MG	ZN
ICB		1	16:59 AL	CA	FE	MG	ZN
PQL		1	17:04 AL	CA	FE	MG	ZN
ICSA		1	17:08 AL	CA	FE	MG	ZN
ICSAB		1	17:13 AL	CA	FE	MG	ZN
CCV		1	17:18 AL	CA	FE	MG	ZN
CCB		1	17:22 AL	CA	FE	MG	ZN
SE6767-020	DSY-SD-G21-2448	2	17:27				ZN
SE6767-020L	DSY-SD-G21-2448L	10	17:31				ZN
SE6767-020A	DSY-SD-G21-2448A	2	17:36				ZN
SE6767-020D	DSY-SD-G21-2448D	2	17:40				ZN
SE6767-020S	DSY-SD-G21-2448S	2	17:44				ZN
ZZZZZZ		1	17:49				
ZZZZZZ		1	17:53				
ZZZZZZ		1	17:58				
ZZZZZZ		1	18:02				
ZZZZZZ		1	18:07				
CCV		1	18:11 AL	CA	FE	MG	ZN
CCB		1	18:16 AL	CA	FE	MG	ZN

FORM XIV - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ31A Oct 31, 2011 16:55

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9775.00	97.8
CALCIUM	10000.0	9784.00	97.8
IRON	10000.0	9842.00	98.4
MAGNESIUM	10000.0	9879.00	98.8
ZINC	400.0	395.30	98.8

SAMPLE: CCV

File: IBJ31A Oct 31, 2011 17:18

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12460.00	99.7
CALCIUM	12500.0	12420.00	99.4
IRON	12500.0	12510.00	100.1
MAGNESIUM	12500.0	12310.00	98.5
ZINC	500.0	479.90	96.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ31A Oct 31, 2011 18:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12730.00	101.8
CALCIUM	12500.0	12340.00	98.7
IRON	12500.0	13050.00	104.4
MAGNESIUM	12500.0	12480.00	99.8
ZINC	500.0	480.20	96.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ31A Oct 31, 2011 17:04

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	291.60	97.2
CALCIUM	100.0	101.70	101.7
IRON	100.0	100.90	100.9
MAGNESIUM	100.0	107.00	107.0
ZINC	20.0	20.05	100.3

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ31A Oct 31, 2011 16:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	6.944	J
ZINC	0.190	U

SAMPLE: CCB

File: IBJ31A Oct 31, 2011 17:22

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.778	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ31A Oct 31, 2011 18:16

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ31A Oct 31, 2011 17:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	467200	93.4
CALCIUM	500000	432700	86.5
IRON	200000	176400	88.2
MAGNESIUM	500000	416700	83.3
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ31A Oct 31, 2011 17:13

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	498500	99.7
CALCIUM	500000	451100	90.2
IRON	200000	181800	90.9
MAGNESIUM	500000	439900	88.0
ZINC	1000	939	93.9

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	11:45 AL	CA	CU FE PB MG	ZN
Std 1		1	11:50 AL	CA	CU FE PB MG	ZN
ICV		1	11:54 AL	CA	CU FE PB MG	ZN
ICB		1	11:59 AL	CA	CU FE PB MG	ZN
PQL		1	12:03 AL	CA	CU FE PB MG	ZN
ICSA		1	12:08 AL	CA	CU FE PB MG	ZN
ICSAB		1	12:12 AL	CA	CU FE PB MG	ZN
CCV		1	12:17 AL	CA	CU FE PB MG	ZN
CCB		1	12:21 AL	CA	CU FE PB MG	ZN
ZZZZZZ		50	12:26			
ZZZZZZ		1	12:30			
ZZZZZZ		1	12:35			
ZZZZZZ		5	12:39			
ZZZZZZ		5	12:44			
ZZZZZZ		1	12:48			
ZZZZZZ		1	12:53			
ZZZZZZ		1	12:57			
ZZZZZZ		1	13:02			
ZZZZZZ		1	13:06			
CCV		1	13:11 AL	CA	CU FE PB MG	ZN
CCB		1	13:15 AL	CA	CU FE PB MG	ZN
ZZZZZZ		5	13:20			
ZZZZZZ		25	13:24			
ZZZZZZ		5	13:29			
ZZZZZZ		5	13:33			
ZZZZZZ		50	13:38			
ZZZZZZ		250	13:42			
ZZZZZZ		50	13:47			
ZZZZZZ		50	13:52			
ZZZZZZ		5	13:56			
ZZZZZZ		50	14:01			
CCV		1	14:05 AL	CA	CU FE PB MG	ZN
CCB		1	14:10 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	14:15			
ZZZZZZ		1	14:19			
ZZZZZZ		1	14:24			
ZZZZZZ		2	14:28			
ZZZZZZ		1	14:33			
ZZZZZZ		5	14:38			
ZZZZZZ		1	14:42			
ZZZZZZ		1	14:47			
ZZZZZZ		1	14:51			
ZZZZZZ		1	14:56			
CCV		1	15:00 AL	CA	CU FE PB MG	ZN
CCB		1	15:04 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:09			
ZZZZZZ		1	15:14			
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		10	15:32			
ZZZZZZ		10	15:36			
ZZZZZZ		10	15:41			
ZZZZZZ		10	15:45			
ZZZZZZ		5	15:50			
CCV		1	15:54	AL	CA CU FE PB MG	ZN
CCB		1	15:58	AL	CA CU FE PB MG	ZN
ZZZZZZ		1	16:03			
ZZZZZZ		1	16:07			
ZZZZZZ		1	16:12			
ZZZZZZ		1	16:17			
ZZZZZZ		1	16:21			
ZZZZZZ		1	16:26			
ZZZZZZ		1	16:30			
ZZZZZZ		1	16:35			
ZZZZZZ		1	16:39			
ZZZZZZ		1	16:44			
CCV		1	16:48	AL	CA CU FE PB MG	ZN
CCB		1	16:52	AL	CA CU FE PB MG	ZN
ZZZZZZ		1	16:57			
PBSBJ31ICS1		1	17:02		CU PB	ZN
LCSOBJ31ICS1		1	17:06		CU PB	ZN
SE6767-021	DSY-SD-G25-0012	1	17:11		CU PB	ZN
SE6767-022	DSY-SD-G25-1224	1	17:15		CU PB	ZN
SE6767-023	DSY-SD-G25-2448	1	17:20		CU PB	ZN
ZZZZZZ		1	17:24			
ZZZZZZ		1	17:29			
ZZZZZZ		1	17:33			
ZZZZZZ		1	17:38			
CCV		1	17:42	AL	CA CU FE PB MG	ZN
CCB		1	17:47	AL	CA CU FE PB MG	ZN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICV

File: IBK01A Nov 01, 2011 11:54

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9602.00	96.0
CALCIUM	10000.0	9512.00	95.1
COPPER	400.0	383.10	95.8
IRON	10000.0	9685.00	96.9
LEAD	400.0	392.40	98.1
MAGNESIUM	10000.0	9694.00	96.9
ZINC	400.0	389.40	97.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 12:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12210.00	97.7
CALCIUM	12500.0	12210.00	97.7
COPPER	500.0	478.30	95.7
IRON	12500.0	12250.00	98.0
LEAD	500.0	479.20	95.8
MAGNESIUM	12500.0	12180.00	97.4
ZINC	500.0	478.20	95.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 13:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12590.00	100.7
COPPER	500.0	495.30	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	495.30	99.1
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	493.30	98.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 14:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12080.00	96.6
CALCIUM	12500.0	12140.00	97.1
COPPER	500.0	475.80	95.2
IRON	12500.0	12200.00	97.6
LEAD	500.0	481.30	96.3
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	475.80	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
COPPER	500.0	504.50	100.9
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12850.00	102.8
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12880.00	103.0
COPPER	500.0	509.80	102.0
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.60	100.7
MAGNESIUM	12500.0	12790.00	102.3
ZINC	500.0	501.20	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 16:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12670.00	101.4
COPPER	500.0	502.10	100.4
IRON	12500.0	12780.00	102.2
LEAD	500.0	503.30	100.7
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	498.50	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 17:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	506.70	101.3
IRON	12500.0	12970.00	103.8
LEAD	500.0	509.20	101.8
MAGNESIUM	12500.0	13000.00	104.0
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: PQL

File: IBK01A Nov 01, 2011 12:03

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	301.90	100.6
CALCIUM	100.0	101.10	101.1
COPPER	25.0	25.33	101.3
IRON	100.0	98.83	98.8
LEAD	5.0	5.41	108.2
MAGNESIUM	100.0	104.10	104.1
ZINC	20.0	20.26	101.3

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICB

File: IBK01A Nov 01, 2011 11:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.241	J

SAMPLE: CCB

File: IBK01A Nov 01, 2011 12:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	4.030	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 13:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCB

File: IBK01A Nov 01, 2011 14:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.041	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 15:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 15:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: CCB

File: IBK01A Nov 01, 2011 16:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 17:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.925	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-22

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK01A Nov 01, 2011 12:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465400	93.1
CALCIUM	500000	436100	87.2
COPPER	0	2	
IRON	200000	177400	88.7
LEAD	0	-1	
MAGNESIUM	500000	432700	86.5
ZINC	0	2	

SAMPLE: ICSAB

File: IBK01A Nov 01, 2011 12:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479000	95.8
CALCIUM	500000	435000	87.0
COPPER	500	509	101.8
IRON	200000	171700	85.9
LEAD	50	45	90.0
MAGNESIUM	500000	429400	85.9
ZINC	1000	916	91.6

TOC analyses

	Type	Sample Name	Dilution	Result	Comment	Date / Time
1	Unknown	CCV	1.000	SSM-TC:19049 ug	105%	10/19/11 09:01:35
2	Unknown	BLANK	1.000	SSM-TC:0.000 ug		10/19/11 09:22:04
3	Unknown	LCS	1.000	SSM-TC:21361 ug	101%	10/19/11 09:38:17
4	Unknown	SE6726-1	1.000	SSM-TC:6568 ug	PERCENT	10/19/11 09:53:47
5	Unknown	SE6726-1	1.000	SSM-TC:6617 ug	DUP	10/19/11 10:09:10
6	Unknown	SE6726-1	1.000	SSM-TC:6441 ug		10/19/11 10:19:25
7	Unknown	SE6726-1	1.000	SSM-TC:7107 ug		10/19/11 10:31:02
8	Unknown	SE6726-1MS	1.000	SSM-TC:14962 ug	MS	10/19/11 10:41:56
9	Unknown	SE6620-2 1	1.000	SSM-TC:6816 ug	TOC1	10/19/11 10:53:29
10	Unknown	SE6620-2 2	1.000	SSM-TC:7234 ug	TOC2	10/19/11 11:04:35
11	Unknown	SE6620-4 1	1.000	SSM-TC:4812 ug	TOC1	10/19/11 11:15:34
12	Unknown	SE6620-4 2	1.000	SSM-TC:4421 ug	TOC2	10/19/11 11:28:54
13	Unknown	SE6620-8 1	1.000	SSM-TC:3757 ug	TOC1	10/19/11 11:40:12
14	Unknown	CCV	1.000	SSM-TC:18843 ug	108%	10/19/11 11:53:14
15	Unknown	CCB	1.000	SSM-TC:0.000 ug		10/19/11 11:59:48
16	Unknown	SE6620-8 2	1.000	SSM-TC:3580 ug	TOC2	10/19/11 12:10:54
17	Unknown	SE6767-1 1	1.000	SSM-TC:7566 ug	TOC1	10/19/11 12:25:45
18	Unknown	SE6767-1 2	1.000	SSM-TC:8003 ug	TOC2	10/19/11 12:37:41
19	Unknown	SE6767-4 1	1.000	SSM-TC:8586 ug	TOC1	10/19/11 12:56:33
20	Unknown	SE6767-4 2	1.000	SSM-TC:7256 ug	TOC2	10/19/11 01:06:54
21	Unknown	SE6767-8 1	1.000	SSM-TC:7140 ug	TOC1	10/19/11 01:18:40
22	Unknown	SE6767-8 2	1.000	SSM-TC:7692 ug	TOC2	10/19/11 01:30:01
23	Unknown	SE6767-11 1	1.000	SSM-TC:6474 ug	TOC1	10/19/11 01:44:09
24	Unknown	SE6767-11 2	1.000	SSM-TC:6184 ug	TOC2	10/19/11 01:54:40
25	Unknown	SE6767-11MS	1.000	SSM-TC:15746 ug	MS	10/19/11 02:08:07
26	Unknown	CCV	1.000	SSM-TC:20402 ug	117%	10/19/11 02:20:51
27	Unknown	CCB	1.000	SSM-TC:0.000 ug	TOC2	10/19/11 02:31:37
28	Unknown	SE6767-14 1	1.000	SSM-TC:6753 ug	TOC1	10/19/11 02:42:05
29	Unknown	SE6767-14 2	1.000	SSM-TC:12796 ug	TOC2	10/19/11 02:58:22
30	Unknown	SE6767-18 1	1.000	SSM-TC:7668 ug	TOC1	10/19/11 03:08:09
31	Unknown	SE6767-18 2	1.000	SSM-TC:7733 ug	TOC2	10/19/11 03:19:24
32	Unknown	SE6767-21 1	1.000	SSM-TC:8277 ug	TOC1	10/19/11 03:32:34
33	Unknown	SE6767-21 2	1.000	SSM-TC:7998 ug	TOC2	10/19/11 03:44:47
34	Unknown	SE6768-1 1	1.000	SSM-TC:8663 ug	TOC1	10/19/11 03:56:34
35	Unknown	SE6768-1 2	1.000	SSM-TC:8442 ug	TOC2	10/19/11 04:08:39
36	Unknown	SE6768-5 1	1.000	SSM-TC:8712 ug	TOC1	10/19/11 04:20:44
37	Unknown	SE6768-5 2	1.000	SSM-TC:7685 ug	TOC2	10/19/11 04:35:14
38	Unknown	CCV	1.000	SSM-TC:22715 ug	111%	10/19/11 04:45:25
39	Unknown	CCB	1.000	SSM-TC:0.000 ug		10/19/11 04:51:37

Lloyd - WG99546
R175930

Percent - WG99548
R175931

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99854	ASTM D2216	27-OCT-11	26-OCT-11	U 1 %	1 %	N/A
MBLANK	WG99874	ASTM D2216	27-OCT-11	26-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99854-2	LCS	WG99854	27-OCT-11	26-OCT-11	%	90	91.	102	80-120	
WG99874-2	LCS	WG99874	27-OCT-11	26-OCT-11	%	90	92.	102	80-120	

Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99874-3	SE6767-20	WG99874	27-OCT-11	%	37.	33.	11	20
WG99854-3	SE6767-1	WG99854	27-OCT-11	%	38.	37.	2	20
WG99854-4	SE6767-14	WG99854	27-OCT-11	%	37.	35.	3	20
WG99874-4	SE6767-15	WG99874	27-OCT-11	%	30.	32.	4	20

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99546-3	MS	SE6767-11	WG99546	19-OCT-11	ug/gdrywt	33383.25	34000	82000	145*	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99546-3	MS	SE6767-11	WG99546	19-OCT-11	ug/gdrywt	33383.25	34000	82000	145*	75 - 125

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 16, 2012**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – PAH/PCB/COPPER/LEAD/ ZINC/TOTAL ORGANIC CARBON/TOTAL SOLIDS/ASBESTOS**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-23

SAMPLES: 7/Sediment/PAH/PCB/METALS/ASBESTOS

DSY-SD-AA01-0012
DSY-SD-AA01-2448
DSY-SD-AA05-1224
DSY-SD-DUP33-101211
DSY-SD-AA01-1224
DSY-SD-AA05-0012
DSY-SD-AA05-2448

1/Aqueous/

DSY-SD-RB13-101211

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-23 consisted of seven (7) sediment environmental samples and one (1) rinse blank. All samples were analyzed for polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), metals, and asbestos. All samples, except DSY-SD-RB13-101211 were analyzed for total solids. Two sediment samples were analyzed for total organic carbon. One field duplicate pair was included in this sample delivery group (SDG): DSY-SD-AA01-2448 / DSY-SD-DUP33-101211.

The samples were collected by Tetra Tech on October 12, 2011 and analyzed by Katahdin Analytical Services for all fractions except asbestos. EMSL Analytical, Inc. performed the asbestos analyses. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, 8082, 6010C, Standard Method D2216, Lloyd Kahn, and asbestos by methods EPA 600/R-93/116 and EPA AHERA – 40 CFR Part 763 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Instrument Tuning and System Performance
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Results
  • Surrogate Spike Recoveries
* • Internal Standard Areas
* • Matrix Spike Sample/Matrix Spike Duplicate Sample Results
* • Laboratory Control Sample Results
* • ICP Interference Check Sample Results
* • ICP Serial Dilution Results

* • Field Duplicate Precision
* • Laboratory Duplicate Results
* • Detection Limits
* • Analyte Identification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier II validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

SURROGATE SPIKE RECOVERIES

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had percent recoveries (%Rs) on both GC columns below the lower quality control limits in all sediment samples except for DSY-SD-AA01-2448. The positive and non-detected PCB results reported for all samples except for DSY-SD-AA01-2448 were qualified as estimated, (J) and (UJ), respectively.

The %Rs for the PCB surrogate spike compound, tetrachloro-m-xylene were below the lower quality control limits on both GC columns for sample, DSY-SD-AA01-2448 and lower for decachlorobiphenyl on the primary column. The sample was not re-extracted or reanalyzed. The non-detected PCB results for sediment sample DSY-SD-AA01-2448 were qualified as estimated, (UJ).

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl were below the lower quality control limits on both GC columns for sample, DSY-SD-RB13-101211. The sample was not re-extracted or reanalyzed. The non-detected PCB results for sample, DSY-SD-RB13-101211 were qualified as estimated, (UJ).

NOTES

The DFTPP tune analyzed on instrument GCMS-N on 11/15/11 @1604 and associated with all samples had a relative ion abundance of %100.2 for mass to charge ratio 442 compared to mass to charge ratio 198, which should be the base peak. No action was taken on this basis because all associated DFTTP tunes and continuing calibration RRFs met quality control limits.

The following contaminant was detected in the sediment laboratory preparation blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Lead	0.107 mg/kg	0.535 mg/kg

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was taken because all lead results were greater than the action level.

The analytes zinc and iron were detected in several continuing calibration blanks associated with the sediment samples. No action was taken on this basis because all sediment sample results were greater than the blank action levels.

The internal standard area for perylene-d12 was less than the lower quality control limit in the diluted sample DSY-SD-AA05-2448. No action was taken on this basis because only fluoranthene was reported from the diluted sample and perylene-d12 is not used to quantitate fluoranthene.

Sample DSY-SD-RB13-101211 was not spiked for surrogates in the 8270 SIM analysis. The sample was spiked for surrogates in the full scan analysis and had acceptable recoveries. No action was taken on this basis because the full scan analysis had acceptable recoveries.

The PAH SIM laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG99293 had a percent recovery for benzo(a)pyrene less than the quality control limit in the LCSD. No action was taken on this basis because the LCS had an acceptable recovery.

The PCB laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG99288 had a percent recovery for Aroclor-1260 less than the quality control limit in the LCS. No action was taken on this basis because the LCSD had an acceptable recovery.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

All asbestos samples were dried and sieved into three components fine (<2mm), medium (>2mm), and course (<19mm). Each component was then analyzed via polarized light microscopy (PLM). Samples that did not have asbestos detected using PLM were analyzed via Qualitative Transmission Electron Microscopy (TEM).

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). All samples were analyzed by 8270C SIM for benzo(a)pyrene, except for sample DSY-SD-AA05-2448.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: None.

Other Factors Affecting Data Quality: Surrogate noncompliances resulted in qualification of data in the PCB fraction. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082, and 6010C listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		730	U		720	U		300	J	P	720	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		730	U		720	U		720	U		720	U	
BENZO(G,H,I)PERYLENE		730	U		720	U		720	U		720	U	
BENZO(K)FLUORANTHENE		730	U		720	U		720	U		720	U	
CHRYSENE		290	J	P	720	U		400	J	P	280	U	
DIBENZO(A,H)ANTHRACENE		730	U		720	U		720	U		720	U	
FLUORANTHENE		590	J	P	520	J	P	770	J	P	560	J	P
INDENO(1,2,3-CD)PYRENE		730	U		720	U		720	U		720	U	
PYRENE		620	J	P	600	J	P	830	J	P	610	J	P

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-AA05-2448DL			DSY-SD-DUP33-101211		
	LAB_ID	SE6768-6			SE6768-7			SE6768-7DL			SE6768-4		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.9			42.3			42.3			40.0		
	DUP_OF										DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		470	J	P	3000						220	J	P
BENZO(A)PYRENE					1600								
BENZO(B)FLUORANTHENE		530	J	P	2600						610	U	
BENZO(G,H,I)PERYLENE		630	U		570	J	P				610	U	
BENZO(K)FLUORANTHENE		280	J	P	1100						610	U	
CHRYSENE		620	J	P	3200						300	J	P
DIBENZO(A,H)ANTHRACENE		630	U		560	U					610	U	
FLUORANTHENE		1000						9900			710	J	P
INDENO(1,2,3-CD)PYRENE		630	U		680	J	P				610	U	
PYRENE		1000			8900						680	J	P

PROJ_NO: 02747 SDG: DSY-23 FRACTION: OS MEDIA: WATER	NSAMPLE	DSY-SD-RB13-101211		
	LAB_ID	SE6768-8		
	SAMP_DATE	10/12/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		7.5	U	
BENZO(B)FLUORANTHENE		7.5	U	
BENZO(G,H,I)PERYLENE		7.5	U	
BENZO(K)FLUORANTHENE		7.5	U	
CHRYSENE		7.5	U	
DIBENZO(A,H)ANTHRACENE		7.5	U	
FLUORANTHENE		7.5	U	
INDENO(1,2,3-CD)PYRENE		7.5	U	
PYRENE		7.5	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		140			140			230			170		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-6			SE6768-4		
FRACTION: PAH	SAMP_DATE	10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	38.9			40.0		
	DUP_OF				DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		310			160		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-8		
FRACTION: PAH	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(A)PYRENE		0.1	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-1			SE6768-2			SE6768-3			SE6768-5		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1221		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1232		30	UJ	R	29	UJ	R	29	UJ	R	30	UJ	R
AROCLOR-1242		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1248		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1254		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R
AROCLOR-1260		25	UJ	R	25	UJ	R	25	UJ	R	25	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-6			SE6768-7			SE6768-4		
FRACTION: PCB	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.9			42.3			40.0		
	DUP_OF							DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1221		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1232		25	UJ	R	22	UJ	R	25	UJ	R
AROCLOR-1242		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1248		22	UJ	R	19	UJ	R	21	UJ	R
AROCLOR-1254		22	UJ	R	170	J	R	21	UJ	R
AROCLOR-1260		22	UJ	R	19	UJ	R	21	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-8		
FRACTION: PCB	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.24	UJ	R
AROCLOR-1221		0.24	UJ	R
AROCLOR-1232		0.24	UJ	R
AROCLOR-1242		0.24	UJ	R
AROCLOR-1248		0.24	UJ	R
AROCLOR-1254		0.24	UJ	R
AROCLOR-1260		0.24	UJ	R

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
SDG: DSY-23	LAB_ID	SE6768-001			SE6768-002			SE6768-003			SE6768-005		
FRACTION: M	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	33.3			33.5			33.6			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		36.9			41.3			42.5			49.4		
LEAD		45			49.9			62.6			55.7		
ZINC		114			122			138			152		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-DUP33-101211		
SDG: DSY-23	LAB_ID	SE6768-006			SE6768-007			SE6768-004		
FRACTION: M	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	38.9			42.3			40.0		
	DUP_OF							DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		60.9			155			36.5		
LEAD		55.2			111			51.8		
ZINC		153			373			114		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB13-101211		
SDG: DSY-23	LAB_ID	SE6768-008		
FRACTION: M	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
COPPER		0.76	J	P
LEAD		4	U	
ZINC		1.9	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012									DSY-SD-AA01-0012C		
SDG: DSY-23	LAB_ID	041128162-0001 Fine									041128162-0001 Coars		
FRACTION: MISC	SAMP_DATE	10/12/2011									10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM									NM		
	UNITS	%						MG/KG			%		
	PCT_SOLIDS	0.0			33.3			33.3			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		0.25	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON								53000					
TOTAL SOLIDS					33								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-0012F			DSY-SD-AA01-0012M			DSY-SD-AA01-1224					
SDG: DSY-23	LAB_ID	041128162-0001 Fine			041128162-0001 Mediu			041128162-0002 Fine					
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%					
	PCT_SOLIDS	0.0			0.0			33.5			34.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE				0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								34					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-1224C			DSY-SD-AA01-1224F			DSY-SD-AA01-1224M			DSY-SD-AA01-2448		
SDG: DSY-23	LAB_ID	041128162-0002 Coars			041128162-0002 Fine			041128162-0002 Mediu			041128162-0003 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.5			34.5			34.5			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE	0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA01-2448			DSY-SD-AA01-2448C			DSY-SD-AA01-2448F			DSY-SD-AA01-2448M		
SDG: DSY-23	LAB_ID	041128162-0003 Fine			041128162-0003 Coars			041128162-0003 Fine			041128162-0003 Mediu		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	33.6			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		34											

PROJ_NO: 02747 SDG: DSY-23 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA05-0012						DSY-SD-AA05-0012C			DSY-SD-AA05-0012F		
	LAB_ID	SE6768-5						041128162-0005 Coars			041128162-0005 Fine		
	SAMP_DATE	10/12/2011						10/12/2011			10/12/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	33.6			33.6			38.1			38.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000								
TOTAL SOLIDS		34											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-0012M			DSY-SD-AA05-1224			DSY-SD-AA05-1224C			DSY-SD-AA05-1224F		
SDG: DSY-23	LAB_ID	041128162-0005 Mediu			SE6768-6			041128162-0006 Coars			041128162-0006 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	38.1			38.9			35.8			35.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<					1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<										
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					39								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-1224M			DSY-SD-AA05-2448			DSY-SD-AA05-2448C			DSY-SD-AA05-2448F		
SDG: DSY-23	LAB_ID	041128162-0006 Mediu			SE6768-7			041128162-0007 Coars			041128162-0007 Fine		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	35.8			42.3			40.6			40.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<										
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					42								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA05-2448M			DSY-SD-DUP33-101211						DSY-SD-DUP33-101211C		
SDG: DSY-23	LAB_ID	041128162-0007 Mediu			041128162-0004 Fine						041128162-0004 Coars		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011						10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%						%		
	PCT_SOLIDS	40.6			33.6			40.0			33.6		
	DUP_OF				DSY-SD-AA01-2448			DSY-SD-AA01-2448			DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	0.25	U	NOT PRESE				1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								40					

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP33-101211F			DSY-SD-DUP33-101211M		
SDG: DSY-23	LAB_ID	041128162-0004 Fine			041128162-0004 Mediu		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	%			%		
	PCT_SOLIDS	33.6			33.6		
	DUP_OF	DSY-SD-AA01-2448			DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE							
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE							
TOTAL ORGANIC CARBON							
TOTAL SOLIDS							

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2627.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	730	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	U	730	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	U	730	ug/Kgdrywt	1	330	980	240	730
Chrysene	J	290	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene	J	590	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene	J	620	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		50.9	%					
2-Fluorobiphenyl		62.9	%					
Terphenyl-d14		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2628.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	270	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	520	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	600	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		53.1	%					
2-Fluorobiphenyl		64.9	%					
Terphenyl-d14		82.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2629.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	300	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	J	400	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	770	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	830	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		37.6	%					
2-Fluorobiphenyl		55.6	%					
Terphenyl-d14		72.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2631.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	280	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	J	560	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	J	610	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		32.3	%					
2-Fluorobiphenyl		48.4	%					
Terphenyl-d14		45.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2632.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 39.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	470	ug/Kgdrywt	1	330	840	220	630
Benzo(b)fluoranthene	J	530	ug/Kgdrywt	1	330	840	340	630
Benzo(g,h,i)perylene	U	630	ug/Kgdrywt	1	330	840	260	630
Benzo(k)fluoranthene	J	280	ug/Kgdrywt	1	330	840	210	630
Chrysene	J	620	ug/Kgdrywt	1	330	840	240	630
Dibenzo(a,h)anthracene	U	630	ug/Kgdrywt	1	330	840	330	630
Fluoranthene		1000	ug/Kgdrywt	1	330	840	270	630
Indeno(1,2,3-cd)pyrene	U	630	ug/Kgdrywt	1	330	840	310	630
Pyrene		1000	ug/Kgdrywt	1	330	840	260	630
Nitrobenzene-d5		38.5	%					
2-Fluorobiphenyl		59.8	%					
Terphenyl-d14		36.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2633.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3000	ug/Kgdrywt	1	330	750	190	560
Benzo(a)pyrene		1600	ug/Kgdrywt	1	330	750	210	560
Benzo(b)fluoranthene		2600	ug/Kgdrywt	1	330	750	300	560
Benzo(g,h,i)perylene	J	570	ug/Kgdrywt	1	330	750	240	560
Benzo(k)fluoranthene		1100	ug/Kgdrywt	1	330	750	190	560
Chrysene		3200	ug/Kgdrywt	1	330	750	220	560
Dibenzo(a,h)anthracene	U	560	ug/Kgdrywt	1	330	750	290	560
Fluoranthene	E	15000	ug/Kgdrywt	1	330	750	240	560
Indeno(1,2,3-cd)pyrene	J	680	ug/Kgdrywt	1	330	750	280	560
Pyrene		8900	ug/Kgdrywt	1	330	750	230	560
Nitrobenzene-d5		50.0	%					
2-Fluorobiphenyl		70.9	%					
Terphenyl-d14		61.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7DL
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2657.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		3000	ug/Kgdrywt	3	330	2200	580	1700
Benzo(a)pyrene	J	1600	ug/Kgdrywt	3	330	2200	630	1700
Benzo(b)fluoranthene		2500	ug/Kgdrywt	3	330	2200	910	1700
Benzo(g,h,i)perylene	U	1700	ug/Kgdrywt	3	330	2200	710	1700
Benzo(k)fluoranthene	J	1100	ug/Kgdrywt	3	330	2200	560	1700
Chrysene		3200	ug/Kgdrywt	3	330	2200	650	1700
Dibenzo(a,h)anthracene	U	1700	ug/Kgdrywt	3	330	2200	870	1700
Fluoranthene		9900	ug/Kgdrywt	3	330	2200	720	1700
Indeno(1,2,3-cd)pyrene	U	1700	ug/Kgdrywt	3	330	2200	830	1700
Pyrene		11000	ug/Kgdrywt	3	330	2200	690	1700
Nitrobenzene-d5		48.9	%					
2-Fluorobiphenyl		73.5	%					
Terphenyl-d14		61.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2630.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	220	ug/Kgdrywt	1	330	820	210	610
Benzo(b)fluoranthene	U	610	ug/Kgdrywt	1	330	820	330	610
Benzo(g,h,i)perylene	U	610	ug/Kgdrywt	1	330	820	260	610
Benzo(k)fluoranthene	U	610	ug/Kgdrywt	1	330	820	200	610
Chrysene	J	300	ug/Kgdrywt	1	330	820	240	610
Dibenzo(a,h)anthracene	U	610	ug/Kgdrywt	1	330	820	320	610
Fluoranthene	J	710	ug/Kgdrywt	1	330	820	260	610
Indeno(1,2,3-cd)pyrene	U	610	ug/Kgdrywt	1	330	820	300	610
Pyrene	J	680	ug/Kgdrywt	1	330	820	250	610
Nitrobenzene-d5		36.2	%					
2-Fluorobiphenyl		56.1	%					
Terphenyl-d14		65.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: N2626.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		70.4						
2-Fluorobiphenyl		74.3						
Terphenyl-d14		77.3						

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4049.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		45.0	%					
Fluorene-D10		70.6	%					
Pyrene-D10		91.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4050.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		140	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		54.9	%					
Fluorene-D10		76.2	%					
Pyrene-D10		101.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4053.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		230	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		38.6	%					
Fluorene-D10		63.2	%					
Pyrene-D10		79.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4055.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		32.6	%					
Fluorene-D10		57.5	%					
Pyrene-D10		68.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4056.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 39.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	51.	8.4	26.
2-Methylnaphthalene-D10		50.1	%					
Fluorene-D10		68.8	%					
Pyrene-D10		81.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4054.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	49.	8.2	25.
2-Methylnaphthalene-D10		31.1	%					
Fluorene-D10		55.8	%					
Pyrene-D10		75.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: G4039.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-1
Client ID: DSY-SD-AA01-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK175.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	51.	24.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	51.	28.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	51.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	51.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	51.	18.	25.
Tetrachloro-M-Xylene	*	26.2	%					
Decachlorobiphenyl	*	31.6	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-2
Client ID: DSY-SD-AA01-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK176.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	50.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene	*	24.6	%					
Decachlorobiphenyl	*	31.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-3
Client ID: DSY-SD-AA01-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK177.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	49.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	49.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	49.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Tetrachloro-M-Xylene	*	34.6	%					
Decachlorobiphenyl		60.4	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-5
Client ID: DSY-SD-AA05-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-23
Lab File ID: 7EK179.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	50.	27.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene	*	25.6	%					
Decachlorobiphenyl	*	41.6	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-6
Client ID: DSY-SD-AA05-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK180.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 39.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	43.	20.	22.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	43.	24.	25.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	43.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	43.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	43.	15.	22.
Tetrachloro-M-Xylene	*	27.6	%					
Decachlorobiphenyl	*	40.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-7
Client ID: DSY-SD-AA05-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK181.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254		170	ug/Kgdrywt	1	17	38.	11.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Tetrachloro-M-Xylene	*	36.2	%					
Decachlorobiphenyl	*	44.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-4
Client ID: DSY-SD-DUP33-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EK178.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 05-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254	U	21.	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene	*	25.9	%					
Decachlorobiphenyl	*	42.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6768-8
Client ID: DSY-SD-RB13-101211
Project: NAVSTA Newport CTO WE(
SDG: DSY-23
Lab File ID: 7EJ585.D

Sample Date: 12-OCT-11
Received Date: 13-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 19-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		68.6	%					
Decachlorobiphenyl	*	24.7	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-0012

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.3
Lab Sample ID: SE6768-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	36.9			P	1	6.5	0.40	2.6
7439-92-1	LEAD, TOTAL	45.0			P	1	1.3	0.23	1.0
7440-66-6	ZINC, TOTAL	114			P	1	6.5	0.44	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-1224

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.5
Lab Sample ID: SE6768-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	41.3			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	49.9			P	1	1.1	0.19	0.89
7440-66-6	ZINC, TOTAL	122			P	1	5.6	0.37	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA01-2448

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 33.6
Lab Sample ID: SE6768-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	42.5			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	62.6			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	138			P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-0012
Matrix: SOIL
SDG Name: DSY-23
Percent Solids: 33.6
Lab Sample ID: SE6768-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	49.4			P	1	6.7	0.42	2.7
7439-92-1	LEAD, TOTAL	55.7			P	1	1.3	0.23	1.1
7440-66-6	ZINC, TOTAL	152			P	1	6.7	0.45	2.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-1224

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 38.9
Lab Sample ID: SE6768-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	60.9			P	1	4.9	0.30	1.9
7439-92-1	LEAD, TOTAL	55.2			P	1	0.97	0.17	0.78
7440-66-6	ZINC, TOTAL	153			P	1	4.9	0.33	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA05-2448

Matrix: SOIL
SDG Name: DSY-23

Percent Solids: 42.3
Lab Sample ID: SE6768-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	155			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	111			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	373			P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-DUP33-101211
Matrix: SOIL
SDG Name: DSY-23
Percent Solids: 40.0
Lab Sample ID: SE6768-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	36.5			P	1	3.8	0.23	1.5
7439-92-1	LEAD, TOTAL	51.8			P	1	0.75	0.13	0.60
7440-66-6	ZINC, TOTAL	114			P	1	3.8	0.25	1.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-RB13-101211
Matrix: WATER
SDG Name: DSY-23
Percent Solids: 0.00
Lab Sample ID: SE6768-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	0.76	J		P	1	25	0.63	10
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0
7440-66-6	ZINC, TOTAL	1.9	J		P	1	25	0.72	10

Comments:

EMSL Analytical, Inc.
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Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
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SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA01-0012 *041128162-0001*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-1224 *041128162-0002*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-2448 *041128162-0003*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-DUP33-101211 *041128162-0004*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA05-0012 *041128162-0005*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-1224 *041128162-0006*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-2448 *041128162-0007*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-0012 *041128162-0008*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-1224 *041128162-0009*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA09-2448 *041128162-0010*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA13-0012 *041128162-0011*	Chrysotile Amosite	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-1224 *041128162-0012*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448 *041128162-0013*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448DUP *041128162-0014*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA17-0013 *041128162-0015*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA17-1224 *041128162-0016*	Amosite	None Detected	<1	None Detected	<1	Not Analyzed	

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EMSL Analytical, Inc.
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Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Project: SE6768

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA17-2448 *041128162-0017*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA21-0012 *041128162-0018*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA21-1224 *041128162-0019*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA21-2448 *041128162-0020*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-DUP34-101311 *041128162-0021*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-0012 *041128162-0022*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-1224 *041128162-0023*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA24-2448 *041128162-0024*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-0012 *041128162-0025*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-1224 *041128162-0026*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA26-2448 *041128162-0027*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA28-0016 *041128162-0028*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	Jar labeled as DSY-SD-AA28-0012
DSY-SD-DUP35-101311 *041128162-0029*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA30-0012 *041128162-0030*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA30-1224 *041128162-0031*	Chrysotile Amosite	None Detected	<1	None Detected	<1	Not Analyzed	Jar received Broken

Note: Revised report issued 11-10-11 for data entry errors on EMSL samples 041128162-0016,041128162-0018, 041128162-0031

Analysts

Garret Vliet
Melissa Klinedinst
Leslie McCluskey
David Poitras
Robyn Denton

Robyn Denton
Approved Lab Signatory

This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-1
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	54000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 15:56:34	N/A	N/A	
Toc In Soil(2)	52000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 16:08:39	N/A	N/A	
Toc In Soil(Avg)	53000 ug/gdrywt	1200	250	900	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	33. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:49	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A0000

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-2
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:38:59	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00001

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with the NELAC
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-3
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA01-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:09	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00019

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-5
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-0012	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	56000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 16:20:44	N/A	N/A	
Toc In Soil(2)	48000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 16:35:14	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	1200	250	890	LLOYD KAHN	WG99546	19-OCT-11 09:01:35	N/A	N/A	
Total Solids	34. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:34	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00001

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with NELAC
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-6
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-1224	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	39. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:44	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A0001

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-7
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA05-2448	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	42. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:54	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A0001

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6768-4
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-23

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP33-101211	SL	12-OCT-11	13-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG99874	27-OCT-11 09:39:19	ASTM D2216	26-OCT-11	

Katahdin Analytical Services A00001

APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Navsta Newport
Reference No. _____

See DV Report

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin
Case/Project No. _____
SDG No. D5Y-23
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Edward Wallace Company Name TetraTech Phone Number 412-921-8704

Date Validation Started 12/29/11 Date Validation Completed 12/30/11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	____
VOA/SV-III	INITIAL CALIBRATION	____
VOA/SV-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	____
SV-VI	SV SURROGATE SPIKE RECOVERIES	____
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	____
VOA/SV-XV	SEMIVOLATILE CLEANUP	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	____
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	____
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	____
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	____
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	____
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	____
Pest/PCB-III	INITIAL CALIBRATION	____
Pest/PCB-IV	CONTINUING CALIBRATION	____
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	____
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	____
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	____
Pest/PCB-VII	PESTICIDE CLEANUP	____
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	____
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	____
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	____
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	____
Pest/PCB-XII	COMPOUND IDENTIFICATION	____
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	____

I certify that all criteria were met for the worksheets checked above.

Signature: Edward Sedlmyer Name: Ed Sedlmyer

Date: 12/30/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Sedlmyer IV

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Sullivan

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received

Validator: Edward Hadley Date: 12/30/11

See DV Report

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

12/96

Sampler:_____ Company:_____ Contacted: Yes No Date:_____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Edward Podbyra

Date: 12/30/11

EPA-NE - Data Validation Worksheet
VOA/SV-II

See DV Report

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Edward Sadlon

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Edward Sadlyn

Date: 12/30/11

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments:

Validator: Edward Sedlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet

VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below.

Concentration Level:_____

Sampler: _____ Company: _____

Contacted: Yes No Date:_____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Edward Hedbon

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. **Blank Actions** - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: Edward Hedley

Date: 12/30/11

12/96

See DV Report

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Validator: Edward Hedlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**

* Advisory Surrogates - OLM03.2

Validator: Edward Sadlyn

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Edward Ludlam

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: Edward Sullivan

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Edward Ludlow Date: 12/30/01

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Edward Redknap

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. **Y N**

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Edward Lodbrupp Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Edward Ludlow

Date: 12/30/11

NA

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Edward Deshaye

Date: 12/30/11

NA

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	____RRT	__Est. Conc.	Action

Validator: Edward Sedlmyer

Date: 12/30/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-XV

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Edward Sullivan Date: 12/30/11

APPENDIX D

SUPPORT DOCUMENTATION

NAVSTA NEWPORT
SEDIMENT DATA
DSY-23

FRACTION	CHEMICAL	DSY-SD-AA01-2448	UNITS	DSY-SD-DUP33-101211	RPD	D
M	COPPER	42.5	MG/KG	36.5	15.19	6.00
M	LEAD	62.6	MG/KG	51.8	18.88	10.80
M	ZINC	138	MG/KG	114	19.05	24.00
OS	BENZO(A)ANTHRACENE	300 J	UG/KG	220 J	30.77	80.00
OS	CHRYSENE	400 J	UG/KG	300 J	28.57	100.00
OS	FLUORANTHENE	770 J	UG/KG	710 J	8.11	60.00
OS	PYRENE	830 J	UG/KG	680 J	19.87	150.00
PAH	BENZO(A)PYRENE	230	UG/KG	160	35.90	70.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Katahdin ANALYTICAL SERVICES
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: SEE PAGE ONE | Contact: SEE ONE PAGE | Phone # ( ) | Fax # ( )

Address | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE 61, Derecktor SY | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #: SE6767 / SE6768

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: Filt. ☐Y ☐N PAH	PCB	Metals (Pb, Cu, Zn)	TOC	Asbestos					
	DSY-SD-DUP32-101211	10/12/11 / —	SED	2	X	X	X							
	DSY-SD-G21-0012	/ 1345		3	X	X	X	X						
	DSY-SD-G21-1224	/ 1348		2	X	X	X							
	DSY-SD-G21-2448	/ 1351		24	X	X	X							
	DSY-SD-G25-0012	/ 1405		3	X	X	X	X						
	DSY-SD-G25-1224	/ 1408		2	X	X	X							
	DSY-SD-G25-2448	/ 1411		2	X	X	X							
	DSY-SD-AA01-0012	/ 1420		34	X	X	X	X	X ✓					
	DSY-SD-AA01-1224	/ 1423		23	X	X	X		X ✓					
	DSY-SD-AA01-2448	/ 1428		23	X	X	X		X ✓					
	DSY-SD-DUP33-101211	/ —		23	X	X	X		X ✓					
	DSY-SD-AA05-0012	/ 1445		34	X	X	X	X	X ✓					
	DSY-SD-AA05-1224	/ 1448		23	X	X	X		X ✓					
	DSY-SD-AA05-2448	/ 1451	↓	3	X	X	X		X ✓					
	DSY-SD-RB13-101211	/ 1600	AQ	5	X	X	X							
		/												

COMMENTS DSY-SD-G21-2448 is designated as Lab QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345	Andrew Hall			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				0000 10/12 ANE	

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

12-11

AS-COC1

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-23
SE6768

Sample Receipt

The following samples were received on October 13, 2011 and were logged in under Katahdin Analytical Services work order number SE6768 for a hardcopy due date of November 1, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6768-1	DSY-SD-AA01-0112
SE6768-2	DSY-SD-AA01-1224
SE6768-3	DSY-SD-AA01-2448
SE6768-4	DSY-SD-DUP33-101211
SE6768-5	DSY-SD-AA05-0012
SE6768-6	DSY-SD-AA05-1224
SE6768-7	DSY-SD-AA05-2448
SE6768-8	DSY-SD-RB13-101211

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-23 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The aqueous sample SE6768-8 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for the soil LCS/LCSD.

The LCSD WG99293-3 had a low recovery for the compound benzo(a)pyrene, which was outside of the laboratory established acceptance limits. Since the LCS was acceptable, no further action was taken.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process.

The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6768-7 was manually integrated for the analyte benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6768-7DL had a low response for the internal standard perylene-d12, which was outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the initial analysis had acceptable internal standard responses, the dilution was not reanalyzed.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of

exceedances, no corrective action is taken, as long the LCS is acceptable.
Due to software limitations, the area responses and retention times for the continuing calibration verification standards on the Internal Standard Summary Form could not be generated automatically. This information was manually entered on the form.

8082 Analysis

Surrogate recoveries for all samples and QC, as well as spike recoveries for the laboratory control samples and laboratory control sample duplicates (LCS/LCSDs) were evaluated using laboratory established acceptance limits.

Samples SE6768-1, 2, 6 and 7 were manually integrated for Aroclor 1254 or the surrogate TCX. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6768-1 through 7 had low recoveries for the surrogate TCX on both channels and the surrogate DCB on one or both channels, which were outside the laboratory established acceptance limits. The associated method blank and LCS/LCSD had acceptable surrogate recoveries. This indicates that the sample surrogate deviations are due to a matrix effect. Therefore, these samples were not reextracted.

Sample SE6768-8 had low recoveries for the surrogate DCB on both channels and the associated method blank and LCS/LCSD WG99288-1, 2 and 3 had low recoveries for the surrogate TCX on one or both channels, which were outside the laboratory established acceptance limits. Since the recoveries for DCB were acceptable for the QC samples, no further action was taken.

The closing calibration verification standard (CV) (file 7EK183) had a high response for the surrogate TCX on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG99288-2 had a low recovery for Aroclor 1260 which was outside of the laboratory established acceptance limits. Since the LCSD had acceptable recoveries, the associated sample was not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-23 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Numbers SE6768-(1-7) were digested for ICP analysis on 10/31/11 (QC Batch BJ31ICS1) in accordance with USEPA Method 3050B.

Aqueous-matrix Katahdin Sample Number SE6768-8 was digested for ICP analysis on 10/31/11 (QC Batch BJ31ICW1) in accordance with USEPA Method 3010A.

ICP analyses of SDG DSY-23 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-23 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.06.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Project:	KIMS Entry By: GN	Delivered By: --
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Ha
SDG #:	Cooler: 1 of 13	Date/Time Rec.: 10/13/14 18:00

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.2
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea **Soil/Sediment:** Received in airtight container?				✓	
				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2* Sulfide - >9				✓	
				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

AA0S-0012 - no TOC jar in cooler.

Project:	KIMS Entry By: GN	Delivered By:	
KAS Work Order#: SE6767 / SE6768	KIMS Review By: DN	Received By: Andrew Hale	
SDG #:	Cooler: 2 of 3	Date/Time Rec.: 10/13/11 18:00	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 1.7
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certair regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Project:	KIMS Entry By: GN	Delivered By: --
KAS Work Order#: SE6767/SE6768	KIMS Review By: DN	Received By: Andrew Hafen
SDG #:	Cooler: 3 of 13	Date/Time Rec.: 10/13/11 18:03

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		X			
2. Chain of Custody present in cooler?	X				
3. Chain of Custody signed by client?	X				
4. Chain of Custody matches samples?	X				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	X				Temp (°C): 0.9
Samples received at <6 °C w/o freezing?	X				Note: Not required for metals analysis.
Ice packs or ice present?	X				The lack of ice or ice packs (i.e. no attempt t begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metal analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2#				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

ARC 17-5-11 8000010

Katahdin ANALYTICAL SERVICES
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
TetraTech NUS	STEVE PARKER	(978) 474-8434	(978) 474-8571

Address	City	State	Zip Code
250 ANDOVER ST. SUITE 200	WILMINGTON	MA	01887

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61 Derecktor SY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
Michael Horton	

LAB USE ONLY

WORK ORDER #: SE6767

KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH	PCB	Metals (Pb, Cu, Zn)	TOC						
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐
	DSY-SD-G01-0012	10/12/11 0920	SED	3	X	X	X	X						
	DSY-SD-G01-1224	/0923		2	X	X	X							
	DSY-SD-G01-2448	/0926		2	X	X	X							
	DSY-SD-G05-0012	/1205		3	X	X	X	X						
	DSY-SD-G05-1224	/1208		2	X	X	X							
	DSY-SD-G05-2448	/1211		2	X	X	X							
	DSY-SD-DUP3-101211	/—		2	X	X	X							
	DSY-SD-G09-0012	/1240		3	X	X	X	X						
	DSY-SD-G09-1224	/1243		2	X	X	X							
	DSY-SD-G09-2448	/1246		2	X	X	X							
	DSY-SD-G13-0012	/1310		3	X	X	X	X						
	DSY-SD-G13-1224	/1313		2	X	X	X							
	DSY-SD-G13-2448	/1316		2	X	X	X							
	DSY-SD-G17-0012	/1325		3	X	X	X	X						
	DSY-SD-G17-1224	/1328		2	X	X	X							
	DSY-SD-G17-2448	/1331		2	X	X	X							

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10/13/11 1345				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
				00001/01	12-5-11

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ORIGINAL

AS-COC1

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-AA01-0012	SE6768-1	62.9		51.1		65.9		0
DSY-SD-AA01-1224	SE6768-2	64.8		53.1		82.1		0
DSY-SD-AA01-2448	SE6768-3	55.6		37.7		72.2		0
DSY-SD-DUP33-101211	SE6768-4	56.2		36.0		65.4		0
DSY-SD-AA05-0012	SE6768-5	48.4		32.2		45.8		0
DSY-SD-AA05-1224	SE6768-6	59.7		38.7		36.6		0
DSY-SD-AA05-2448	SE6768-7	71.1		50.0		61.7		0
DSY-SD-AA05-2448	SE6768-7DL	73.5		48.9		61.4		0
Method Blank Sample	WG99468-1	68.0		62.9		76.0		0
Laboratory Control S	WG99468-2	81.9		73.7		84.6		0
Laboratory Control S	WG99468-3	78.4		65.9		83.8		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB13-101211	SE6768-8	74.3		70.4		77.3		0
Method Blank Sample	WG99289-1	69.7		63.0		70.5		0
Laboratory Control S	WG99289-2	64.3		52.5		69.6		0
Laboratory Control S	WG99289-3	67.3		54.6		76.1		0

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND139 DFTPP Injection Date: 10/13/11

Instrument ID: GCMS-N DFTPP Injection Time: 1102

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.1
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	36.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	11.1 (74.2)2
442	40.0 - 100.0% of mass 198	77.2
443	17.0 - 23.0% of mass 442	15.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1013	N1952	10/13/11	1127
02		SSTD010N1013	N1953	10/13/11	1209
03		SSTD025N1013	N1954	10/13/11	1252
04		SSTD075N1013	N1955	10/13/11	1334
05		SSTD100N1013	N1956	10/13/11	1416
06		SSTD125N1013	N1957	10/13/11	1459
07		8270C IND CHEC	N1958	10/13/11	1541
08					
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18					
19					
20					

Katahdin Analytical Services A0000022

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-23

Instrument ID: GCMS-N Calibration Date(s): 10/13/11 10/13/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1127 1459

LAB FILE ID: RF10: N1953 RF25: N1954 RF50: N1952
RF75: N1955 RF100: N1956 RF125: N1957

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	1.097	0.974	0.928	0.840	0.836	0.729	AVRG		0.90072996	14.211	30.000
Pyrene	1.509	1.565	1.504	1.403	1.311	1.250	AVRG		1.42351937	8.730	15.000
Benzo(a)anthracene	1.063	1.053	1.061	0.984	0.959	0.911	AVRG		1.00509683	6.307	15.000
Chrysene	1.058	1.040	1.003	0.916	0.889	0.830	AVRG		0.95600873	9.536	15.000
Benzo(b)fluoranthene	1.125	1.162	1.116	1.075	1.096	0.983	AVRG		1.09290468	5.620	15.000
Benzo(k)fluoranthene	1.216	1.199	1.184	1.164	1.100	1.025	AVRG		1.14810451	6.322	15.000
Benzo(a)pyrene	1.009	1.037	1.048	0.976	0.964	0.882	AVRG		0.98594835	6.154	30.000
Indeno(1,2,3-cd)pyrene	218300	323180	594600	743080	917840	1117000	LINR	-9.42e-002	1.70884978	0.99692	0.99000
Dibenzo(a,h)anthracene	0.676	0.725	0.702	0.655	0.636	0.636	AVRG		0.67176429	5.419	15.000
Benzo(g,h,i)perylene	0.726	0.746	0.714	0.651	0.634	0.628	AVRG		0.68322461	7.554	15.000
Nitrobenzene-D5	0.331	0.342	0.345	0.322	0.314	0.298	AVRG		0.32524779	5.495	15.000
2-Fluorobiphenyl	1.257	1.212	1.139	1.025	0.960	0.893	AVRG		1.08086780	13.395	15.000
Terphenyl-D14	0.820	0.861	0.860	0.830	0.788	0.750	AVRG		0.81840048	5.285	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND156 DFTPP Injection Date: 10/27/11

Instrument ID: GCMS-N DFTPP Injection Time: 1543

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.3
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	36.0
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	53.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.3
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	12.3 (73.9)2
442	40.0 - 100.0% of mass 198	85.6
443	17.0 - 23.0% of mass 442	16.6 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD3.00N1027	N2205	10/27/11	1608
02	WG99289-BLANK	WG99289-1	N2206	10/27/11	1654
03	WG99289-LCS	WG99289-2	N2207	10/27/11	1736
04	WG99289-LCSD	WG99289-3	N2208	10/27/11	1818
05					
06					
07					
08					
09					
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19					
20					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Instrument ID: GCMS-N Calibration Date: 10/27/11 Time: 1608

Lab File ID: N2205 Init. Calib. Date(s): 10/13/11 10/13/11

Init. Calib. Times: 1127 1459

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Fluoranthene	0.9010000	0.9304400	0.9304400	0.01	3.27	20.01	AVRG
Pyrene	1.4240000	1.3005000	1.3005000	0.01	-8.67	20.00	AVRG
Benzo(a)anthracene	1.0050000	0.9809200	0.9809200	0.01	-2.40	20.00	AVRG
Chrysene	0.9560000	0.9210500	0.9210500	0.01	-3.66	20.00	AVRG
Benzo(b)fluoranthene	1.0930000	1.0270000	1.0270000	0.01	-6.04	20.00	AVRG
Benzo(k)fluoranthene	1.1480000	1.0838000	1.0838000	0.01	-5.59	20.00	AVRG
Benzo(a)pyrene	0.9860000	0.9556900	0.9556900	0.01	-3.07	20.01	AVRG
Indeno(1,2,3-cd)pyrene	53.260000	50.000000	0.6674400	0.01	6.52	20.00	LINR
Dibenzo(a,h)anthracene	0.6720000	0.7146200	0.7146200	0.01	6.34	20.00	AVRG
Benzo(g,h,i)perylene	0.6830000	0.6938000	0.6938000	0.01	1.58	20.00	AVRG
Nitrobenzene-D5	0.3250000	0.3359800	0.3359800	0.01	3.38	20.00	AVRG
2-Fluorobiphenyl	1.0810000	1.0665000	1.0665000	0.01	-1.34	20.00	AVRG
Terphenyl-D14	0.8180000	0.7483300	0.7483300	0.01	-8.52	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND180 DFTPP Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP Injection Time: 1604

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4	(73.4)2
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6	(19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08					
09					
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17					
18					
19					
20					

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : N2556.DN2557.DN2555.D
N2558.DN2559.DN2560.D

SDG: DSY-23
Instrument ID: GCMS-N
Calibration Date(s): 15-NOV-11 16:23
15-NOV-11 20:07

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	10.0000	25.0000	50.0000	75.0000	100.0000	125.0000	New	b	m1	m2	%RSD	%RSD	
Fluoranthene	558752	1422052	2304238	4306477	5111984	6314071	QUA	-0.0081	0.95099	0.20145	0.99971	0.99000	O
Pyrene	1.35704	1.32974	1.16554	1.10244	1.02761	0.98510	AVG		1.16125		13.29001	15.00000	O
Benzo(a)anthracene	0.95816	0.94601	0.87590	0.87144	0.85598	0.84135	AVG		0.89147		5.45799	15.00000	O
Chrysene	0.92893	0.89955	0.78848	0.79504	0.77132	0.76175	AVG		0.82418		8.65987	15.00000	O
Benzo(b)fluoranthene	1.03381	0.99641	1.01878	1.02056	1.00035	1.11500	AVG		1.03082		4.21928	15.00000	O
Benzo(k)fluoranthene	1.01777	1.07940	0.98180	0.92536	0.90933	0.95028	AVG		0.97732		6.49217	15.00000	O
Benzo(a)pyrene	0.87140	0.89980	0.84876	0.84229	0.85409	0.83227	AVG		0.85810		2.82393	30.00000	O
Indeno(1,2,3-cd)pyrene	0.62585	0.69894	0.65196	0.61158	0.65143	0.54298	AVG		0.63046		8.27918	15.00000	O
Dibenzo(a,h)anthracene	0.66592	0.74007	0.69378	0.65089	0.69463	0.59130	AVG		0.67276		7.46543	15.00000	O
Benzo(g,h,i)perylene	0.66159	0.72178	0.66545	0.60243	0.62372	0.53286	AVG		0.63464		10.15921	15.00000	O
Nitrobenzene-D5	0.32744	0.33867	0.30688	0.30398	0.30079	0.28936	AVG		0.31119		5.88091	15.00000	
2-Fluorobiphenyl	1.18443	1.18635	1.04086	0.97163	0.94843	0.88824	AVG		1.03666		12.07191	15.00000	
Terphenyl-D14	0.76913	0.76985	0.68789	0.68306	0.64778	0.63881	AVG		0.69942		8.22861	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND184 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-N DFTPP Injection Time: 0827

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.5
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	35.2
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	54.4
197	Less than 1.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.1
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	9.4 (71.5)2
442	40.0 - 100.0% of mass 198	69.2
443	17.0 - 23.0% of mass 442	13.1 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1119	N2622	11/19/11	0851
02	WG99468-BLANK	WG99468-1	N2623	11/19/11	0934
03	WG99468-LCS	WG99468-2	N2624	11/19/11	1016
04	WG99468-LCSD	WG99468-3	N2625	11/19/11	1058
05	DSY-SD-RB13-101211	SE6768-8	N2626	11/19/11	1140
06	DSY-SD-AA01-0012	SE6768-1	N2627	11/19/11	1223
07	DSY-SD-AA01-1224	SE6768-2	N2628	11/19/11	1305
08	DSY-SD-AA01-2448	SE6768-3	N2629	11/19/11	1347
09	DSY-SD-DUP33-101211	SE6768-4	N2630	11/19/11	1429
10	DSY-SD-AA05-0012	SE6768-5	N2631	11/19/11	1510
11	DSY-SD-AA05-1224	SE6768-6	N2632	11/19/11	1552
12	DSY-SD-AA05-2448	SE6768-7	N2633	11/19/11	1634
13					
14					
15					
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19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101675-1 **Analytical Date:** 11/19/11 08:51
Lab File ID : N2622.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	52.53090	0.89806	0.010	5.06179	20.01000	Quadratic
128 Pyrene	1.16125	1.28148	1.28148	0.010	10.35391	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.91891	0.91891	0.010	3.07814	20.00000	Averaged
142 Chrysene	0.82418	0.84321	0.84321	0.010	2.30862	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	1.02818	1.02818	0.010	-0.25608	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	1.01300	1.01300	0.010	3.65105	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.88947	0.88947	0.010	3.65578	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.70335	0.70335	0.010	11.56228	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.74058	0.74058	0.010	10.07984	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.75339	0.75339	0.010	18.71122	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.31489	0.31489	0.010	1.19014	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.03966	1.03966	0.010	0.28975	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.74650	0.74650	0.010	6.73055	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: ND185 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-N DFTPP Injection Time: 0846

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.9
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	33.6
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	40.0 - 60.0% of mass 198	53.3
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.6 (72.6)2
442	40.0 - 100.0% of mass 198	74.7
443	17.0 - 23.0% of mass 442	14.6 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1120	N2643	11/20/11	0904
02	DSY-SD-AA05-2448	SE6768-7DL	N2657	11/20/11	1853
03					
04					
05					
06					
07					
08					
09					
10					
11					
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13					
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15					
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17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101676-1 **Analytical Date:** 11/20/11 09:04
Lab File ID : N2643.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	44.18288	0.77643	0.010	-11.63424	20.01000	Quadratic
128 Pyrene	1.16125	1.37317	1.37317	0.010	18.24965	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.90924	0.90924	0.010	1.99271	20.00000	Averaged
142 Chrysene	0.82418	0.85444	0.85444	0.010	3.67155	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	0.97423	0.97423	0.010	-5.48990	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	0.97595	0.97595	0.010	-0.13994	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.86760	0.86760	0.010	1.10721	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.70245	0.70245	0.010	11.41919	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.73287	0.73287	0.010	8.93349	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.73988	0.73988	0.010	16.58342	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.29553	0.29553	0.010	-5.03250	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.03512	1.03512	0.010	-0.14804	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.75797	0.75797	0.010	8.37173	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2206.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : DSY-23
Lab Sample ID : WG99289-1
Date Extracted : 17-OCT-11
Date Analyzed : 27-OCT-11
Time Analyzed : 16:54

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99289-2	N2207.D	10/27/11	17:36
Laboratory Control S	WG99289-3	N2208.D	10/27/11	18:18
DSY-SD-RB13-101211	SE6768-8	N2626.D	11/19/11	11:40

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99289-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: N2206.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 27-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		63.0						
2-Fluorobiphenyl		69.7						
Terphenyl-d14		70.5						

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99289-2
LCSD ID: WG99289-3
Project:
SDG: DSY-23
Report Date: 30-NOV-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99289

Analysis Date: 27-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	34.3	68.6	37.2	74.4	ug/L	8	30	66-109
Benzo(a)pyrene	50.0	37.6	75.2	41.7	83.4	ug/L	10	30	63-118
Benzo(b)fluoranthene	50.0	33.9	67.8	38.3	76.6	ug/L	12	30	60-108
Benzo(k)fluoranthene	50.0	35.1	70.2	40.3	80.6	ug/L	14	30	59-125
Benzo(g,h,i)perylene	50.0	37.9	75.8	36.5	73.0	ug/L	4	30	58-115
Chrysene	50.0	37.9	75.8	41.8	83.6	ug/L	10	30	68-114
Dibenzo(a,h)anthracene	50.0	39.5	79.0	37.8	75.6	ug/L	4	30	61-111
Fluoranthene	50.0	42.5	85.0	45.2	90.4	ug/L	6	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	36.6	73.2	35.9	71.8	ug/L	2	30	55-111
Pyrene	50.0	35.4	70.8	40.2	80.4	ug/L	13	30	58-135
Nitrobenzene-d5			52.5		54.6				41-91
2-Fluorobiphenyl			64.3		67.3				43-90
Terphenyl-d14			69.6		76.1				36-156

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2623.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-23
Lab Sample ID : WG99468-1
Date Extracted : 19-OCT-11
Date Analyzed : 19-NOV-11
Time Analyzed : 09:34

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99468-2	N2624.D	11/19/11	10:16
Laboratory Control S	WG99468-3	N2625.D	11/19/11	10:58
DSY-SD-AA01-0012	SE6768-1	N2627.D	11/19/11	12:23
DSY-SD-AA01-1224	SE6768-2	N2628.D	11/19/11	13:05
DSY-SD-AA01-2448	SE6768-3	N2629.D	11/19/11	13:47
DSY-SD-DUP33-101211	SE6768-4	N2630.D	11/19/11	14:29
DSY-SD-AA05-0012	SE6768-5	N2631.D	11/19/11	15:10
DSY-SD-AA05-1224	SE6768-6	N2632.D	11/19/11	15:52
DSY-SD-AA05-2448	SE6768-7	N2633.D	11/19/11	16:34
DSY-SD-AA05-2448	SE6768-7DL	N2657.D	11/20/11	18:53

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99468-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: N2623.D

Sample Date:
Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 30-NOV-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		62.9	%					
2-Fluorobiphenyl		68.0	%					
Terphenyl-d14		76.0	%					

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LCS/LCSD Recovery Report

LCS ID: WG99468-2
LCSD ID: WG99468-3
Project:
SDG: DSY-23
Report Date: 06-DEC-11

Received Date: 19-OCT-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG99468

Analysis Date: 19-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1240	74.2	1230	73.6	ug/Kgdrywt	1	30	40-100
Benzo(a)pyrene	1670	1370	82.0	1340	80.2	ug/Kgdrywt	2	30	40-100
Benzo(b)fluoranthene	1670	1210	72.4	1200	71.8	ug/Kgdrywt	1	30	40-100
Benzo(g,h,i)perylene	1670	1480	88.6	1410	84.4	ug/Kgdrywt	5	30	40-100
Benzo(k)fluoranthene	1670	1330	79.6	1300	77.8	ug/Kgdrywt	2	30	40-100
Chrysene	1670	1350	80.8	1320	79.0	ug/Kgdrywt	2	30	40-100
Dibenzo(a,h)anthracene	1670	1380	82.6	1330	79.6	ug/Kgdrywt	4	30	40-100
Fluoranthene	1670	1470	88.0	1460	87.4	ug/Kgdrywt	1	30	40-100
Indeno(1,2,3-cd)pyrene	1670	1380	82.6	1330	79.6	ug/Kgdrywt	4	30	40-100
Pyrene	1670	1380	82.6	1360	81.4	ug/Kgdrywt	1	30	40-100
Nitrobenzene-d5			73.7		65.9				24-81
2-Fluorobiphenyl			81.9		78.4				29-83
Terphenyl-d14			84.6		83.8				24-136

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Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-23
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	600003		8.76		2389440		11.57		1317918		15.69	
	Upper Limit	1200006		9.26		4778880		12.07		2635836		16.19	
	Lower Limit	300001.5		8.26		1194720		11.07		658959		15.19	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101675-1					2420851		11.54		1347143		15.67	
Method Blank Sample	WG99468-1	614699		8.74		2242017		11.54		1194930		15.67	
Laboratory Control S	WG99468-2	667847		8.74		2462565		11.54		1348361		15.67	
Laboratory Control S	WG99468-3	631393		8.74		2386633		11.54		1317403		15.67	
DSY-SD-RB13-101211	SE6768-8	693084		8.74		2530127		11.54		1408983		15.67	
DSY-SD-AA01-0012	SE6768-1	633690		8.74		2363245		11.54		1369373		15.67	
DSY-SD-AA01-1224	SE6768-2	603723		8.74		2285762		11.54		1308156		15.67	
DSY-SD-AA01-2448	SE6768-3	632542		8.74		2413743		11.54		1401033		15.67	
DSY-SD-DUP33-1012	SE6768-4	594524		8.74		2257459		11.54		1280130		15.67	
DSY-SD-AA05-0012	SE6768-5	636434		8.74		2399973		11.54		1372217		15.67	
DSY-SD-AA05-1224	SE6768-6	623425		8.74		2381338		11.54		1338744		15.67	
DSY-SD-AA05-2448	SE6768-7	605770		8.74		2373442		11.54		1390670		15.67	
Continuing Calibrati	WG101676-1					2521119		11.54		1397409		15.67	
DSY-SD-AA05-2448	SE6768-7DL	603144		8.73		2342095		11.53		1348425		15.66	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-23
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std.	2174245		19.23		1621980		25.55		1257422		28.69	
	Upper Limit	4348490		19.73		3243960		26.05		2514844		29.19	
	Lower Limit	1087122.5		18.73		810990		25.05		628711		28.19	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101675-1	2211669		19.21		1598713		25.53		1207219		28.68	
Method Blank Sample	WG99468-1	1867777		19.19		1522161		25.52		1160976		28.68	
Laboratory Control S	WG99468-2	2240611		19.20		1932664		25.53		1511892		28.68	
Laboratory Control S	WG99468-3	2272892		19.20		1955905		25.53		1487079		28.68	
DSY-SD-RB13-101211	SE6768-8	2252447		19.19		1997988		25.52		1628391		28.68	
DSY-SD-AA01-0012	SE6768-1	2228352		19.19		1472378		25.52		954631		28.68	
DSY-SD-AA01-1224	SE6768-2	2159965		19.19		1389206		25.52		924042		28.68	
DSY-SD-AA01-2448	SE6768-3	2289354		19.20		1410098		25.52		920706		28.68	
DSY-SD-DUP33-1012	SE6768-4	2133656		19.19		1489047		25.52		1055127		28.68	
DSY-SD-AA05-0012	SE6768-5	2265275		19.19		1622601		25.52		1023187		28.68	
DSY-SD-AA05-1224	SE6768-6	2196612		19.20		1583832		25.52		993116		28.68	
DSY-SD-AA05-2448	SE6768-7	2245352		19.21		1413471		25.55		755950		28.69	
Continuing Calibrati	WG101676-1	2105163		19.20		1193705		25.52		945263		28.67	
DSY-SD-AA05-2448	SE6768-7DL	1906540		19.19		955395		25.52		595211	*	28.67	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD		473663		8.20		1846906		11.03		1025757		15.13	
UPPER LIMIT		947326		8.70		3693812		11.53		2051514		15.63	
LOWER LIMIT		236832		7.70		923453		10.53		512879		14.63	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD3.00N1027		472174		7.95		1812390		10.79		1012117		14.89	
02	WG99289-BLANK	WG99289-1		541031		7.95		2058891		10.78		1067891		14.89	
03	WG99289-LCS	WG99289-2		493300		7.95		1873866		10.79		990733		14.89	
04	WG99289-LCSD	WG99289-3		481852		7.95		1820678		10.79		975483		14.89	
05															
06															
07															
08															
09															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD		1611574		18.64		1003007		24.93		701766		28.06	
UPPER LIMIT		3223148		19.14		2006014		25.43		1403532		28.56	
LOWER LIMIT		805787		18.14		501504		24.43		350883		27.56	
	CLIENT SAMPLE ID	LAB SAMPLE ID											
01		SSTD3.00N1027		1620489	18.39		1188404	24.66		987311		27.77	
02	WG99289-BLANK	WG99289-1		1690675	18.38		1447383	24.65		1148165		27.77	
03	WG99289-LCS	WG99289-2		1633015	18.38		1348346	24.66		1106652		27.77	
04	WG99289-LCSD	WG99289-3		1657258	18.39		1272777	24.66		940698		27.77	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2MN #	FLO #	PYR #	Total Out
DSY-SD-AA01-0012	SE6768-1	45.0	70.6	91.4	0
DSY-SD-AA01-1224	SE6768-2	54.9	76.2	101.	0
DSY-SD-AA01-2448	SE6768-3	38.6	63.2	79.8	0
DSY-SD-DUP33-101211	SE6768-4	31.1	55.8	75.8	0
DSY-SD-AA05-0012	SE6768-5	32.6	57.5	68.9	0
DSY-SD-AA05-1224	SE6768-6	50.1	68.8	81.2	0
Method Blank Sample	WG101806-1	51.5	56.2	80.2	0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-23

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB13-101211	SE6768-8	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG99293-1	65.2		75.4		101.		0
Laboratory Control S	WG99293-2	54.1		66.0		86.5		0
Laboratory Control S	WG99293-3	48.6		59.4		73.0		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** DSY-23
Project : NAVSTA Newport CTO WE61 Derecktor **Instrument ID:** GCMS-G
Lab File IDs : G4023.DG4022.DG4018.D **Calibration Date(s):** 19-NOV-11 11:47
G4021.DG4020.DG4019.D 19-NOV-11 15:27

	0.200000(Level 1	0.500000(Level 2	1.0000 Level 3	2.0000 Level 4	5.0000 Level 5	8.0000 Level 6	New Crv	b	mI	m2	%RSD	Max %RSD	
Benzo(a)pyrene	1.22562	1.33406	1.37656	1.28456	1.31940	1.36721	AVG		1.31790		4.26039	15.00000	O
2-Methylnaphthalene-D10	0.89364	1.10537	1.15001	1.06192	1.07206	1.10290	AVG		1.06432		8.37362	15.00000	
Fluorene-D10	0.70351	0.89827	0.92806	0.97534	0.99465	1.04100	AVG		0.92347		12.86845	15.00000	
Pyrene-D10	0.96288	1.12542	1.16069	1.02833	1.13105	1.14947	AVG		1.09297		7.24856	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD933 DFTPP Injection Date: 11/20/11

Instrument ID: GCMS-G DFTPP Injection Time: 0838

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.9)1
69	Less than 100.0% of mass 198	38.7
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	56.7
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	4.1
441	0.0 - 100.0% of mass 443	12.8 (75.1)2
442	40.0 - 100.0% of mass 198	90.8
443	17.0 - 23.0% of mass 442	17.0 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1120	G4035	11/20/11	0856
02	WG99293-BLANK	WG99293-1	G4036	11/20/11	0940
03	WG99293-LCS	WG99293-2	G4037	11/20/11	1024
04	WG99293-LCSD	WG99293-3	G4038	11/20/11	1108
05	DSY-SD-RB13-101211	SE6768-8	G4039	11/20/11	1152
06	WG101806-BLANK	WG101806-1	G4040	11/20/11	1236
07	DSY-SD-AA01-0012	SE6768-1	G4049	11/20/11	1913
08	DSY-SD-AA01-1224	SE6768-2	G4050	11/20/11	1957
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-23
Lab ID : WG101410-1 **Analytical Date:** 11/20/11 08:56
Lab File ID : G4035.D **Instrument ID:** GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{\text{RRF}}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.21722	1.21722	0.010	-7.63968	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.04216	1.04216	0.010	-2.08182	20.00000	Averaged
47 Fluorene-D10	0.92347	0.91434	0.91434	0.010	-0.98882	20.00000	Averaged
64 Pyrene-D10	1.09297	1.15073	1.15073	0.010	5.28381	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-23

Lab File ID: GD934 DFTPP Injection Date: 11/21/11

Instrument ID: GCMS-G DFTPP Injection Time: 0809

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.9
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	40.6
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	57.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.8
365	1.0 - 100.0% of mass 198	3.7
441	0.0 - 100.0% of mass 443	12.8 (77.3)2
442	40.0 - 100.0% of mass 198	87.1
443	17.0 - 23.0% of mass 442	16.6 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1121	G4051	11/21/11	0829
02	DSY-SD-AA01-2448	SE6768-3	G4053	11/21/11	0959
03	DSY-SD-DUP33-101211	SE6768-4	G4054	11/21/11	1044
04	DSY-SD-AA05-0012	SE6768-5	G4055	11/21/11	1129
05	DSY-SD-AA05-1224	SE6768-6	G4056	11/21/11	1213
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 **SDG:** DSY-23
Lab ID : WG101699-1 **Analytical Date:** 11/21/11 08:29
Lab File ID : G4051.D **Instrument ID:** GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.12257	1.12257	0.010	-14.82178	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	0.98043	0.98043	0.010	-7.88177	20.00000	Averaged
47 Fluorene-D10	0.92347	0.88800	0.88800	0.010	-3.84120	20.00000	Averaged
64 Pyrene-D10	1.09297	0.99058	0.99058	0.010	-9.36839	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4040.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-23
Lab Sample ID : WG101806-1
Date Extracted : 19-OCT-11
Date Analyzed : 20-NOV-11
Time Analyzed : 12:36

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA01-0012	SE6768-1	G4049.D	11/20/11	19:13
DSY-SD-AA01-1224	SE6768-2	G4050.D	11/20/11	19:57
DSY-SD-AA01-2448	SE6768-3	G4053.D	11/21/11	09:59
DSY-SD-DUP33-101211	SE6768-4	G4054.D	11/21/11	10:44
DSY-SD-AA05-0012	SE6768-5	G4055.D	11/21/11	11:29
DSY-SD-AA05-1224	SE6768-6	G4056.D	11/21/11	12:13

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG101806-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: G4040.D

Sample Date:
Received Date: 01-DEC-11
Extract Date: 19-OCT-11
Extracted By: KD
Extraction Method: SW846 3550
Lab Prep Batch: WG101806

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		51.5	%					
Fluorene-D10		56.2	%					
Pyrene-D10		80.2	%					

600 Technology Way
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http://www.katahdinlab.com

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4036.D
Instrument ID : GCMS-G
Matrix : AQ

SDG : DSY-23
Lab Sample ID : WG99293-1
Date Extracted : 17-OCT-11
Date Analyzed : 20-NOV-11
Time Analyzed : 09:40

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99293-2	G4037.D	11/20/11	10:24
Laboratory Control S	WG99293-3	G4038.D	11/20/11	11:08
DSY-SD-RB13-101211	SE6768-8	G4039.D	11/20/11	11:52

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99293-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: G4036.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		65.2	%					
Fluorene-D10		75.4	%					
Pyrene-D10		101.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99293-2
LCSD ID: WG99293-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99293

Analysis Date: 20-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.46	73.0	1.23	61.5*	ug/L	17	30	63-98
2-Methylnaphthalene-D10			54.1		48.6				43-92
Fluorene-D10			66.0		59.4				29-101
Pyrene-D10			86.5		73.0				53-166

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Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101399-3
Lab File ID : G4018.D

SDG: DSY-23
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	47822		8.34		158215		11.29		80066		15.58	
	Upper Limit	95644		8.84		316430		11.79		160132		16.08	
	Lower Limit	23911		7.84		79107.5		10.79		40033		15.08	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101410-1	51116		8.32		172627		11.27		87317		15.55	
Method Blank Sample	WG99293-1	47181		8.32		170317		11.27		85206		15.55	
Laboratory Control S	WG99293-2	50326		8.32		184491		11.25		93644		15.55	
Laboratory Control S	WG99293-3	51212		8.32		176570		11.27		87902		15.55	
DSY-SD-RB13-101211	SE6768-8	52947		8.32		174846		11.27		90629		15.55	
Method Blank Sample	WG101806-1	50371		8.32		171957		11.27		93963		15.55	
DSY-SD-AA01-0012	SE6768-1	44472		8.32		160685		11.27		83691		15.55	
DSY-SD-AA01-1224	SE6768-2	47002		8.32		162658		11.27		83273		15.55	
Continuing Calibrati	WG101699-1	50986		8.27		172659		11.23		88499		15.51	
DSY-SD-AA01-2448	SE6768-3	50223		8.29		161598		11.23		84144		15.51	
DSY-SD-DUP33-1012	SE6768-4	47584		8.27		157639		11.23		81751		15.51	
DSY-SD-AA05-0012	SE6768-5	49996		8.27		166265		11.23		86143		15.51	
DSY-SD-AA05-1224	SE6768-6	45844		8.27		161673		11.23		84298		15.51	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
SDG: DSY-23
Lab ID : WG101399-3
Analytical Date: 11/19/11 11:47
Lab File ID : G4018.D
Instrument ID: GCMS-G

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	118014	19.19	75564	25.77	53419	29.09
	Upper Limit	236028	19.69	151128	26.27	106838	29.59
	Lower Limit	59007	18.69	37782	25.27	26709.5	28.59
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101410-1	134675	19.15	68400	25.71	41070	29.01
Method Blank Sample	WG99293-1	130557	19.15	60469	25.74	34435	29.03
Laboratory Control S	WG99293-2	141444	19.13	78454	25.71	47837	29.01
Laboratory Control S	WG99293-3	133855	19.15	73937	25.71	47808	29.03
DSY-SD-RB13-101211	SE6768-8	134814	19.15	61884	25.71	39825	29.02
Method Blank Sample	WG101806-1	124869	19.14	62583	25.73	38766	29.03
DSY-SD-AA01-0012	SE6768-1	139858	19.15	56388	25.71	33748	29.03
DSY-SD-AA01-1224	SE6768-2	141124	19.15	51648	25.73	30467	29.03
Continuing Calibrati	WG101699-1	131530	19.10	75311	25.67	49379	28.97
DSY-SD-AA01-2448	SE6768-3	143871	19.10	62639	25.68	34173	28.98
DSY-SD-DUP33-1012	SE6768-4	134014	19.10	62397	25.68	33658	28.98
DSY-SD-AA05-0012	SE6768-5	134725	19.10	70736	25.68	40202	28.98
DSY-SD-AA05-1224	SE6768-6	132541	19.10	70289	25.69	37265	28.99

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99849-BLANK	WG99849-1	94	93	113	102			0
02	WG99849-LCS	WG99849-2	97	96	115	102			0
03	WG99849-LCSD	WG99849-3	87	85	110	95			0
04	DSY-SD-AA01-0012	SE6768-1	23*	26*	31*	32*			4
05	DSY-SD-AA01-1224	SE6768-2	22*	24*	29*	31*			4
06	DSY-SD-AA01-2448	SE6768-3	30*	34*	57*	60			3
07	DSY-SD-DUP33-101211	SE6768-4	22*	26*	40*	42*			4
08	DSY-SD-AA05-0012	SE6768-5	21*	26*	40*	42*			4
09	DSY-SD-AA05-1224	SE6768-6	23*	28*	38*	40*			4
10	DSY-SD-AA05-2448	SE6768-7	28*	36*	34*	44*			4
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99288-BLANK	WG99288-1	61*	70	57	58			1
02	WG99288-LCS	WG99288-2	59*	64	58	57			1
03	WG99288-LCSD	WG99288-3	51*	56*	61	59			2
04	DSY-SD-RB13-101211	SE6768-8	62	69	24*	25*			2
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000070

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99288-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Lab Sample ID: WG99288-1 Lab File ID: 7EJ548

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/17/11

Date Analyzed (1): 10/18/11 Date Analyzed (2): 10/18/11

Time Analyzed (1): 1333 Time Analyzed (2): 1333

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99288-LCS	WG99288-2	7EJ549	10/18/11	10/18/11
02	WG99288-LCSD	WG99288-3	7EJ550	10/18/11	10/18/11
03	DSY-SD-RB13-101211	SE6768-8	7EJ585	10/19/11	10/19/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99288-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: 7EJ548.D

Sample Date:
Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.025	ug/L	1	.5	0.050	0.015	0.025
Aroclor-1221	U	0.025	ug/L	1	.5	0.050	0.020	0.025
Aroclor-1232	U	0.025	ug/L	1	.5	0.050	0.0089	0.025
Aroclor-1242	U	0.025	ug/L	1	.5	0.050	0.018	0.025
Aroclor-1248	U	0.025	ug/L	1	.5	0.050	0.020	0.025
Aroclor-1254	U	0.025	ug/L	1	.5	0.050	0.0082	0.025
Aroclor-1260	U	0.025	ug/L	1	.5	0.050	0.017	0.025
Tetrachloro-M-Xylene		69.6	%					
Decachlorobiphenyl		58.0	%					

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99288-2
LCSD ID: WG99288-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 17-OCT-11
Extract Date: 17-OCT-11
Extracted By: JMS
Extraction Method: SW846 3510
Lab Prep Batch: WG99288

Analysis Date: 18-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	0.500	0.337	67.4	0.326	65.2	ug/L	3	30	65-112
Aroclor-1260	0.500	0.302	60.4*	0.320	64.0	ug/L	6	30	62-104
Tetrachloro-M-Xylene			64.2		56.5*				62-111
Decachlorobiphenyl			57.7		61.2				44-135

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99849-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Lab Sample ID: WG99849-1 Lab File ID: 7EJ909

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3550

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 10/27/11 Date Analyzed (2): 10/27/11

Time Analyzed (1): 0310 Time Analyzed (2): 0310

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99849-LCS	WG99849-2	7EJ910	10/27/11	10/27/11
02	WG99849-LCSD	WG99849-3	7EJ911	10/27/11	10/27/11
03	DSY-SD-AA01-0012	SE6768-1	7EK175	11/05/11	11/05/11
04	DSY-SD-AA01-1224	SE6768-2	7EK176	11/05/11	11/05/11
05	DSY-SD-AA01-2448	SE6768-3	7EK177	11/05/11	11/05/11
06	DSY-SD-DUP33-101211	SE6768-4	7EK178	11/05/11	11/05/11
07	DSY-SD-AA05-0012	SE6768-5	7EK179	11/05/11	11/05/11
08	DSY-SD-AA05-1224	SE6768-6	7EK180	11/05/11	11/05/11
09	DSY-SD-AA05-2448	SE6768-7	7EK181	11/05/11	11/05/11
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99849-1
Client ID: Method Blank Sample
Project:
SDG: DSY-23
Lab File ID: 7EJ909.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		93.7	%					
Decachlorobiphenyl		113.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99849-2
LCSD ID: WG99849-3
Project:
SDG: DSY-23
Report Date: 01-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99849

Analysis Date: 27-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	175.	105.	167.	100.	ug/Kgdrywt	5	50	53-123
Aroclor-1260	167.	175.	105.	168.	100.	ug/Kgdrywt	4	50	58-120
Tetrachloro-M-Xylene			97.3		86.8				56-115
Decachlorobiphenyl			115.		110.				59-124

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FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000105

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.33 TCX: 3.83

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/18/11	0646	13.33	3.83
02	WG99288-BLANK	WG99288-1	10/18/11	1333	13.34	3.84
03	WG99288-LCS	WG99288-2	10/18/11	1359	13.33	3.84
04	WG99288-LCSD	WG99288-3	10/18/11	1425	13.33	3.84
05		AR1660 1.0	10/18/11	1819	13.34	3.84
06		AR1660 0.25	10/19/11	0044	13.34	3.83
07	DSY-SD-RB13-101211	SE6768-8	10/19/11	0526	13.33	3.84
08		AR1660 1.0	10/19/11	0710	13.33	3.84
09		AR1660 0.25	10/26/11	2254	13.29	3.82
10	WG99849-BLANK	WG99849-1	10/27/11	0310	13.29	3.82
11	WG99849-LCS	WG99849-2	10/27/11	0336	13.29	3.82
12	WG99849-LCSD	WG99849-3	10/27/11	0402	13.29	3.82
13		AR1660 1.0	10/27/11	0518	13.29	3.82
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/04/11	2139	13.23	3.80
02		AR1254 1.0	11/04/11	2257		
03	DSY-SD-AA01-0012	SE6768-1	11/05/11	0040	13.23	3.80
04	DSY-SD-AA01-1224	SE6768-2	11/05/11	0106	13.23	3.80
05	DSY-SD-AA01-2448	SE6768-3	11/05/11	0132	13.23	3.80
06	DSY-SD-DUP33-101211	SE6768-4	11/05/11	0158	13.23	3.80
07	DSY-SD-AA05-0012	SE6768-5	11/05/11	0224	13.23	3.80
08	DSY-SD-AA05-1224	SE6768-6	11/05/11	0250	13.23	3.80
09	DSY-SD-AA05-2448	SE6768-7	11/05/11	0316	13.22	3.80
10		AR1660 1.0	11/05/11	0408	13.23	3.80
11		AR1254 1.0	11/05/11	0526		
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.3368000	1.0000000	42616000	0.001	33.68	20.00	2RDR	<-
(2)	1.2505000	1.0000000	23397000	0.001	25.05	20.00	2RDR	<-
(3)	1.1700000	1.0000000	58060000	0.001	17.00	20.00	2RDR	
(4)	1.0804000	1.0000000	31961000	0.001	8.04	20.00	2RDR	
(5)	0.9378400	1.0000000	24746000	0.001	-6.22	20.00	2RDR	
Average %D: 15.510								
Aroclor-1260	0.9655200	1.0000000	48658000	0.001	-3.45	20.00	2RDR	
(2)	0.9873200	1.0000000	64198000	0.001	-1.27	20.00	2RDR	
(3)	1.0827000	1.0000000	51622000	0.001	8.27	20.00	2RDR	
(4)	0.9683400	1.0000000	45880000	0.001	-3.17	20.00	2RDR	
(5)	1.0657000	1.0000000	33176000	0.001	6.57	20.00	2RDR	
Average %D: 1.3900								
Decachlorobiphenyl	1.86e-002	2.e-002	556320000	0.001	-7.00	20.00	2RDR	
Tetrachloro-m-xylene	2.39e-002	2.e-002	1.39e+009	0.001	19.50	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 1819

Lab File ID: 7EJ559 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0518000	1.0000000	33613000	0.001	5.18	20.00	2RDR
(2)	1.0776000	1.0000000	20191000	0.001	7.76	20.00	2RDR
(3)	0.9003900	1.0000000	44115000	0.001	-9.96	20.00	2RDR
(4)	0.9726000	1.0000000	28698000	0.001	-2.74	20.00	2RDR
(5)	0.9107600	1.0000000	24002000	0.001	-8.92	20.00	2RDR
Average %D: -1.740							
Aroclor-1260	0.8913800	1.0000000	44738000	0.001	-10.86	20.00	2RDR
(2)	0.8848700	1.0000000	57223000	0.001	-11.51	20.00	2RDR
(3)	0.9502600	1.0000000	44940000	0.001	-4.97	20.00	2RDR
(4)	0.9174500	1.0000000	43348000	0.001	-8.26	20.00	2RDR
(5)	1.0712000	1.0000000	33351000	0.001	7.12	20.00	2RDR
Average %D: -5.700							
Decachlorobiphenyl	1.76e-002	2.e-002	524140000	0.001	-12.00	20.00	2RDR
Tetrachloro-m-xylene	2.11e-002	2.e-002	1.23e+009	0.001	5.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0044

Lab File ID: 7EJ574 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2587400	0.2500000	32568000	0.001	3.50	20.00	2RDR
(2)	0.2660700	0.2500000	19591000	0.001	6.43	20.00	2RDR
(3)	0.2199400	0.2500000	37271000	0.001	-12.02	20.00	2RDR
(4)	0.2284800	0.2500000	24835000	0.001	-8.61	20.00	2RDR
(5)	0.2096000	0.2500000	19531000	0.001	-16.16	20.00	2RDR
Average %D: -5.360							
Aroclor-1260	0.2198300	0.2500000	38400000	0.001	-12.07	20.00	2RDR
(2)	0.2254200	0.2500000	48073000	0.001	-9.83	20.00	2RDR
(3)	0.2350600	0.2500000	37753000	0.001	-5.98	20.00	2RDR
(4)	0.2211800	0.2500000	36425000	0.001	-11.53	20.00	2RDR
(5)	0.2590900	0.2500000	30434000	0.001	3.64	20.00	2RDR
Average %D: -7.160							
Decachlorobiphenyl	4.31e-003	5.e-003	470980000	0.001	-13.80	20.00	2RDR
Tetrachloro-m-xylene	5.32e-003	5.e-003	1.19e+009	0.001	6.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0602000	1.0000000	33878000	0.001	6.02	20.00	2RDR
(2)	1.0917000	1.0000000	20453000	0.001	9.17	20.00	2RDR
(3)	0.9251200	1.0000000	45391000	0.001	-7.49	20.00	2RDR
(4)	0.9812400	1.0000000	28959000	0.001	-1.88	20.00	2RDR
(5)	0.9144800	1.0000000	24104000	0.001	-8.55	20.00	2RDR
Average %D: -0.540							
Aroclor-1260	0.9013000	1.0000000	45262000	0.001	-9.87	20.00	2RDR
(2)	0.9066200	1.0000000	58705000	0.001	-9.34	20.00	2RDR
(3)	0.9532600	1.0000000	45092000	0.001	-4.67	20.00	2RDR
(4)	0.9146200	1.0000000	43207000	0.001	-8.54	20.00	2RDR
(5)	1.1244000	1.0000000	35070000	0.001	12.44	20.00	2RDR
Average %D: -4.000							
Decachlorobiphenyl	1.85e-002	2.e-002	553140000	0.001	-7.50	20.00	2RDR
Tetrachloro-m-xylene	2.13e-002	2.e-002	1.24e+009	0.001	6.50	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2896900	0.2500000	36591000	0.001	15.88	20.00	2RDR
(2)	0.2657000	0.2500000	19563000	0.001	6.28	20.00	2RDR
(3)	0.2752800	0.2500000	48510000	0.001	10.11	20.00	2RDR
(4)	0.2673200	0.2500000	29523000	0.001	6.93	20.00	2RDR
(5)	0.2634400	0.2500000	25368000	0.001	5.38	20.00	2RDR
Average %D: 8.9200							
Aroclor-1260	0.2540000	0.2500000	45486000	0.001	1.60	20.00	2RDR
(2)	0.2641200	0.2500000	58742000	0.001	5.65	20.00	2RDR
(3)	0.2707500	0.2500000	44749000	0.001	8.30	20.00	2RDR
(4)	0.2534300	0.2500000	42703000	0.001	1.37	20.00	2RDR
(5)	0.2711600	0.2500000	31938000	0.001	8.46	20.00	2RDR
Average %D: 5.0800							
Decachlorobiphenyl	5.e-003	5.e-003	554440000	0.001	0.00	20.00	2RDR
Tetrachloro-m-xylene	5.73e-003	5.e-003	1.29e+009	0.001	14.60	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0568000	1.0000000	33769000	0.001	5.68	20.00	2RDR
(2)	0.9379300	1.0000000	17587000	0.001	-6.21	20.00	2RDR
(3)	1.0722000	1.0000000	52991000	0.001	7.22	20.00	2RDR
(4)	0.9271100	1.0000000	27320000	0.001	-7.29	20.00	2RDR
(5)	0.8455800	1.0000000	22214000	0.001	-15.44	20.00	2RDR
Average %D: -3.210							
Aroclor-1260	0.8304700	1.0000000	41522000	0.001	-16.95	20.00	2RDR
(2)	0.8770600	1.0000000	56691000	0.001	-12.29	20.00	2RDR
(3)	0.9754000	1.0000000	46206000	0.001	-2.46	20.00	2RDR
(4)	0.8297200	1.0000000	38992000	0.001	-17.03	20.00	2RDR
(5)	1.0154000	1.0000000	31554000	0.001	1.54	20.00	2RDR
Average %D: -9.440							
Decachlorobiphenyl	1.62e-002	2.e-002	481100000	0.001	-19.00	20.00	2RDR
Tetrachloro-m-xylene	1.99e-002	2.e-002	1.15e+009	0.001	-0.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2721100	0.2500000	34307000	0.001	8.84	20.00	2RDR
(2)	0.2791400	0.2500000	20589000	0.001	11.66	20.00	2RDR
(3)	0.2361500	0.2500000	40562000	0.001	-5.54	20.00	2RDR
(4)	0.2453600	0.2500000	26872000	0.001	-1.86	20.00	2RDR
(5)	0.2123500	0.2500000	19830000	0.001	-15.06	20.00	2RDR
Average %D: -0.400							
Aroclor-1260	0.2134400	0.2500000	37075000	0.001	-14.62	20.00	2RDR
(2)	0.2276000	0.2500000	48672000	0.001	-8.96	20.00	2RDR
(3)	0.2395000	0.2500000	38622000	0.001	-4.20	20.00	2RDR
(4)	0.2161300	0.2500000	35443000	0.001	-13.55	20.00	2RDR
(5)	0.2541100	0.2500000	29813000	0.001	1.64	20.00	2RDR
Average %D: -7.920							
Decachlorobiphenyl	4.07e-003	5.e-003	441840000	0.001	-18.60	20.00	2RDR
Tetrachloro-m-xylene	5.82e-003	5.e-003	1.31e+009	0.001	16.40	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9420600	1.0000000	38474000	0.001	-5.79	20.00	2RDR
(2)	0.9616100	1.0000000	48072000	0.001	-3.84	20.00	2RDR
(3)	0.9609300	1.0000000	31350000	0.001	-3.91	20.00	2RDR
(4)	0.9584900	1.0000000	34212000	0.001	-4.15	20.00	2RDR
(5)	0.9873300	1.0000000	36099000	0.001	-1.27	20.00	2RDR
Average %D: -3.790							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1398000	1.0000000	36400000	0.001	13.98	20.00	2RDR	
(2)	1.1697000	1.0000000	21902000	0.001	16.97	20.00	2RDR	
(3)	0.9541300	1.0000000	46887000	0.001	-4.59	20.00	2RDR	
(4)	1.0249000	1.0000000	30282000	0.001	2.49	20.00	2RDR	
(5)	0.9308100	1.0000000	24553000	0.001	-6.92	20.00	2RDR	
Average %D: 4.3900								
Aroclor-1260	0.8735500	1.0000000	43796000	0.001	-12.64	20.00	2RDR	
(2)	0.9044700	1.0000000	58558000	0.001	-9.55	20.00	2RDR	
(3)	0.9753200	1.0000000	46202000	0.001	-2.47	20.00	2RDR	
(4)	0.9416600	1.0000000	44552000	0.001	-5.83	20.00	2RDR	
(5)	1.1569000	1.0000000	36124000	0.001	15.69	20.00	2RDR	
Average %D: -2.960								
Decachlorobiphenyl	1.79e-002	2.e-002	534070000	0.001	-10.50	20.00	2RDR	
Tetrachloro-m-xylene	2.42e-002	2.e-002	1.41e+009	0.001	21.00	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9984700	1.0000000	40890000	0.001	-0.15	20.00	2RDR
(2)	1.0254000	1.0000000	51469000	0.001	2.54	20.00	2RDR
(3)	1.0341000	1.0000000	33911000	0.001	3.41	20.00	2RDR
(4)	1.0799000	1.0000000	38770000	0.001	7.99	20.00	2RDR
(5)	1.1094000	1.0000000	40956000	0.001	10.94	20.00	2RDR
Average %D: 4.9500							

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000106

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.08 TCX: 4.33

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/18/11	0646	17.08	4.33
02	WG99288-BLANK	WG99288-1	10/18/11	1333	17.08	4.34
03	WG99288-LCS	WG99288-2	10/18/11	1359	17.09	4.33
04	WG99288-LCSD	WG99288-3	10/18/11	1425	17.09	4.34
05		AR1660 1.0	10/18/11	1819	17.09	4.33
06		AR1660 0.25	10/19/11	0044	17.08	4.33
07	DSY-SD-RB13-101211	SE6768-8	10/19/11	0526	17.08	4.33
08		AR1660 1.0	10/19/11	0710	17.08	4.33
09		AR1660 0.25	10/26/11	2254	17.03	4.31
10	WG99849-BLANK	WG99849-1	10/27/11	0310	17.03	4.31
11	WG99849-LCS	WG99849-2	10/27/11	0336	17.03	4.31
12	WG99849-LCSD	WG99849-3	10/27/11	0402	17.03	4.31
13		AR1660 1.0	10/27/11	0518	17.03	4.31
14						
15						
16						
17						
18						
19						
20						

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/04/11	2139	16.95	4.29
02		AR1254 1.0	11/04/11	2257		
03	DSY-SD-AA01-0012	SE6768-1	11/05/11	0040	16.95	4.29
04	DSY-SD-AA01-1224	SE6768-2	11/05/11	0106	16.95	4.29
05	DSY-SD-AA01-2448	SE6768-3	11/05/11	0132	16.95	4.29
06	DSY-SD-DUP33-101211	SE6768-4	11/05/11	0158	16.95	4.29
07	DSY-SD-AA05-0012	SE6768-5	11/05/11	0224	16.95	4.29
08	DSY-SD-AA05-1224	SE6768-6	11/05/11	0250	16.95	4.29
09	DSY-SD-AA05-2448	SE6768-7	11/05/11	0316	16.94	4.29
10		AR1660 1.0	11/05/11	0408	16.95	4.29
11		AR1254 1.0	11/05/11	0526		
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

								COEFFICENTS			%RSD	MAX %RSD
COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	A0	A1	A2	OR R^2	OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4686000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 0646

Lab File ID: 7EJ543 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.8264500	1.0000000	2888200.0	0.001	-17.36	20.00	2RDR
(2)	1.1661000	1.0000000	6677000.0	0.001	16.61	20.00	2RDR
(3)	1.1096000	1.0000000	11498000	0.001	10.96	20.00	2RDR
(4)	1.0682000	1.0000000	5880300.0	0.001	6.82	20.00	2RDR
(5)	1.0515000	1.0000000	5167200.0	0.001	5.15	20.00	2RDR
Average %D: 4.4400							
Aroclor-1260	1.1030000	1.0000000	7751500.0	0.001	10.30	20.00	2RDR
(2)	1.1154000	1.0000000	9495100.0	0.001	11.54	20.00	2RDR
(3)	1.1417000	1.0000000	6803700.0	0.001	14.17	20.00	2RDR
(4)	1.1010000	1.0000000	6291700.0	0.001	10.10	20.00	2RDR
(5)	1.1315000	1.0000000	6462800.0	0.001	13.15	20.00	2RDR
Average %D: 11.850							
Decachlorobiphenyl	2.08e-002	2.e-002	99996000	0.001	4.00	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	258390000	0.001	19.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/18/11 Time: 1819

Lab File ID: 7EJ559 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9443100	1.0000000	3296800.0	0.001	-5.57	20.00	2RDR
(2)	0.9414100	1.0000000	5404200.0	0.001	-5.86	20.00	2RDR
(3)	0.8732400	1.0000000	9044100.0	0.001	-12.68	20.00	2RDR
(4)	0.8407100	1.0000000	4617800.0	0.001	-15.93	20.00	2RDR
(5)	0.8710800	1.0000000	4278000.0	0.001	-12.89	20.00	2RDR
Average %D: -10.58							
Aroclor-1260	0.8859700	1.0000000	6218900.0	0.001	-11.40	20.00	2RDR
(2)	0.8697500	1.0000000	7375300.0	0.001	-13.02	20.00	2RDR
(3)	0.9102900	1.0000000	5400600.0	0.001	-8.97	20.00	2RDR
(4)	1.0688000	1.0000000	6105700.0	0.001	6.88	20.00	2RDR
(5)	0.8911000	1.0000000	5060600.0	0.001	-10.89	20.00	2RDR
Average %D: -7.480							
Decachlorobiphenyl	1.79e-002	2.e-002	85899000	0.001	-10.50	20.00	2RDR
Tetrachloro-m-xylene	1.93e-002	2.e-002	209470000	0.001	-3.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0044

Lab File ID: 7EJ574 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2418300	0.2500000	3413800.0	0.001	-3.27	20.00	2RDR
(2)	0.2366500	0.2500000	5509000.0	0.001	-5.34	20.00	2RDR
(3)	0.2195500	0.2500000	8856100.0	0.001	-12.18	20.00	2RDR
(4)	0.2147300	0.2500000	4571700.0	0.001	-14.11	20.00	2RDR
(5)	0.2198500	0.2500000	4277300.0	0.001	-12.06	20.00	2RDR
Average %D: -9.400							
Aroclor-1260	0.2253300	0.2500000	6201000.0	0.001	-9.87	20.00	2RDR
(2)	0.2225800	0.2500000	7179100.0	0.001	-10.97	20.00	2RDR
(3)	0.2349800	0.2500000	5266000.0	0.001	-6.01	20.00	2RDR
(4)	0.2299500	0.2500000	5061100.0	0.001	-8.02	20.00	2RDR
(5)	0.2314500	0.2500000	4935100.0	0.001	-7.42	20.00	2RDR
Average %D: -8.440							
Decachlorobiphenyl	4.57e-003	5.e-003	86150000	0.001	-8.60	20.00	2RDR
Tetrachloro-m-xylene	4.79e-003	5.e-003	205370000	0.001	-4.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/19/11 Time: 0710

Lab File ID: 7EJ589 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845600	1.0000000	3436100.0	0.001	-1.54	20.00	2RDR
(2)	0.9908000	1.0000000	5684400.0	0.001	-0.92	20.00	2RDR
(3)	0.9189900	1.0000000	9519600.0	0.001	-8.10	20.00	2RDR
(4)	0.8800800	1.0000000	4836200.0	0.001	-11.99	20.00	2RDR
(5)	0.9111300	1.0000000	4475300.0	0.001	-8.89	20.00	2RDR
Average %D: -6.290							
Aroclor-1260	0.9209600	1.0000000	6466000.0	0.001	-7.90	20.00	2RDR
(2)	0.9206300	1.0000000	7814300.0	0.001	-7.94	20.00	2RDR
(3)	0.9603500	1.0000000	5703900.0	0.001	-3.96	20.00	2RDR
(4)	0.9609000	1.0000000	5482800.0	0.001	-3.91	20.00	2RDR
(5)	0.9512200	1.0000000	5410800.0	0.001	-4.88	20.00	2RDR
Average %D: -5.720							
Decachlorobiphenyl	1.89e-002	2.e-002	90640000	0.001	-5.50	20.00	2RDR
Tetrachloro-m-xylene	2.e-002	2.e-002	217370000	0.001	0.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/26/11 Time: 2254

Lab File ID: 7EJ899 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2711800	0.2500000	3823700.0	0.001	8.47	20.00	2RDR
(2)	0.2602800	0.2500000	6052700.0	0.001	4.11	20.00	2RDR
(3)	0.2509300	0.2500000	10174000	0.001	0.37	20.00	2RDR
(4)	0.2575200	0.2500000	5522000.0	0.001	3.01	20.00	2RDR
(5)	0.2705500	0.2500000	5276500.0	0.001	8.22	20.00	2RDR
Average %D: 4.8400							
Aroclor-1260	0.2524000	0.2500000	6966600.0	0.001	0.96	20.00	2RDR
(2)	0.2545000	0.2500000	8279500.0	0.001	1.80	20.00	2RDR
(3)	0.2942500	0.2500000	6697100.0	0.001	17.70	20.00	2RDR
(4)	0.2613900	0.2500000	5786300.0	0.001	4.56	20.00	2RDR
(5)	0.2576800	0.2500000	5541600.0	0.001	3.07	20.00	2RDR
Average %D: 5.6000							
Decachlorobiphenyl	4.9e-003	5.e-003	92449000	0.001	-2.00	20.00	2RDR
Tetrachloro-m-xylene	5.34e-003	5.e-003	229140000	0.001	6.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 10/27/11 Time: 0518

Lab File ID: 7EJ914 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9688000	1.0000000	3381600.0	0.001	-3.12	20.00	2RDR
(2)	0.9852400	1.0000000	5652900.0	0.001	-1.48	20.00	2RDR
(3)	0.9685300	1.0000000	10034000	0.001	-3.15	20.00	2RDR
(4)	0.9472300	1.0000000	5208800.0	0.001	-5.28	20.00	2RDR
(5)	0.9356600	1.0000000	4596200.0	0.001	-6.43	20.00	2RDR
Average %D: -3.890							
Aroclor-1260	0.9532300	1.0000000	6693900.0	0.001	-4.68	20.00	2RDR
(2)	0.9705600	1.0000000	8245100.0	0.001	-2.94	20.00	2RDR
(3)	1.0507000	1.0000000	6251800.0	0.001	5.07	20.00	2RDR
(4)	0.9373600	1.0000000	5347000.0	0.001	-6.26	20.00	2RDR
(5)	0.9893200	1.0000000	5633000.0	0.001	-1.07	20.00	2RDR
Average %D: -1.980							
Decachlorobiphenyl	1.77e-002	2.e-002	85224000	0.001	-11.50	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196580000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2139

Lab File ID: 7EK168 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2625300	0.2500000	3702900.0	0.001	5.01	20.00	2RDR
(2)	0.2588500	0.2500000	6019700.0	0.001	3.54	20.00	2RDR
(3)	0.2368200	0.2500000	9581500.0	0.001	-5.27	20.00	2RDR
(4)	0.2285400	0.2500000	4878400.0	0.001	-8.58	20.00	2RDR
(5)	0.2364600	0.2500000	4604800.0	0.001	-5.42	20.00	2RDR
Average %D: -2.160							
Aroclor-1260	0.2437000	0.2500000	6720700.0	0.001	-2.52	20.00	2RDR
(2)	0.2414400	0.2500000	7829200.0	0.001	-3.42	20.00	2RDR
(3)	0.2525200	0.2500000	5689500.0	0.001	1.01	20.00	2RDR
(4)	0.2469500	0.2500000	5453200.0	0.001	-1.22	20.00	2RDR
(5)	0.2457300	0.2500000	5265200.0	0.001	-1.71	20.00	2RDR
Average %D: -1.560							
Decachlorobiphenyl	4.49e-003	5.e-003	84641000	0.001	-10.20	20.00	2RDR
Tetrachloro-m-xylene	5.39e-003	5.e-003	231630000	0.001	7.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 2257

Lab File ID: 7EK171 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9587500	1.0000000	3882500.0	0.001	-4.12	20.00	2RDR
(2)	1.0246000	1.0000000	6763400.0	0.001	2.46	20.00	2RDR
(3)	0.9353800	1.0000000	7002600.0	0.001	-6.46	20.00	2RDR
(4)	0.9313500	1.0000000	8775400.0	0.001	-6.86	20.00	2RDR
(5)	1.0111000	1.0000000	5700300.0	0.001	1.11	20.00	2RDR
Average %D: -2.780							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0408

Lab File ID: 7EK183 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0514000	1.0000000	3667500.0	0.001	5.14	20.00	2RDR
(2)	1.0686000	1.0000000	6125500.0	0.001	6.86	20.00	2RDR
(3)	0.9594500	1.0000000	9940000.0	0.001	-4.06	20.00	2RDR
(4)	0.9068200	1.0000000	4984600.0	0.001	-9.32	20.00	2RDR
(5)	0.9355200	1.0000000	4595500.0	0.001	-6.45	20.00	2RDR
Average %D: -1.560							
Aroclor-1260	0.9979600	1.0000000	7009900.0	0.001	-0.20	20.00	2RDR
(2)	0.9520600	1.0000000	8085500.0	0.001	-4.79	20.00	2RDR
(3)	0.9950900	1.0000000	5914600.0	0.001	-0.49	20.00	2RDR
(4)	1.0133000	1.0000000	5785200.0	0.001	1.33	20.00	2RDR
(5)	0.9766400	1.0000000	5559000.0	0.001	-2.34	20.00	2RDR
Average %D: -1.300							
Decachlorobiphenyl	1.87e-002	2.e-002	89870000	0.001	-6.50	20.00	2RDR
Tetrachloro-m-xylene	2.26e-002	2.e-002	245260000	0.001	13.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-23

Instrument ID: GC07 Calibration Date: 11/05/11 Time: 0526

Lab File ID: 7EK186 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0070000	1.0000000	4078200.0	0.001	0.70	20.00	2RDR
(2)	1.1115000	1.0000000	7337700.0	0.001	11.15	20.00	2RDR
(3)	0.9857100	1.0000000	7383400.0	0.001	-1.43	20.00	2RDR
(4)	0.9711300	1.0000000	9158900.0	0.001	-2.89	20.00	2RDR
(5)	1.0638000	1.0000000	6007200.0	0.001	6.38	20.00	2RDR
Average %D: 2.7800							

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
A05-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-23

Lab Sample ID: SE6768-7 Date(s) Analyzed: 11/05/11 11/05/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.08	6.22	85.0		
Aroclor-1254	2	6.47	6.41	6.55	155		
	3	6.83	6.78	6.92	159		
COLUMN 1	4	7.67	7.62	7.76	193		
	5	8.13	8.09	8.23	231	164	
	1	6.36	6.30	6.44	108		
	2	7.32	7.26	7.40	162		
	3	7.61	7.55	7.69	152		
COLUMN 2	4	8.43	8.37	8.51	145		
	5	10.12	10.07	10.21	261	166	1.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICV

File: IBK01A Nov 01, 2011 11:54

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9602.00	96.0
CALCIUM	10000.0	9512.00	95.1
COPPER	400.0	383.10	95.8
IRON	10000.0	9685.00	96.9
LEAD	400.0	392.40	98.1
MAGNESIUM	10000.0	9694.00	96.9
ZINC	400.0	389.40	97.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 12:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12210.00	97.7
CALCIUM	12500.0	12210.00	97.7
COPPER	500.0	478.30	95.7
IRON	12500.0	12250.00	98.0
LEAD	500.0	479.20	95.8
MAGNESIUM	12500.0	12180.00	97.4
ZINC	500.0	478.20	95.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 13:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12590.00	100.7
COPPER	500.0	495.30	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	495.30	99.1
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	493.30	98.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 14:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12080.00	96.6
CALCIUM	12500.0	12140.00	97.1
COPPER	500.0	475.80	95.2
IRON	12500.0	12200.00	97.6
LEAD	500.0	481.30	96.3
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	475.80	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
COPPER	500.0	504.50	100.9
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12850.00	102.8
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12880.00	103.0
COPPER	500.0	509.80	102.0
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.60	100.7
MAGNESIUM	12500.0	12790.00	102.3
ZINC	500.0	501.20	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 16:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12670.00	101.4
COPPER	500.0	502.10	100.4
IRON	12500.0	12780.00	102.2
LEAD	500.0	503.30	100.7
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	498.50	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 17:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	506.70	101.3
IRON	12500.0	12970.00	103.8
LEAD	500.0	509.20	101.8
MAGNESIUM	12500.0	13000.00	104.0
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 18:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
CALCIUM	12500.0	12630.00	101.0
COPPER	500.0	501.20	100.2
IRON	12500.0	12800.00	102.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12940.00	103.5
ZINC	500.0	498.30	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 19:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12760.00	102.1
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	508.30	101.7
IRON	12500.0	12920.00	103.4
LEAD	500.0	505.00	101.0
MAGNESIUM	12500.0	12960.00	103.7
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 20:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12340.00	98.7
CALCIUM	12500.0	12160.00	97.3
COPPER	500.0	495.00	99.0
IRON	12500.0	12550.00	100.4
LEAD	500.0	487.00	97.4
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	476.70	95.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: PQL

File: IBK01A Nov 01, 2011 12:03

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	301.90	100.6
CALCIUM	100.0	101.10	101.1
COPPER	25.0	25.33	101.3
IRON	100.0	98.83	98.8
LEAD	5.0	5.41	108.2
MAGNESIUM	100.0	104.10	104.1
ZINC	20.0	20.26	101.3

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICB

File: IBK01A Nov 01, 2011 11:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.241	J

SAMPLE: CCB

File: IBK01A Nov 01, 2011 12:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	4.030	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 13:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 14:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.041	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 16:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 17:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.925	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 18:41

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: CCB

File: IBK01A Nov 01, 2011 19:34

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 20:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.137	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK01A Nov 01, 2011 12:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465400	93.1
CALCIUM	500000	436100	87.2
COPPER	0	2	
IRON	200000	177400	88.7
LEAD	0	-1	
MAGNESIUM	500000	432700	86.5
ZINC	0	2	

SAMPLE: ICSAB

File: IBK01A Nov 01, 2011 12:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479000	95.8
CALCIUM	500000	435000	87.0
COPPER	500	509	101.8
IRON	200000	171700	85.9
LEAD	50	45	90.0
MAGNESIUM	500000	429400	85.9
ZINC	1000	916	91.6

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.107	J
ZINC	1.0	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

QC Batch ID: BJ31ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.56	98.2	80	120
LEAD	10.00	9.68	96.8	80	120
ZINC	50.00	49.03	98.1	80	120

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

QC Batch ID: BJ31ICW1

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	10	U
LEAD	4.0	U
ZINC	10	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

QC Batch ID: BJ31ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250.00	249.70	99.9	80	120
LEAD	100.00	94.76	94.8	80	120
ZINC	500.00	499.60	99.9	80	120

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name: DSY-23**

Instrument Name THERMO ICAP 6500 **Instrument ID:** 1 **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Katahdin Analytical Services A0000140

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ31ICS1

Matrix: SOIL **SDG Name:** DSY-23

Method: P **Prep Date:** 10/31/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ31ICS1	LCSOBJ31ICS1	1	0.1	
PBSBJ31ICS1	PBSBJ31ICS1	1	0.1	
DSY-SD-AA01-0012	SE6768-001	1.16	0.1	C
DSY-SD-AA01-1224	SE6768-002	1.34	0.1	B
DSY-SD-AA01-2448	SE6768-003	1.66	0.1	B
DSY-SD-DUP33-101211	SE6768-004	1.66	0.1	B
DSY-SD-AA05-0012	SE6768-005	1.11	0.1	C
DSY-SD-AA05-1224	SE6768-006	1.32	0.1	B
DSY-SD-AA05-2448	SE6768-007	1.32	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ31ICW1

Matrix: WATER **SDG Name:** DSY-23

Method: P **Prep Date:** 10/31/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ31ICW1	LCSWBJ31ICW1	0.05	0.05	
PBWBJ31ICW1	PBWBJ31ICW1	0.05	0.05	
DSY-SD-RB13-101211	SE6768-008	0.05	0.05	A

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	11:45 AL	CA	CU FE PB MG	ZN
Std 1		1	11:50 AL	CA	CU FE PB MG	ZN
ICV		1	11:54 AL	CA	CU FE PB MG	ZN
ICB		1	11:59 AL	CA	CU FE PB MG	ZN
PQL		1	12:03 AL	CA	CU FE PB MG	ZN
ICSA		1	12:08 AL	CA	CU FE PB MG	ZN
ICSAB		1	12:12 AL	CA	CU FE PB MG	ZN
CCV		1	12:17 AL	CA	CU FE PB MG	ZN
CCB		1	12:21 AL	CA	CU FE PB MG	ZN
ZZZZZZ		50	12:26			
ZZZZZZ		1	12:30			
ZZZZZZ		1	12:35			
ZZZZZZ		5	12:39			
ZZZZZZ		5	12:44			
ZZZZZZ		1	12:48			
ZZZZZZ		1	12:53			
ZZZZZZ		1	12:57			
ZZZZZZ		1	13:02			
ZZZZZZ		1	13:06			
CCV		1	13:11 AL	CA	CU FE PB MG	ZN
CCB		1	13:15 AL	CA	CU FE PB MG	ZN
ZZZZZZ		5	13:20			
ZZZZZZ		25	13:24			
ZZZZZZ		5	13:29			
ZZZZZZ		5	13:33			
ZZZZZZ		50	13:38			
ZZZZZZ		250	13:42			
ZZZZZZ		50	13:47			
ZZZZZZ		50	13:52			
ZZZZZZ		5	13:56			
ZZZZZZ		50	14:01			
CCV		1	14:05 AL	CA	CU FE PB MG	ZN
CCB		1	14:10 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	14:15			
ZZZZZZ		1	14:19			
ZZZZZZ		1	14:24			
ZZZZZZ		2	14:28			
ZZZZZZ		1	14:33			
ZZZZZZ		5	14:38			
ZZZZZZ		1	14:42			
ZZZZZZ		1	14:47			
ZZZZZZ		1	14:51			
ZZZZZZ		1	14:56			
CCV		1	15:00 AL	CA	CU FE PB MG	ZN
CCB		1	15:04 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:09			
ZZZZZZ		1	15:14			
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		10	15:32				
ZZZZZZ		10	15:36				
ZZZZZZ		10	15:41				
ZZZZZZ		10	15:45				
ZZZZZZ		5	15:50				
CCV		1	15:54 AL	CA	CU FE PB MG		ZN
CCB		1	15:58 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	16:03				
ZZZZZZ		1	16:07				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:17				
ZZZZZZ		1	16:21				
ZZZZZZ		1	16:26				
ZZZZZZ		1	16:30				
ZZZZZZ		1	16:35				
ZZZZZZ		1	16:39				
ZZZZZZ		1	16:44				
CCV		1	16:48 AL	CA	CU FE PB MG		ZN
CCB		1	16:52 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	16:57				
PBSBJ31ICS1		1	17:02		CU PB		ZN
LCSOBJ31ICS1		1	17:06		CU PB		ZN
ZZZZZZ		1	17:11				
ZZZZZZ		1	17:15				
ZZZZZZ		1	17:20				
SE6768-001	DSY-SD-AA01-0012	1	17:24		CU PB		ZN
SE6768-002	DSY-SD-AA01-1224	1	17:29		CU PB		ZN
SE6768-003	DSY-SD-AA01-2448	1	17:33		CU PB		ZN
SE6768-004	DSY-SD-DUP33-101211	1	17:38		CU PB		ZN
CCV		1	17:42 AL	CA	CU FE PB MG		ZN
CCB		1	17:47 AL	CA	CU FE PB MG		ZN
SE6768-005	DSY-SD-AA05-0012	1	17:51		CU PB		ZN
SE6768-006	DSY-SD-AA05-1224	1	17:56		CU PB		ZN
SE6768-007	DSY-SD-AA05-2448	1	18:00		CU PB		ZN
ZZZZZZ		1	18:05				
ZZZZZZ		5	18:10				
ZZZZZZ		1	18:14				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:23				
ZZZZZZ		1	18:27				
ZZZZZZ		1	18:32				
CCV		1	18:36 AL	CA	CU FE PB MG		ZN
CCB		1	18:41 AL	CA	CU FE PB MG		ZN
ZZZZZZ		1	18:45				
ZZZZZZ		1	18:50				
ZZZZZZ		1	18:54				
ZZZZZZ		5	18:59				
ZZZZZZ		1	19:03				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:12				
ZZZZZZ		1	19:17				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-23

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
PBWBJ31ICW1		1	19:21		CU PB	ZN
LCSWBJ31ICW1		1	19:26		CU PB	ZN
CCV		1	19:30 AL	CA	CU FE PB MG	ZN
CCB		1	19:34 AL	CA	CU FE PB MG	ZN
SE6788-008	DSY-SD-RB13-101211	1	19:39		CU PB	ZN
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:06			
ZZZZZZ		1	20:11			
ZZZZZZ		5	20:15			
ZZZZZZ		1	20:20			
CCV		1	20:24 AL	CA	CU FE PB MG	ZN
CCB		1	20:29 AL	CA	CU FE PB MG	ZN

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99546	Lloyd Kahn	19-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	POL	LOD
MBLANK	WG99874	ASTM D2216	27-OCT-11	26-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99546-2	LCS	WG99546	19-OCT-11	N/A	ug/gdrywt	400000.000	400000	101	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99874-2	LCS	WG99874	27-OCT-11	26-OCT-11	%	90	92.	102	80-120	

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 9, 2011

Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
jObrin@katahdinlab.com

Re: **Narrative 041128162 Modified Draft ASTM Sieve Method with Qualitative TEM analysis**

Dear Jennifer:

The following set of samples was received October 20th 2011 via FedEx. These samples were received under chain of custody from Katahdin Analytical Services, Scarborough, ME for asbestos content analysis. All samples are associated with the project SE6768/SE6841. The samples submitted were saturated with moisture and required additional time to dry. Most of the samples were received in good condition, except for the following samples below:

EMSL Sample Number	Client Sample Number	Condition at Time of Receipt
041128162-0015	DSY-SD-AA17-0012	Jar broken
041128162-0019	DSY-SD-AA21-1224	Jar broken
041128162-0028	DSY-SD-AA28-0016	Jar labeled DSY-SD-AA28-0012
041128162-0031	DSY-SD-AA30-1224	Jar broken

The samples were logged in following normal lab procedures. All analyses were performed in the Cinnaminson, NJ laboratory.

Modified Draft ASTM Sieve method

The samples were first dried prior to being fractioned into 3 sieved components, Coarse (<19 mm), Medium (>2 mm) and Fine (<2 mm). The sieved samples were then analyzed via polarized light microscopy (PLM) using the procedures from the EPA 600/R-93/116 method. Any asbestos found in the fine fraction was analyzed via a 400 point count analysis. All data was reported on a percent asbestos basis. The limit of quantification for this method is <1%.

Samples that did not have asbestos detected were analyzed via Qualitative Transmission Electron Microscopy (TEM). Due to the amount of organic material and calcium fibers in these samples, an aliquot of the sample was treated with dilute hydrochloric acid prior to analysis.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

QC Performed

QC guidelines were not specified by the client. EMSL performed QC in compliance with our Quality Assurance Manual (QAM) and pertinent SOPs. For this analysis, two inter-analyst and four intra-analyst samples were analyzed. Six laboratory blanks were also analyzed. All QC was found to be in concordance.

Stephen Siegel, CIH
Asbestos Lab Manager,
EMSL Westmont, NJ

Robyn Denton
Asbestos Quality Assurance Manager
EMSL Westmont, NJ

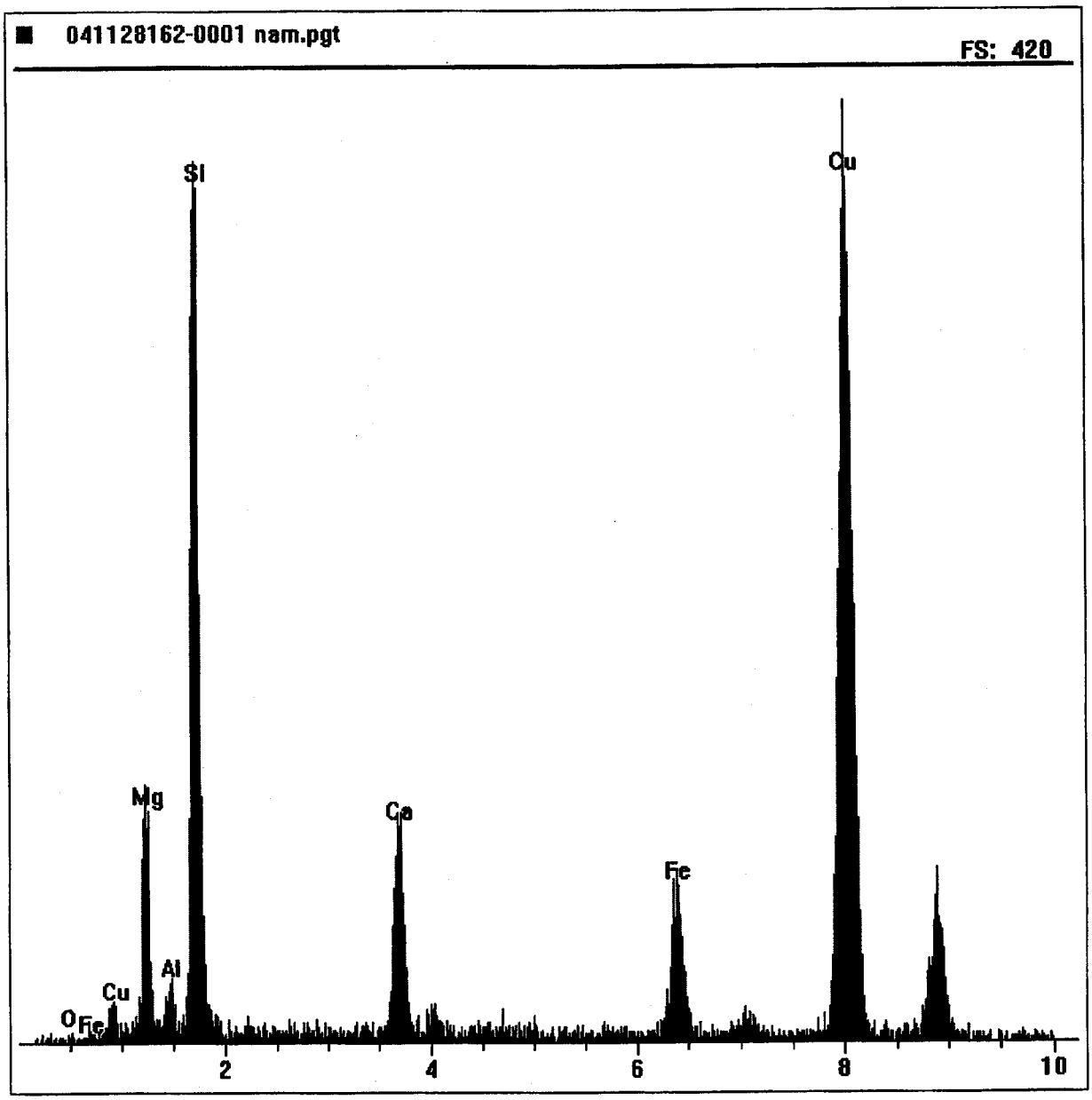
2. Tabulated Sample Results

EMSL ANALYTICAL, INC.

Energy Dispersive X-Ray Analysis
Qualitative Spectrum

File: C:\Program Files\PGT\Data\041128162-0001 nam.pgt
Collected: November 08, 2011 12:41:16

Live Time:	35.49	Count Rate:	974	Dead Time:	19.08 %
Beam Voltage:	20.00	Beam Current:	2.00	Takeoff Angle:	31.00



3. Worksheets/Benchsheets

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:**

Address: | **Date/Time Due:**

Fax:

Project:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Rolled, 7. Fibrils, 8. Modulis, 9. Bundle Shaped, 10. Other; Sign of Elongation (E): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low 0.010, 2. Mod 0.010-0.030, 3. High >0.030, 4. None 0.00 or Isotropic; Fiber Color (FC): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Dispersion (D): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulous
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-01 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C), (T), (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G. Viet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

Date/Time Due:

TAT:

Special Instructions

ASTM

Order Number

041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (4)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Way, 2. Bright, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Rolled, 7. Fibril, 8. Mobile, 9. Basic Shape, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1. Low 0.010, 2. Mid 0.010-0.050, 3. High >0.050, 4. Xtals 0.020 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macroscopic	Treatment	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-04 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	GV
-04 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-04 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-05 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		1 2	<1 <1			20	99		1.551, 1.680 / 1.557, 1.694 / 1,2 / 1 / 2 P / 1,2 B / (FC) 6 / 1 / E	LM
-05 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		1 2	<1 <1			20	99		1.550, 1.694 / 1.535, 1.694 / 1,2 / 1 / 2 P / 1,2 B / (FC) 6 / 1 / E	LM
-05 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-06 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		2	<1	11	2	20	98		1.683 / 1.696 / 2 / 1 / 2 P / 2 B / (FC) 6 / 1 / E	MK
-06 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		2	<1	11	2	20	98		1.680 / 1.696 / 2 / 1 / 2 P / 2 B / (FC) 6 / 1 / E	MK
-06 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G.Vliet L.M. 11/4/11 Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
7 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. 1.557 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
7 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
7 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
8 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
8 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
8 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
9 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.557 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
9 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.549 ⊥ R.I. 1.554 ∥ R.I.; 1 M 1 S; 2 P 1 B (FC) 6 1 E
9 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC — Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
10 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I.	1.558 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
10 MEDIUM	(C) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
10 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
11 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T) 1			2	<1						1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
11 MEDIUM	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 2										P B	(FC) E
11 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
12 COARSE	(C) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I.	1.554 ∥ R.I.
	(T) 1										1 M	1 S
	(H) 2										2 P, 1 B	(FC) 6, 1 E
12 MEDIUM	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 2										P B	(FC) E
12 FINE	(C) 2	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.
	(T) 1										M	S
	(H) 1										P B	(FC) E
QC	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E

ams

1.680 1.696 2 1 22 61

1.682 1.696 2 1 22 61

1.680 1.692 2 1 22 61

QC

Analyst: LM Date: 11.5.11 Computer: Date:

Room Temp (C): 23.7

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon-Like, 5 Tapered Ends, 6 Scaled, 7 Fibril, 8 Mobile, 9 Needle Shape, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low: 0.010, 2 Mid: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
13 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
13 MEDIUM	(C) 2 (T) 2 (H)	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
13 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
15 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.547 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ‖ R.I.; M S; P B (FC) E

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 23.6°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon-Like, 5 Tapered Ends, 6 Scalel, 7 Fluted, 8 Acicular, 9 Exotic Shape, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties ⊥ R.I.	Optical Properties ∥ R.I.	M	S	P	B	(FC)	E
16 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
16 MEDIUM	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
16 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
17 COARSE	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
17 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.678	1.695	2	1	2	2	6	1
17 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
18 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
QC	(C) (T) (H)							20										

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 24.8°

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties: Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Soiled, 7. Fibril, 8. Matrix, 9. Exotic Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
19 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
19 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
19 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
20 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
20 MEDIUM	(C) 2, (T) 1, (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
20 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
21 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.549 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
21 MEDIUM	(C) 2, (T) 1, (H) 2	1		1, 2	<1, <1	11	5	20	95	chrys M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
21 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C), (T), (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.678 1.692 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.5

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: [redacted]

Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
22 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.555 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
22 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.548 ⊥ R.I. 1.553 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
22 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
23 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.547 ⊥ R.I. 1.553 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
23 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
23 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
24 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	2	20	98	M10	1.551 ⊥ R.I. 1.555 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
24 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.; M 1 S; P 2 B 1 (FC) 6 E 1
24 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

amo 1.681 1.696; 2 1; 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: _____ Date: _____

Room Temp (C): 20.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scalpel, 7. Fibril, 8. Needle, 9. Exists Singly, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.000 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
25 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
25 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.556 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E
25 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
26 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	<1	11	3	20	92	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
26 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
26 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
27 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	2	20	96	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
27 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M; S; P; 2; B: 1; FC: 6; E: 1
27 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M; S; P; B; FC; E

amo 1.678 1.692 2 1 2 2 61

1.678 1.691 2 1 2 2 61

amo 1.680 1.696 2 1 2 2 61

1.676 1.691 2 1 2 2 61

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.4

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
28 COARSE	(C) 1,4 (T) 2 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.551 / 1.570 ∥ R.I. · 2 M · 1 S · 2 P · 1 B · (FC) a/a/ · 1 E
				amosite	<1						
28 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	5	20	95	M2	1.550 ⊥ R.I. · 1.551 ∥ R.I. · M · S · P · B · (FC)/ · E
2Y FINE	(C) 1 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
29 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 / 1.550 ⊥ R.I. · 1.551 / 1.570 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/a · 1 E
				amosite	<1						
29 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	3	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.576 / 1.585 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/ · 1 E
				amosite	<1						
29 FINE	(C) 1,4 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
30 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 ⊥ R.I. · 1.576 ∥ R.I. · M · S · P · B · (FC) a/ · E
30 MEDIUM	(C) (T) (H)	1		no		11	5	20	95	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
30 FINE	(C) (T) (H)	1		no		11	10	20	90	M2	⊥ R.I. · ∥ R.I. · M · S · P · B · (FC) · E
QC 30 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.550 ⊥ R.I. · 1.576 / 1.594 ∥ R.I. · 2 M · 1 S · 2 P · 2 B · (FC) a/a · 1 E
				amosite	<1						

QC

Analyst: David Portnoi Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): 19.4°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (A), Sign of Elongation (E), Pleochroism (F), Birefringence (G), Dispersion Color (DC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (E)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties: ⊥ R.I.	∥ R.I.	M	S	P	B	(FC)	E
31 COARSE	(C) 4	1		mD				20	100									
	(T) 2																	
	(H) 2																	
31 MEDIUM	(C) 1	1		chry	<1	11	5	20	95	mx	1.550 // 1.560	1.544 // 1.556	1	2				
	(T) 1			Amosite	<1										2	2	4/4	1
	(H) 1																	
31 FINE	(C) 1	1		mx		11	10	20	90	mx								
	(T) 1																	
	(H) 1																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
QC 31 COARSE	(C)							20										
	(T)																	
	(H)																	

QC

Analyst: Dwight Pointer Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0001
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
01	D3	ND								FBCM		
	J4	1-2	2							FBCM		Mg, Si, Al, Ca, Fe
	O13	3	1							FBCM		Si
	H12	4	1							FBCM		Si
	I11	5-7	3							FBCM		Mg, Si, Al Ca, Fe; Si
02	F5	ND								FBCM		
	F11	8-9	2							FBCM		Si
	G15	10-11 ~~ND~~	2							FBCM		Si
	M4	ND								FBCM		
	N10	ND								FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
(Total)		11	11									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg, Al, Si, Ca, Fe; Si

Prepped w/ acid

Grid Box # Bulk-0075 Row O Column 1,2

Analyst BD Scope 04:03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0002
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
03	C7	ND								F B C M		
	D5	↓								F B C M		
	F4	↓								F B C M		
	G11	1	1							F B C M		Si
	D13	2-4	3							F B C M		Mg,Al,Si,Ca,Fe
04	A11	ND								F B C M		
	B13	↓								F B C M		
	D12	↓								F B C M		
	F4	↓								F B C M		
	G7	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		4	4				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing

Prepped w/ Acid

Grid Box # BULK.0075 Row O Column 3,4

Analyst RD Scope 04.03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0003
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
05	G5	ND								F B C M		
	H8	ND								F B C M		
	L10	↓								F B C M		
	J9									F B C M		
	D9									F B C M		
06	B5	ND								F B C M		
	H9									F B C M		
	C13									F B C M		
	D11									F B C M		
	M10	1	1							F B C M		Mg, Al, Si, Ca, Fe
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg Al Si Ca Fe

Prepped w/Acid

Grid Box # Bulk-75 Row 0 Column 5,6

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0004
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P1	03	1	1							F B C M		Ca
	H2	ND								F B C M		
	J4	2-3	2							F B C M		Si, Al, Mg
	K7	4	1							F B C M		Si, Al
	D5	ND								F B C M		
P2	C11	↓								F B C M		
	D14									F B C M		
	K10									F B C M		
	H4	5	1							F B C M		Si
	J2									F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		5	3									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Si, Al, Mg, Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 1,2

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0014
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P3	C7	ND								F B C M		
	D9	〃								F B C M		
	G5	〃								F B C M		
	H11	〃								F B C M		
	D15	〃								F B C M		
P4	A8	1	1							F B C M		Ca
	C10	ND								F B C M		
	D15	〃								F B C M		
	K11	〃								F B C M		
	D13	〃								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1				-	-				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☒ (5) Fibers Containing Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 3,4

Analyst RD Scope CH03 Date 11.08.11
RD 11/08/11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0018
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
U1	A4	ND								F B C M		
	B6	|	1							F B C M		Ca
	B8	|								F B C M		
	D6	|								F B C M		
	F8	|	1							F B C M		Si
U2	O14	|								F B C M		
	L15	|	1							F B C M		Mg, Ca Si, Al
	K11	|								F B C M		
	F14	|								F B C M		
	E4	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		—										

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Ca, Si, Mg, Al

Prepped w/ Acid

Grid Box # Bulk-0075 Row U Column 1,2

Analyst RD Scope 04.03 Date 11.10.11

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
1	041128162-0001	DSY-SD-AA01-0012	10/12/2011	109.64	93.13	14.97	1.86	Y
2	041128162-0002	DSY-SD-AA01-1224	10/12/2011	110.96	96.93	12.76	1.65	Y
3	041128162-0003	DSY-SD-AA01-2448	10/12/2011	75.26	61.02	12.87	1.63	Y
4	041128162-0004	DSY-SD-DUP33-101211	10/12/2011	86.24	67.77	16.16	2.7	Y
5	041128162-0005	DSY-SD-AA05-0012	10/12/2011	119.53	98.32	19.09	2.53	Y
6	041128162-0006	DSY-SD-AA05-1224	10/12/2011	100.08	84.64	13.18	2.48	Y
7	041128162-0007	DSY-SD-AA05-2448	10/12/2011	124.57	93.44	25.08	6.31	Y
8	041128162-0008	DSY-SD-AA09-0012	10/13/2011	65.56	49.83	13.68	2.34	Y
9	041128162-0009	DSY-SD-AA09-1224	10/13/2011	100.73	70.26	24.89	5.91	Y
10	041128162-0010	DSY-SD-AA09-2448	10/13/2011	125.05	96.76	22.17	6.49	Y
11	041128162-0011	DSY-SD-AA13-0012	10/13/2011	65.37	49.82	13.41	2.33	Y
12	041128162-0012	DSY-SD-AA13-1224	10/13/2011	113.34	89.41	19.39	4.78	Y
13	041128162-0013	DSY-SD-AA13-2448	10/13/2011	98.20	82.65	13.39	2.57	Y
14	041128162-0014	DSY-SD-AA13-2448DUP	10/13/2011	77.32	63.36	11.73	2.82	Y
15	041128162-0015	DSY-SD-AA17-0013	10/13/2011	96.54	81.39	12.88	2.48	Y
16	041128162-0016	DSY-SD-AA17-1224	10/13/2011	95.61	78.01	14.97	3.04	Y
17	041128162-0017	DSY-SD-AA17-2448	10/13/2011	113.68	89.28	20.83	3.99	Y
18	041128162-0018	DSY-SD-AA21-0012	10/13/2011	63.55	53.08	9.49	1.4	Y
19	041128162-0019	DSY-SD-AA21-1224	10/13/2011	74.76	63.49	9.78	1.83	Y
20	041128162-0020	DSY-SD-AA21-2448	10/13/2011	88.76	78.89	8.24	1.67	Y
21	041128162-0021	DSY-SD-DUP34-101311	10/13/2011	105.22	82.26	19.23	4.02	Y
22	041128162-0022	DSY-SD-AA24-0012	10/13/2011	104.98	83.43	19.38	2.53	Y

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
23	041128162-0023	DSY-SD-AA24-1224	10/13/2011	75.39	60.20	13.51	1.96	Y
24	041128162-0024	DSY-SD-AA24-2448	10/13/2011	105.00	75.29	25.04	4.95	Y
25	041128162-0025	DSY-SD-AA26-0012	10/13/2011	108.33	76.40	29.73	2.71	Y
26	041128162-0026	DSY-SD-AA26-1224	10/13/2011	140.83	93.00	39.86	8.39	Y
27	041128162-0027	DSY-SD-AA26-2448	10/13/2011	121.13	79.09	31.17	11.03	Y
28	041128162-0028	DSY-SD-AA28-0016	10/13/2011	125.92	43.07	67.23	15.61	Y
29	041128162-0029	DSY-SD-DUP35-101311	10/13/2011	123.34	46.17	64.05	13.37	Y
30	041128162-0030	DSY-SD-AA30-0012	10/13/2011	292.02	11.36	263.61	17.26	Y
31	041128162-0031	DSY-SD-AA30-1224	10/13/2011	285.69	4.03	262.76	17.17	Y

4. QC Data Reports/Logs

Monthly PLM Bulk QC Summary

Laboratory: Cinnaminson, NJ **Report #** 1 **Month/Year:** Nov-11

				Original		QC		Variance		
	Date	Reference #	Sample #	Analyst	Result	Analyst	Result	Original	QC	Conclusion
1	11/4/11	041128162-0003	DSY-SD-AA01-2448	GV	0	TY	0	0.00	0.00	Pass
2	11/4/11	041128162-0006	DSY-SD-AA05-1224	GV	0	FD	0	0.00	0.00	Pass
3	11/7/11	041128162-0025C	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
4	11/7/11	041128162-0025M	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
5	11/7/11	041128162-0025F	DSY-SD-AA26-0012	LM	0	LM	0	0.00	N/A	Pass
6	11/7/11	041128162-0030	DSY-SD-AA30-0012	DP	0.5	DP	0.5	0.00	N/A	Pass

EMSL PLM ANALYST ACCURACY

Analyst: Leslie McCluskey

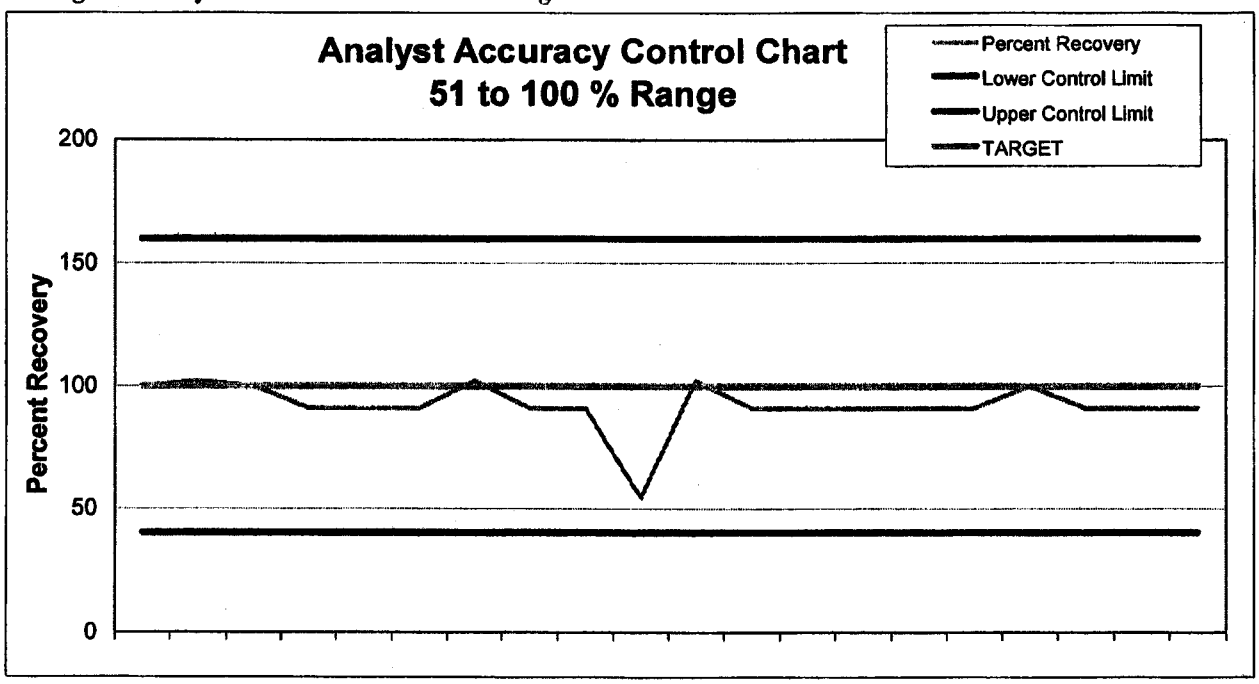
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
1/5/11	6	Chrysotile	55.00	Chrysotile	55.00	IN	100	0	IN
1/6/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
1/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
1/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
2/8/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
3/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	30.00	IN	55	45	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
5/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
6/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
10/21/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **8.5** *Target = 0*



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EMSL PLM ANALYST ACCURACY

Analyst: Melissa Klinedinst

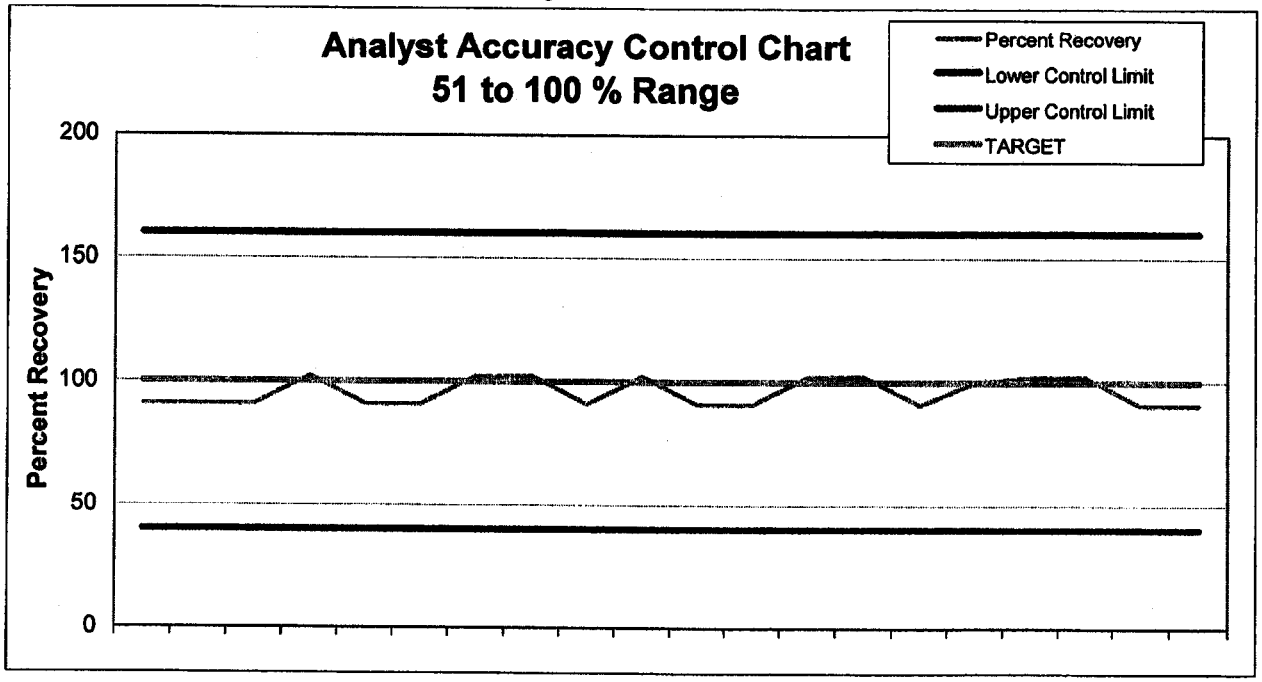
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
6/29/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/11/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/21/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/24/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
9/29/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/3/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/9/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
11/2/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/3/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/6/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **5.8** ***Target = 0***



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EMSL PLM ANALYST ACCURACY

Analyst: Dave Poitras

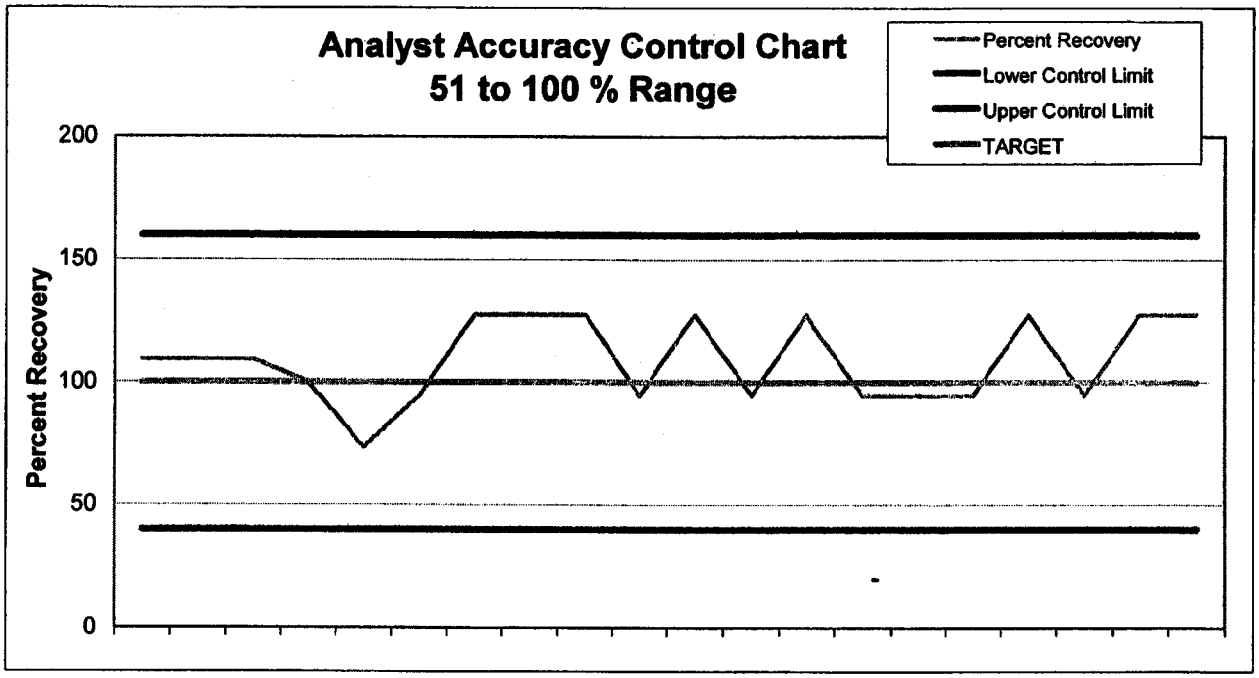
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
3/28/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/12/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
5/3/11	3	Chrysotile	95.00	Chrysotile	70.00	IN	74	26	IN
6/28/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
6/29/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/12/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
7/26/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/2/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/20/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/8/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN

Average Accuracy Coeficent = **15.4** ***Target = 0***



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EMSL PLM ANALYST ACCURACY

Analyst: Garret Vliet

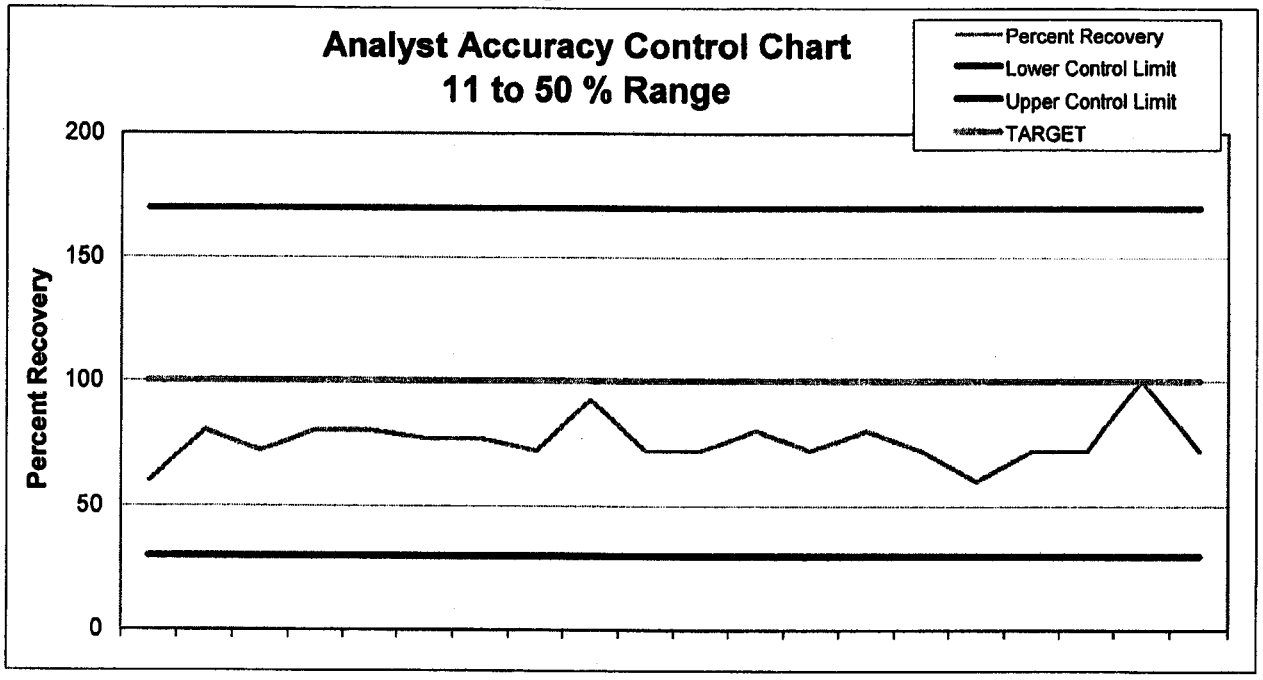
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/24/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	12.00	IN	92	8	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
9/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN

Average Accuracy Coeficent = **24.3** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Frank DiCrescenzo

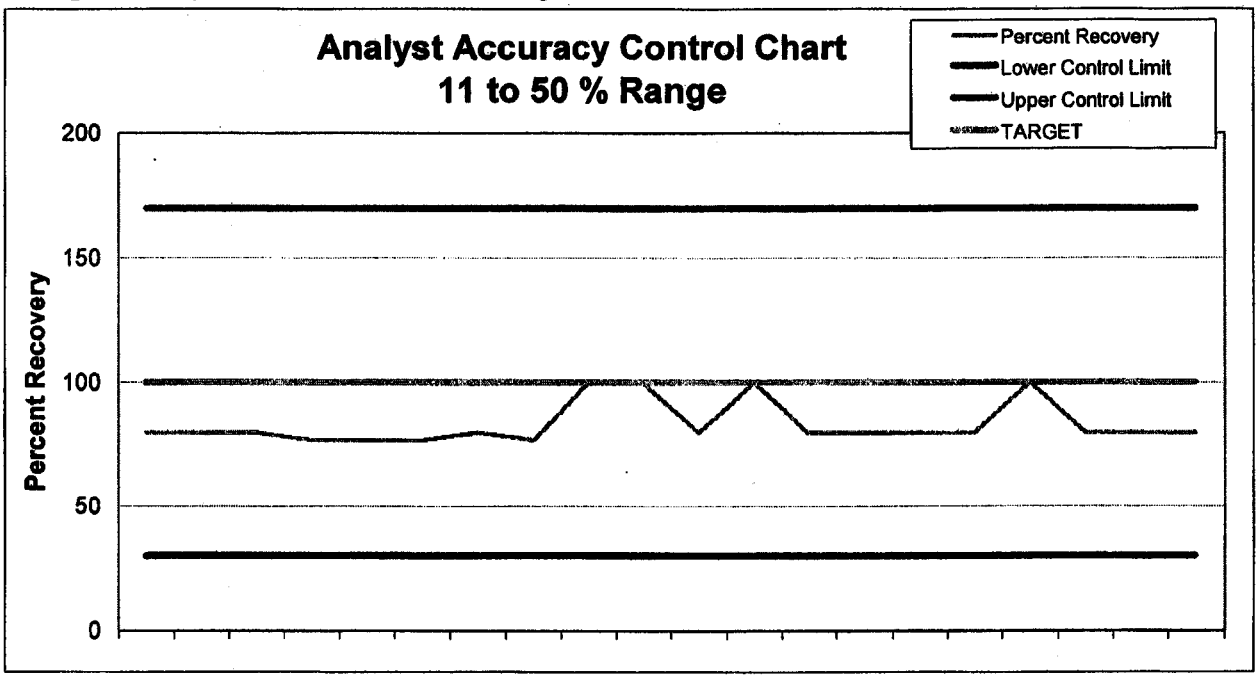
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/18/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/9/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN

Average Accuracy Coeficent = 16.6 *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Ted Young

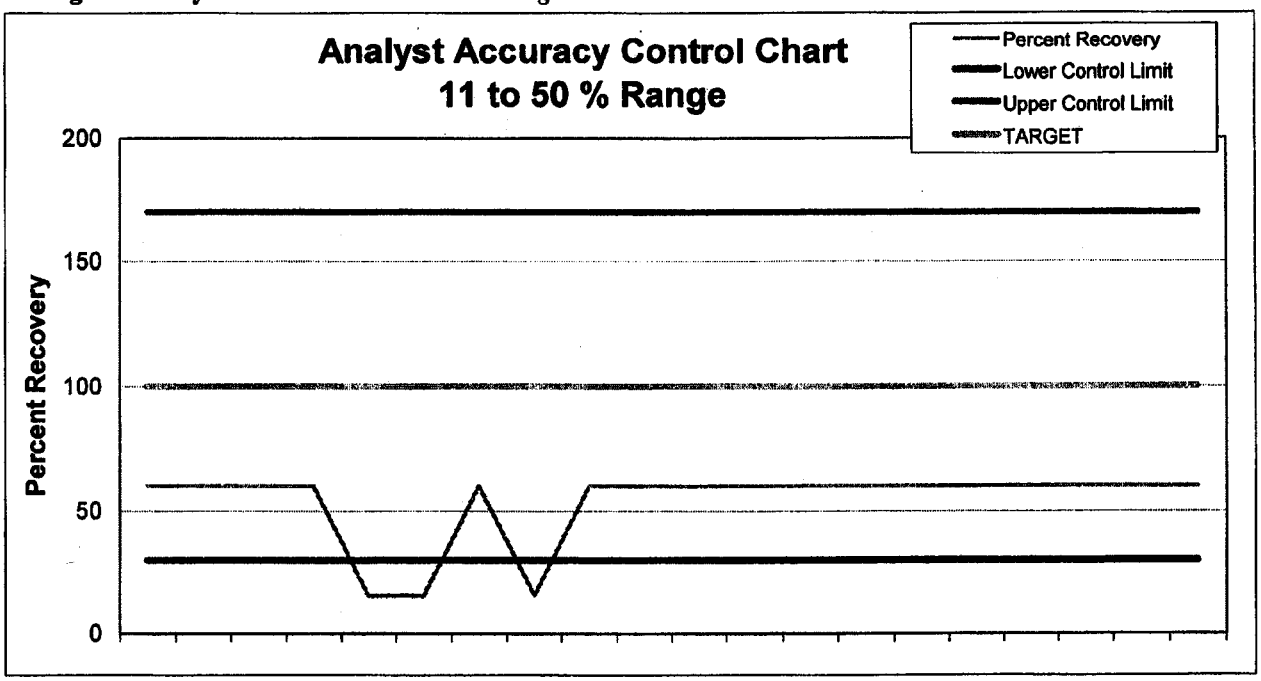
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/20/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
7/1/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/16/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN

Average Accuracy Coeficent = **46.7** ***Target = 0***



Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10.5 6 20.3	(C)			1	50			20			1.551 ⊥ R.I. 1.558 ∥ R.I.
	(T)										M S
	(H)										2 P 1 B (FC) 6 1 E
11.7 6 20.3	(C)			1	50			20			1.550 ⊥ R.I. 1.557 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 P 1 B (FC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: Computer: Date:

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
11/2/11 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/3 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/6 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
11/7 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(PC) 6 1 E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(PC) E

21.6°

21.6°

21.3°

21.6°

Analyst: MK Date: Nov 11 Computer: Date:

Room Temp (C):

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
1/1 8	(C)			act/tre	3			20	97		⊥ R.I.	∥ R.I.	21.1°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/5 6	(C)			chry	70			20	30		⊥ R.I.	∥ R.I.	25.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/7 6	(C)			chry	70			20	30		⊥ R.I.	∥ R.I.	19.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/8 1	(C)			act/tre	<1			20	100		⊥ R.I.	∥ R.I.	20°C		
	(T)										M	S			
	(H)										P B	(PC) E			
1/9 10	(C)			antho	5			20	95		⊥ R.I.	∥ R.I.	22.8°C		
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(PC) E			

Analyst: David Poitras Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (E)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc. (C)	(T)	(H)	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11/1 (8)		W	2			5	2			20	98		1.605 ⊥ R.I. 1.618 ∥ R.I. 2 M 1 S 2P 2 B (FC) 1 E
11/2 (3)			4			1	65			20	35		1.557 ⊥ R.I. 1.558 ∥ R.I. M S 2P B (FC) E
11/3 (3)			A			1	75			20	25		1.552 ⊥ R.I. 1.557 ∥ R.I. M S 2P B (FC) E
11/4 (9)			A			1	18			20	82		1.552 ⊥ R.I. 1.557 ∥ R.I. M S 2P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E
										20			⊥ R.I. ∥ R.I. M S P B (FC) E

Analyst: G. Uliet Date: 11/1/11 Computer: _____ Date: _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Special Instructions | Order Number

Fax:

Project: Ref Slides

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (S)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
8	(C)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I.
10/31	(T)										M / S
	(H)										P / B / (FC) / E
8	(C)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I.
11/1	(T)										M / S
	(H)										P / B / (FC) / E
3	(C)			1	60	~	~	20	40		⊥ R.I. / ∥ R.I.
11/2	(T)										M / S
	(H)										P / B / (FC) / E
3	(C)			1	60	~	~	20	40		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/3	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
9	(C)			1	20	~	~	20	80		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/4	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
6	(C)			1	50	~	~	20	50		1.550 ⊥ R.I. / 1.557 ∥ R.I.
11/5	(T)										M / S
	(H)										2 P / 1 B / (FC) / 1 E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

FD FD FD FD FD

Analyst: FD Date: 11-5-11 Computer: _____ Date: _____

Room Temp (C): _____

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11-1-11 8-1.605	(C)			4/5	2			20	98		1.613 ⊥ R.I. 1.635 ∥ R.I.
	(T)										2 M 1 S
	(H)										2P 2B (FC) 6 3 E
11-2-11 3-1.550	(C)			1	60			20	40		1.548 ⊥ R.I. 1.574 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (FC) 6 1 E
11-3-11 3-1.550	(C)			1	60			20	40		1.549 ⊥ R.I. 1.576 ∥ R.I.
	(T)										1 M 1 S
	(H)										2P 1 B (FC) 6 1 E
11-4-11 9-1.550	(C)			1	15			20	85		1.550 ⊥ R.I. 1.577 ∥ R.I.
	(T)										1 M 1 S
	(H)										2P 1 B (FC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: Tai Young Date: Nov. 2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM sieve

Order Number: 041128162

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scalel, 7. Fibril, 8. Needle, 9. Blade Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
BLANK 1 MED.	(C) 3	1		NP	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 2 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 3 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 1 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 2 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
BLANK 3 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I. G.V.
	(T) 2										M	S
	(H) 1										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC)	E

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3 °C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:** QC

Address: | **Date/Time Due:**

Special Instructions: ASTM

Order Number: 28162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Beaded, 7. Fibril, 8. Mesh-like, 9. Exotic Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1 Low: 0.010, 2 Mod 0.010-0.050, 3 High: 0.050, 4 None: 0.001 or Isotropic; Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless; Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
intra QC 25 C	(C) 2			1	<1	[illegible]		20	98	M10	1.551 ⊥ R.I. 1.551 ∥ R.I.
	(T) 1					11	2				1 M 1 S
	(H) 2										2 P 1 B (FC) 6 1 E
M	(C) 2			1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.
	(T) 1										1 M 1 S
	(H) 2										2 P 1 B (FC) 6 1 E
F	(C) 2			ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.
	(T) 1										M S
	(H) 1										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample		Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-2 COARSE	(C) 2	1/2/3		ND		—	—	20	100	NF	⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

FD

Analyst: FD Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | **Logged:** | **TAT:** QC

Address: | **Date/Time Due:**

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-3 COARSE	(C) 2	2,3,5		NID				20	100		⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

Analyst: Tw Kong Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

5. Client and EMSL Internal Chains of Custody

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page 1 of 1

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
SE6841	

LAB USE ONLY WORK ORDER #: SE6768 ~~SE6841~~

KATAHDIN PROJECT NUMBER

REMARKS: To EMSL

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
					ANALYSIS AND CONTAINER TYPE / PRESERVATIVES										
•	DSY-SD-AA01-0012	10-12-11/14:20	SL	1	✓		SDG: DSY-23								
•	-AA01-1224	/14:23		1	✓										
•	-AA01-2448	/14:28		1	✓										
•	-DUP33-101211	/00:00		1	✓										
•	-AA05-0012	/14:45		1	✓										
•	-AA05-1224	/14:48		1	✓										
•	-AA05-2448	/14:51		1	✓										
		/													
•	DSY-SD-AA09-0012	10-13-11/11:55	SL	1	✓		SDG: DSY-24								
•	-AA09-1224	/11:58		1	✓										
•	-AA09-2448	/12:01		1	✓										
•	-AA13-0012	/12:20		1	✓										
•	-AA13-1224	/12:23		1	✓										
•	-AA13-2448	/12:26		2	✓	MS/MSD									
•	-AA17-0012	/12:45		1	✓										
•	-AA17-1224	/12:48		1	✓										

COMMENTS DOD QSM 4.1 ND to LOD QC Level IV Tetra Tech ADAPTEDD

Due ~~12~~ 11-1-11 (31)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11/15:15	10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin
ANALYTICAL SERVICES

600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

D4112816 2

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:

LAB USE ONLY WORK ORDER #: SE6841

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: Asbestos (Filt. ☐Y ☐N)	
1	DSY-SD-AA17-2448	10-13-11 / 12:51	SL	1	✓	
2	-AA21-0012	/ 13:05				SDG: DSY-24
3	-AA21-1224	/ 13:08				
4	-AA21-2448	/ 13:11				
5	-Dup34-101311	/ 00:00				
6	-AA24-0012	/ 13:25				
7	-AA24-1224	/ 13:28				
8	-AA24-2448	/ 13:31				
9	-AA26-0012	/ 14:00				
10	-AA26-1224	/ 14:03				
11	-AA26-2448	/ 14:06				
12	-AA28-0016	/ 14:30				Jar marked 0012
13	-Dup35-101311	/ 00:00				
14	-AA30-0012	/ 14:45				
15	-AA30-1224	/ 14:48				Jar rec'd broken
		/				

COMMENTS See Page 1 called client/left message for Teste TAT JK

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-13-11 / 15:15	C LaLena 10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

REPORT TO INSTRUCTIONS

- ☐ Send Receipt Confirmation Emails
- ☐ Email Report Only-Do not send hard copy
- ☐ No electronic signatures
- ☐ Project ID required
- ☐ Cust. COC ID required
- ☐ Miscellaneous account

Sales Rep and Comment: ssteinmetz

Instructions
Received 2 day extention on due date

BILL TO INSTRUCTIONS

- ☐ Exempt from prep charge
- ☐ Exempt from off hour min charges
- ☐ Exempt from layer/aliquot charges
- ☐ Email Invoice Only- Do not send hard copy.
- ☐ Credit Card on File
- ☐ P.O. Required

Billing Frequency: With Report -- Print and send an invoice for each Order ID

Use Billing Contact:
Accounting Terms: N30
Payment Directions: With Report

Instructions

Internal Comment

Test: PLM ASTM Sieve Quantitative **Matrix** Soils **TAT:** 2 Week **Qty:** 31

- ☐ Lab Opening Exempt For Test
- ☐ Prep Charge Exempt For Test
- ☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011

Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments
weights are estimated using a blank sample jar as tare weight. Sludge could not be completely removed.

Prepped: DS **Date** 11/3/11
Analyzed: G.Vliet/MM MC **Date** 11/4/11 115, 117
Data Entry AD **Date** 11.8.11
Screened: **Date**
Mailed: KB **Date** 11/10/11

Special Test Instructions

11/5/11

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		~~11/3/2011~~ 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0005	DSY-SD-AA05-0012		11/3/2011 2:00:00 PM
041128162-0006	DSY-SD-AA05-1224		11/3/2011 2:00:00 PM
041128162-0007	DSY-SD-AA05-2448		11/3/2011 2:00:00 PM
041128162-0008	DSY-SD-AA09-0012		11/3/2011 2:00:00 PM
041128162-0009	DSY-SD-AA09-1224		11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400

Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

041128162-0010	DSY-SD-AA09-2448	11/3/2011 2:00:00 PM
041128162-0011	DSY-SD-AA13-0012	11/3/2011 2:00:00 PM
041128162-0012	DSY-SD-AA13-1224	11/3/2011 2:00:00 PM
041128162-0013	DSY-SD-AA13-2448	11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP	11/3/2011 2:00:00 PM
041128162-0015	DSY-SD-AA17-0012	11/3/2011 2:00:00 PM
041128162-0016	DSY-SD-AA17-1224	11/3/2011 2:00:00 PM
041128162-0017	DSY-SD-AA17-2448	11/3/2011 2:00:00 PM
041128162-0018	DSY-SD-AA21-0012	11/3/2011 2:00:00 PM
041128162-0019	DSY-SD-AA21-1224	11/3/2011 2:00:00 PM
041128162-0020	DSY-SD-AA21-2448	11/3/2011 2:00:00 PM
041128162-0021	DSY-SD-DUP34-101311	11/3/2011 2:00:00 PM
041128162-0022	DSY-SD-AA24-0012	11/3/2011 2:00:00 PM
041128162-0023	DSY-SD-AA24-1224	11/3/2011 2:00:00 PM
041128162-0024	DSY-SD-AA24-2448	11/3/2011 2:00:00 PM
041128162-0025	DSY-SD-AA26-0012	11/3/2011 2:00:00 PM
041128162-0026	DSY-SD-AA26-1224	11/3/2011 2:00:00 PM
041128162-0027	DSY-SD-AA26-2448	11/3/2011 2:00:00 PM
041128162-0028	DSY-SD-AA28-0016	11/3/2011 2:00:00 PM
041128162-0029	DSY-SD-DUP35-101311	11/3/2011 2:00:00 PM
041128162-0030	DSY-SD-AA30-0012	11/3/2011 2:00:00 PM
041128162-0031	DSY-SD-AA30-1224	11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *11/8/2011 11:23:35 AM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

Test: **TEM ASTM Sieve Qualitative** **Matrix** Soils **TAT:** 2 Week **Qty:** 5

☐ Lab Opening Exempt For Test
☐ Prep Charge Exempt For Test
☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments

Prepped: DS **Date:** 11/8/11
Analyzed: RD **Date:** 11.8.11
Data Entry ↓ **Date:** 11.8.11
Screened: **Date:**
Mailed: KB **Date:** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		11/3/2011 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP		11/3/2011 2:00:00 PM

0411 Bulk 0076 E

Reprep w/acid

0411 Bulk 0075 O

6. Equipment Performance Checks

PLM Calibration & Contamination Record

Lab: Cinnaminson Month / Year: November / 2011

PLM Scope #: 02

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	C.H.	✓	✓	✓	✓	✓	✓	420	589
11/2/11	C.H.	✓	✓	✓	✓	✓	✓		
11/3/11	C.H.	✓	✓	✓	✓	✓	✓		
11/4/11	C.H.	✓	✓	✓	✓	✓	✓		
11/5/11	LM	✓	✓	✓	✓	✓	✓		
11/7/11	LM/C.H	✓	✓	✓	✓	✓	✓		
11/8/11	C.H	✓	✓	✓	✓	✓	✓		
11/9/11									
11/10/11									
11/11/11									
11/									
11/									
11/									
11/									
11/									
11/									

26.1°C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Conn Month / Year: Nov 2011

PLM Scope #: 10

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/2/11	MK	✓	✓	✓	✓	✓	✓	460	620
11/3	MK	✓	✓	✓	✓	✓	✓		
11/6	MK	✓	✓	✓	✓	✓	✓		
11/7	MK	✓	✓	✓	✓	✓	✓		
11/9	MK	✓	✓	✓	✓	✓	✓		

21.6 °C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinn. N.J. Month / Year: November 2011

PLM Scope #: 5

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/2011	DP	✓	center	✓	align	✓	✓	460	620
11/2/2011	DP	✓	center	✓	✓	✓	✓		
11/5/2011	DP	✓	center	✓	✓	✓	✓		
11/7/2011	DP		center	✓	✓	✓	✓		
11/8/2011	DP	✓	center	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson 04 Month / Year: Nov. 2011

PLM Scope #: 01

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	G.V.	/	/	/	/	/	//	460	600
11/2/11	G.V.	/	/	/	/	/	//		
11/3/11	G.V.	/	/	/	/	/	//		
11/4/11	G.V.	/	/	/	/	/	//		
11/7/11	G.V.	/	/	/	/	/	//		
11/9/11	G.V.	/	/	/	/	/	//		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson-Asbestos Month / Year: 11/11

PLM Scope #: 06

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11-1-11	FD	✓	✓	✓	✓	✓	✓	460	620
11-2-11	FD	✓	✓	✓	✓	✓	✓		
11-3-11	FD	✓	✓	✓	✓	✓	✓		
11-4-11	FD	✓	✓	✓	✓	✓	✓		
11-5-11	FD	✓	✓	✓	✓	✓	✓		
11-8-11	FD	✓	✓	✓	✓	✓	✓		
11-9-11	FD	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Livermore Month / Year: Nov / 2011

PLM Scope #: 4 Tai Yun

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1	TY	✓	✓	✓	✓	✓	✓	4.55	5.30
11/2	TY	✓	✓	✓	✓	✓	✓		
11/3	TY	✓	✓	✓	✓	✓	✓		
11/4	TY	✓	✓	✓	✓	✓	✓		
11/7	TY	✓	✓	✓	✓	✓	✓		
11/8	TY	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

Daily TEM Calibration Sheet

Month: November Year: 2011 Scope: 04-03

Day (1-31)	Analyst Initials	Scope Align.	LN Dewar Filled	Al Peak Actual	Al Peak Accepted Limit	Cu Peak Actual	Cu Peak Accepted Limit	Pass/Fail* (circle)
1	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
2	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
3	CG	✓	FL	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
4	CG	✓	CG	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
5			FL		1.47-1.49		8.03-8.05	Pass/Fail
6					1.47-1.49		8.03-8.05	Pass/Fail
7			FL		1.47-1.49		8.03-8.05	Pass/Fail
8	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
9			FL		1.47-1.49		8.03-8.05	Pass/Fail
10	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
11					1.47-1.49		8.03-8.05	Pass/Fail
12					1.47-1.49		8.03-8.05	Pass/Fail
13					1.47-1.49		8.03-8.05	Pass/Fail
14					1.47-1.49		8.03-8.05	Pass/Fail
15					1.47-1.49		8.03-8.05	Pass/Fail
16					1.47-1.49		8.03-8.05	Pass/Fail
17					1.47-1.49		8.03-8.05	Pass/Fail
18					1.47-1.49		8.03-8.05	Pass/Fail
19					1.47-1.49		8.03-8.05	Pass/Fail
20					1.47-1.49		8.03-8.05	Pass/Fail
21					1.47-1.49		8.03-8.05	Pass/Fail
22					1.47-1.49		8.03-8.05	Pass/Fail
23					1.47-1.49		8.03-8.05	Pass/Fail
24					1.47-1.49		8.03-8.05	Pass/Fail
25					1.47-1.49		8.03-8.05	Pass/Fail
26					1.47-1.49		8.03-8.05	Pass/Fail
27					1.47-1.49		8.03-8.05	Pass/Fail
28					1.47-1.49		8.03-8.05	Pass/Fail
29					1.47-1.49		8.03-8.05	Pass/Fail
30					1.47-1.49		8.03-8.05	Pass/Fail
31					1.47-1.49		8.03-8.05	Pass/Fail

*** Any failing results need immediate corrective action**

Controlled Document
Confidential Business Information/Property of EMSL Analytical, Inc.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Chrysotile Beam Dose Sensitivity

(Quarterly)

Date	Initials	Negative Numbers		At least 90% of patterns >15 seconds ?
		SAED	Morphology	
1/27/2009	JRB	03070	03071	PASS
5/7/2009	KLB	03125	03124	PASS
8/5/2009	KLB	03_247	03_246	PASS
11/3/2009	KLB	03-356	03-357	PASS
2/8/2010	DY	03_372	03_373	PASS
5/18/2010	DY	03373	03374	PASS
8/16/2010	DY	03030	03031	PASS
11/5/2010	CG	11-5-10CG6	11-5-10CG5	PASS
2/18/2011	CG	03125	03126	PASS
5/20/2011	CG	03155	03154	PASS
8/18/2011	CG	03227	03228	PASS
11/4/2011	CG	03316	03317	PASS

Comments:

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

		Negative (Camera)			
Date	Initials	Negative Number	Camera Length	Camera Constant	Is 2 Standard Dev. < 5% Mean?
2/25/2010	CJG	03-37216	100	516.02	PASS
3/17/2010	CJG	03-6[4]	100	514.61	PASS
5/18/2010	DY	03006	100	501.47	PASS
6/18/2010	DY	03024	100	510.82	PASS
7/28/2010	DY	03027	100	521.57	PASS
9/3/2010	CG	03030	100	517.31	PASS
10/4/2010	CG	03035	100	521.76	PASS
11/5/2010	CG	11-5-10-CG1	100	526.44	PASS
12/16/2010	CG	03-278	100	527.61	PASS
1/13/2011	CG	1-13-10 CG1	100	523.21	PASS
2/17/2011	CG	03122	100	529.45	PASS
3/18/2011	CG	03139	100	523.70	PASS
4/15/2011	CG	03144	100	510.25	PASS
5/20/2011	CG	03156	100	522.70	PASS
6/13/2011	CG	03163	100	522.09	PASS
7/12/2011	CG	03169	100	533.34	PASS
8/11/2011	CG	03219	100	529.18	PASS
9/15/2011	CG	03258	100	532.16	PASS
10/12/2011	CG	03289	100	524.71	PASS
11/4/2011	CG	03318	100	532.69	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03
Detector: PGT Avalon

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

On Screen					
Date	Initials	Camera Length	Aperture #	Aperture Diameter	Is 2 Standard Dev. < 5% Mean?
7/28/2010	DY	24	1	1.12	PASS
9/3/2010	CG	24	1	1.18	PASS
10/4/2010	CG	24	1	1.18	PASS
11/5/2010	CG	24	1	1.18	PASS
12/16/2010	CG	24	1	1.18	PASS
2/17/2011	CG	24	1	1.18	PASS
2/18/2011	CG	24	1	1.18	PASS
2/22/2011	CG	24	1	1.18	PASS
3/3/2011	CG	24	1	1.18	PASS
3/7/2011	CG	24	1	1.18	PASS
3/8/2011	CG	24	1	1.18	PASS
3/18/2011	CG	24	1	1.18	PASS
4/15/2011	CG	24	1	1.18	PASS
5/20/2011	CG	24	1	1.18	PASS
6/13/2011	CG	24	1	1.18	PASS
7/12/2011	CG	24	1	1.20	PASS
8/11/2011	CG	24	1	1.20	PASS
9/15/2011	CG	24	1	1.18	PASS
10/12/2011	CG	24	1	1.18	PASS
11/4/2011	CG	24	1	1.18	PASS

The above aperture diameter represents the on screen diameter in reciprocal space. Multiply this number times the number of layer lines seen to get layer line spacing.

Comments:

Plasma Asher Calibration

(Quarterly)

Time To Ash 5% of Collapsed MCE Filter			
Date	Initials	Min	Sec
10/28/2009	SNS	3	18
2/2/2010	SNS	6	49
5/12/2010	DY	7	28
8/20/2010	DS	9	32
9/13/2010	WP	4	15

Comments: This is Asher is no longer in use as off Dec 2010. The 2 ashers currently in use for prep are on Scope 1 and Scope 2's calibration report.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Magnification Calibrations
(Monthly)

20,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	20963	20925	PASS
6/18/2010	DY	20963	21060	PASS
7/28/2010	DY	20963	21060	PASS
9/3/2010	CG	20963	20250	PASS
10/4/2010	CG	20963	21330	PASS
11/5/2010	CG	20963	21060	PASS
12/17/2010	CG	20963	21060	PASS
1/13/2011	CG	20963	21060	PASS
2/17/2011	CG	20963	21330	PASS
3/18/2011	CG	20963	21330	PASS
4/15/2011	CG	20963	21330	PASS
5/20/2011	CG	20963	20790	PASS
6/13/2011	CG	20963	20304	PASS
7/12/2011	CG	20963	20790	PASS
8/11/2011	CG	20963	21276	PASS
9/15/2011	CG	20963	20385	PASS
10/12/2011	CG	20963	20925	PASS
11/4/2011	CG	20963	21060	PASS

Comments:

20,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DY	14474	14644	PASS
3/18/2010	DY	14474	14400	PASS
5/18/2010	DY	14474	14582	PASS
6/18/2010	DY	14474	14400	PASS
7/28/2010	DY	14474	14400	PASS
9/3/2010	CG	14474	14164	PASS
10/3/2010	CG	14474	14521	PASS
11/5/2010	CG	14474	14644	PASS
12/17/2010	CG	14474	14400	PASS
1/13/2011	CG	14474	14400	PASS
2/17/2011	CG	14474	14521	PASS
3/18/2011	CG	14474	14644	PASS
4/15/2011	CG	14474	14644	PASS
5/20/2011	CG	14474	14400	PASS
6/13/2011	CG	14474	14521	PASS
7/12/2011	CG	14474	14400	PASS
8/11/2011	CG	14474	14521	PASS
9/15/2011	CG	14474	14521	PASS
10/11/2011	CG	14474	14281	PASS
11/4/2011	CG	14474	14400	PASS

Comments:

10,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	10641	10800	PASS
6/18/2010	DY	10641	10962	PASS
7/28/2010	DY	10641	10800	PASS
9/3/2010	CG	10641	10908	PASS
10/4/2010	CG	10641	10584	PASS
11/5/2010	CG	10641	10692	PASS
12/17/2010	CG	10641	10757	PASS
1/13/2011	CG	10641	10757	PASS
2/17/2011	CG	10641	10584	PASS
3/18/2011	CG	10641	10843	PASS
4/15/2011	CG	10641	10692	PASS
5/20/2011	CG	10641	10584	PASS
6/13/2011	CG	10641	10303	PASS
7/12/2011	CG	10641	10368	PASS
8/11/2011	CG	10641	10627	PASS
9/15/2011	CG	10641	10152	PASS
10/12/2011	CG	10641	10584	PASS
11/4/2011	CG	10641	10541	PASS

Comments:

10,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DLY	7293	7448	PASS
3/18/2010	DLY	7293	7353	PASS
5/18/2010	DY	7293	7353	PASS
6/18/2010	DY	7293	7353	PASS
7/28/2010	DY	7293	7353	PASS
9/3/2010	CG	7293	7082	PASS
10/4/2010	CG	7293	7140	PASS
11/5/2010	CG	7293	7385	PASS
12/16/2010	CG	7293	7200	PASS
1/13/2011	CG	7293	7140	PASS
2/17/2011	CG	7293	7261	PASS
3/18/2011	CG	7293	7448	PASS
4/15/2011	CG	7293	7448	PASS
5/20/2011	CG	7293	7291	PASS
6/13/2011	CG	7293	7353	PASS
7/12/2011	CG	7293	7291	PASS
8/11/2011	CG	7293	7322	PASS
9/15/2011	CG	7293	7200	PASS
10/11/2011	CG	7293	7140	PASS
11/4/2011	CG	7293	7140	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03
Detector: PGT Avalon

Calibration of On Screen 0.5 and 5µm

Measuring Aids at EPA AHERA Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DY	0.55	5.46
3/18/2010	DY	0.56	5.56
5/18/2010	DY	0.55	5.49
6/18/2010	DY	0.56	5.56
7/28/2010	DY	0.56	5.56
9/3/2010	CG	0.56	5.65
10/3/2010	CG	0.55	5.51
11/5/2010	CG	0.55	5.46
12/17/2010	CG	0.56	5.56
1/13/2011	CG	0.56	5.56
2/17/2011	CG	0.55	5.51
3/18/2011	CG	0.55	5.46
4/15/2011	CG	0.55	5.46
5/20/2011	CG	0.56	5.56
6/13/2011	CG	0.55	5.51
7/12/2011	CG	0.56	5.56
8/11/2011	CG	0.55	5.51
9/15/2011	CG	0.55	5.51
10/11/2011	CG	0.56	5.60
11/4/2011	CG	0.56	5.56

Comments:

Calibration of On Screen 1.0 and 10µm

Measuring Aids at EPA 100.2 Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DLY	1.07	10.74
3/18/2010	DLY	1.09	10.88
5/18/2010	DY	1.09	10.88
6/18/2010	DY	1.09	10.88
7/28/2010	DY	1.09	10.88
9/3/2010	CG	1.13	11.30
10/4/2010	CG	1.12	11.20
11/5/2010	CG	1.08	10.83
12/16/2010	CG	1.11	11.11
1/13/2011	CG	1.12	11.20
2/17/2011	CG	1.10	11.02
3/18/2011	CG	1.07	10.74
4/15/2011	CG	1.07	10.74
5/20/2011	CG	1.10	10.97
6/13/2011	CG	1.09	10.88
7/12/2011	CG	1.10	10.97
8/11/2011	CG	1.09	10.93
9/15/2011	CG	1.11	11.11
10/11/2011	CG	1.12	11.20
11/4/2011	CG	1.12	11.20

Comments:

Spot Size Measurements

(Quarterly)

Date	Initials	Actual Spot	Target Spot Size	FAIL ≤250nm =	Is 2 SD <25% of
5/18/2010	DY	203.11	≤ 250 nm	PASS	PASS
8/16/2010	DY	213.68	≤ 250 nm	PASS	PASS
11/5/2010	CG	216.38	≤ 250 nm	PASS	PASS
12/17/2010	CG	206.76	≤ 250 nm	PASS	PASS
2/17/2011	CG	192.34	≤ 250 nm	PASS	PASS
2/18/2011	CG	216.38	≤ 250 nm	PASS	PASS
2/22/2011	CG	201.95	≤ 250 nm	PASS	PASS
3/3/2011	CG	221.19	≤ 250 nm	PASS	PASS
3/7/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/8/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/18/2011	CG	192.34	≤ 250 nm	PASS	PASS
4/15/2011	CG	201.95	≤ 250 nm	PASS	PASS
5/20/2011	CG	240.42	≤ 250 nm	PASS	PASS
6/13/2011	CG	231.48	≤ 250 nm	PASS	PASS
7/12/2011	CG	216.45	≤ 250 nm	PASS	PASS
8/11/2011	CG	197.41	≤ 250 nm	PASS	PASS
9/15/2011	CG	245.28	≤ 250 nm	PASS	PASS
10/12/2011	CG	215.05	≤ 250 nm	PASS	PASS
11/4/2011	CG	223.17	≤ 250 nm	PASS	PASS
			≤ 250 nm		

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

K Factors

(Semi-Annually)

Test Dates	Initials	Mean K Factor	Pass Criteria	Actual	PASS FAIL	Acceptance Criteria	PASS/FAIL
5/19/2011	CG	Mg:Si	1.0 - 2.0	1.63	PASS	2SD < 10% Mean	PASS
5/19/2011	CG	Ca:Si	1.0 - 1.75	1.11	PASS	2SD < 10% Mean	PASS
----		Fe:Si	1.0 - 2.0	1.46	PASS	2SD < 10% Mean	PASS
----		Mg:Fe	1.5 or less	1.11	PASS	N/A	N/A
12/16/2010	CG	Na:Si	1.0 - 4.0	3.02	PASS	2SD < 20% Mean	PASS
5/20/2011	CG	Al:Si	1.0 - 1.75	1.19	PASS	2SD < 10% Mean	PASS

Comments:

Detector Resolution

(Semi-Annually / Quarterly when necessary to meet TNI Standard)

Date	@Mn Kα Peak Initials	Resolution	<175?	Resolution + 2(s) <180?
10/25/2007	GPA	130.5	Pass	Pass
5/1/2008	GPA	134.8	Pass	Pass
10/29/2008	JRB	115.9	Pass	Pass
5/6/2009	JB	128.9	Pass	Pass
11/3/2009	KLB	141.0	Pass	Pass
4/28/2010	DY	131.0	Pass	Pass
11/4/2010	CG	120.0	Pass	Pass
5/20/2011	CG	135.0	Pass	Pass
8/18/2011	CG	125.0	Pass	Pass
11/4/2011	CG	135.0	Pass	Pass

Comments:

Significant Na and Resolvable Mg-Si Peaks

(Quarterly)

Date	Initials	Significant Na		Date	Initials	Resolvable Mg	Resolvable Si
8/5/2009	KLB	Pass		8/5/09	KLB	Yes	Yes
11/3/2009	KLB	Pass		11/3/09	KLB	Yes	Yes
2/5/2010	DY	Pass		2/5/10	DY	Yes	Yes
4/28/2010	DY	Pass		4/28/10	DY	Yes	Yes
7/28/2010	DY	Pass		7/28/10	DY	Yes	Yes
11/5/2010	CG	Pass		11/4/10	CG	Yes	Yes
2/18/2011	CG	Pass		2/18/11	CG	Yes	Yes
5/20/2011	CG	Pass		5/20/11	CG	Yes	Yes
8/18/2011	CG	Pass		8/18/11	CG	Yes	Yes
11/4/2011	CG	Pass		11/4/11	CG	Yes	Yes

Comments:

7. NVLAP/AIHA Certifications

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.

Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
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Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

AIHA
Laboratory Accreditation Programs, LLC

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Laboratory ID: 100194

has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC thereby conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA-LAP, LLC in the following:

LABORATORY ACCREDITATION PROGRAMS

√	INDUSTRIAL HYGIENE	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL LEAD	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: July 01, 2012
☐	FOOD	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current scope of accreditation.

Dave Sandusky

Dave Sandusky, CIH
Chairperson, Analytical Accreditation Board

Date Issued: 07/01/2010

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
107 Haddon Avenue, Westmont, NJ 08108

Laboratory ID: 100194
Issue Date: 07/01/2010

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or revocation. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Gas Chromatography	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1400	
		NIOSH 1500	
		NIOSH 1550	
		NIOSH 1603	
		NIOSH 2000	
		NIOSH 2551	
		NIOSH 5502	
		NIOSH 5503	
		NIOSH 5510	
		OSHA 1010	
	GC (Diffusive Samplers)	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1501	
	GC/MS	EPA TO-15	
	HPLC	NIOSH 2016	
		NIOSH 5506	
		OSHA 47	
		OSHA 58	
	AA	NIOSH 6009	
		NIOSH 7105	
		OSHA ID-140	
		OSHA ID-145	
	ICP	NIOSH 7300	
	XRD	NIOSH 7500	
	Ion Chromatography	NIOSH 6004	
		NIOSH 6011	
		NIOSH 7903	

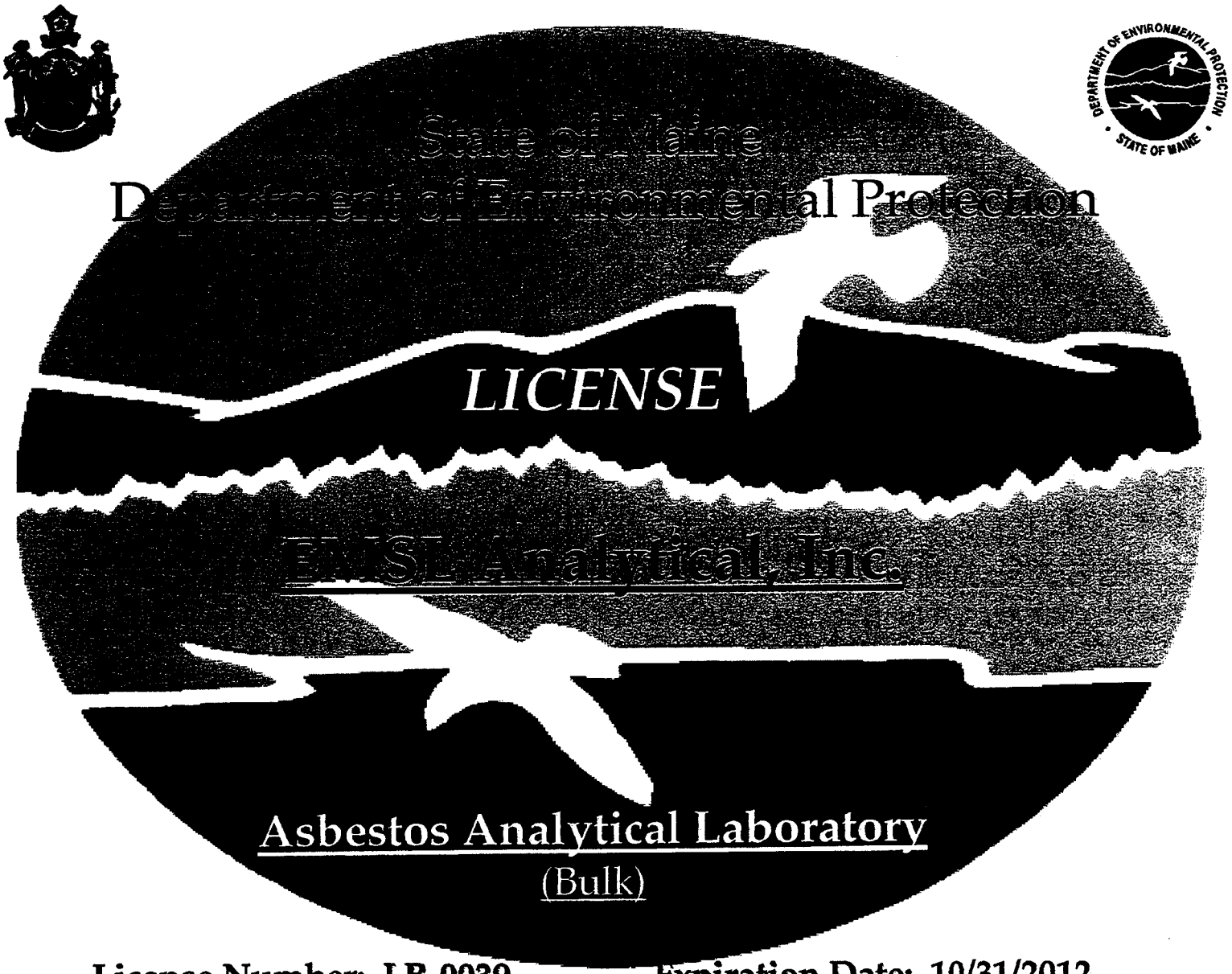
AIHA Laboratory Accreditation Programs, LLC

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Ion Chromatography	OSHA ID-214	
		OSHA ID-215	
	Gravimetric	NIOSH 0500	
		NIOSH 0600	
	UV/VIS (Colorimetric)	NIOSH 6010	
	Thermal Optical Analyzer	NIOSH 5040	
	Polarized Light Microscopy (PLM)	EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)	NIOSH 7400	
	Transmission Electron Microscopy (TEM)	EPA AHERA - 40 CFR Part 763	
		NIOSH 7402	

The laboratory participates in the following AIHA-LAP, LLC-approved proficiency testing programs:

- ✓ Metals*
- ✓ Silica*
- ✓ Asbestos*
- ☐ Bulk Asbestos*
- ✓ Beryllium
- ☐ WASP[1] (Thermal Desorption Tubes)
- ☐ Pharmaceutical Round Robin
- ☐ Compressed/Breathing Air Round Robin
- ☐ NVLAP (determined at the time of site assessment)
- ✓ Organic Solvents*
- ✓ Diffusive Sampler (3M)*
- ☐ Diffusive Sampler (SKC)*
- ☐ Diffusive Sampler (AT)
- ✓ WASP[1] (Formaldehyde)

[1] Workplace Analytical Scheme for Proficiency



License Number: LB-0039 **Expiration Date: 10/31/2012**

8. Shipping Documentation

From:
WILLARD WARREN
KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY

SCARBOROUGH, ME 04074
(207) 874-2400

Ship Date: 18OCT11
ActWgt: 36.6 LB
CAD: 683287/CAFE2472

TO SAMPLE RECEIVING
EMSL
3 COOPER STREET

WESTMONT, NJ 08108 (US)

FedEx Ground

Ref:
INV:
PO: Dept:

1 of 1

(9612019) 8146969 60046520

Part # 150148-434 RIT2 04/11 ••

GND Prepaid

Katahdin Analytical Services

Date: 10-18-11 Signature

ENVIRONMEN
ULTRA CL

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **JANUARY 16, 2012**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – PAH/PCB/COPPER/LEAD/ ZINC/TOTAL ORGANIC CARBON/TOTAL SOLIDS/ASBESTOS**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-24

SAMPLES: 24/Sediment/PAH/PCB/METALS/ASBESTOS

DSY-SD-AA09-0012
DSY-SD-AA09-2448
DSY-SD-AA13-1224
DSY-SD-AA17-0012
DSY-SD-AA17-2448
DSY-SD-AA21-1224
DSY-SD-AA24-0012
DSY-SD-AA24-2448
DSY-SD-AA26-1224
DSY-SD-AA28-0016
DSY-SD-AA30-1224
DSY-SD-DUP35-101311
DSY-SD-AA09-1224
DSY-SD-AA13-0012
DSY-SD-AA13-2448
DSY-SD-AA17-1224
DSY-SD-AA21-0012
DSY-SD-AA21-2448
DSY-SD-AA24-1224
DSY-SD-AA26-0012
DSY-SD-AA26-2448
DSY-SD-AA30-0012
DSY-SD-DUP34-101311
DSY-SD-G30-0018

1/Aqueous/

DSY-SD-RB14-101311

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-24 consisted of twenty-four (24) sediment environmental samples and one (1) rinse blank. All samples were analyzed for polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), metals, and asbestos. All samples, except DSY-SD-RB14-101311 were analyzed for total solids. Ten sediment samples were analyzed for total organic carbon. Two field duplicate pairs were included in this sample delivery group (SDG): DSY-SD-AA21-2448 / DSY-SD-DUP34-101311 and DSY-SD-AA28-0016 / DSY-SD-DUP35-101311.

The samples were collected by Tetra Tech on October 13, 2011 and analyzed by Katahdin Analytical Services for all fractions except asbestos. EMSL Analytical, Inc. performed the asbestos analyses. All analyses were conducted in accordance with SW-846 Methods 8270C, 8270C SIM, 8082, 6010C, Standard Method D2216, Lloyd Kahn, and asbestos by methods EPA 600/R-93/116 and EPA AHERA – 40 CFR Part 763 analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times

*	•	GC/MS Instrument Tuning and System Performance
	•	Initial and Continuing Calibrations
	•	Laboratory Method Blank Results
	•	Surrogate Spike Recoveries
	•	Internal Standard Areas
	•	Matrix Spike Sample/Matrix Spike Duplicate Sample Results
	•	Laboratory Control Sample Results
*	•	ICP Interference Check Sample Results
*	•	ICP Serial Dilution Results
	•	Field Duplicate Precision
*	•	Laboratory Duplicate Results
*	•	Detection Limits
	•	Analyte Identification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. . An EPA Region 1 tier II validation was performed on the data in this SDG. The text of this report has been formulated to address only those areas affecting data quality.

INITIAL AND CONTINUING CALIBRATION

The PAH CCV performed on instrument GCMS-N on 11/21/11 @ 07:50 had a %D greater than 20% for pyrene. Samples DSY-SD-RB14-101311, DSY-SD-AA09-0012, DSY-SD-AA09-1224, DSY-SD-AA09-2448, DSY-SD-AA13-0012, DSY-SD-AA13-1224, DSY-SD-AA13-2448, DSY-SD-AA17-0012, DSY-SD-AA17-1224, and DSY-SD-AA21-0012 were affected. The positive and non-detected results reported for pyrene, in the affected samples, were qualified as estimated (J) and (UJ), respectively.

The PAH CCV performed on instrument GCMS-N on 11/22/11 @ 08:46 had a %D greater than 20% for indeno(1,2,3-cd)pyrene. Samples DSY-SD-AA21-1224, DSY-SD-AA21-2448, DSY-SD-AA24-0012, DSY-SD-AA24-1224, DSY-SD-AA24-2448, and DSY-SD-AA26-0012 were affected. Only non-detected results were reported for indeno(1,2,3-cd)pyrene, in the affected samples, and these results were qualified as estimated (UJ).

The PCB CCV performed on instrument GC07 on 11/03/11 @2205 had a %D greater than 20% for Aroclor-1260 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-G30-0018 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @1131 had a %D greater than 20% for Aroclor-1254 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-AA17-0012 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @1826 had a %D greater than 20% for Aroclor-1254 on the primary column. The positive Aroclor-1254 result reported from the primary column for sample DSY-SD-AA17-0012 was qualified as estimated (J).

The PCB CCV performed on instrument GC07 on 11/07/11 @2238 had a %D greater than 20% for Aroclor-1260 on the primary column. The positive Aroclor-1254 results reported from the primary column for samples DSY-SD-AA21-2448, DSY-SD-DUP34-101311, DSY-SD-AA24-2448, and DSY-SD-AA26-0012 were qualified as estimated (J).

SURROGATE SPIKE RECOVERIES

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in sample DSY-SD-AA28-0016, DSY-SD-DUP35-101311, DSY-SD-AA30-0012, DSY-SD-AA30-1224, and DSY-SD-AA26-2448. No validation action was taken because the surrogates met acceptance limits on column 2 and all results were reported from column 2.

The PCB surrogate spike compounds, tetrachloro-m-xylene and decachlorobiphenyl, had %Rs on one GC column below the lower quality control limits in sample DSY-SD-G30-0018. Surrogate recoveries reported from column 2 met acceptance limits. The positive result reported from column 1 was qualified as estimated, (J).

The %Rs for the PCB surrogate spike compound, decachlorobiphenyl, were below the lower quality control limits on both GC columns for samples, DSY-SD-AA24-0012 and DSY-SD-RB14-101311. The samples were not re-extracted or reanalyzed. The non-detected PCB results for the aforementioned samples were qualified as estimated, (UJ).

INTERNAL STANDARD RESULTS

The internal standard area for perylene-d12 was less than the lower quality control limit in samples DSY-SD-AA26-1224, DSY-SD-AA26-2448, DSY-SD-AA30-0012, and DSY-SD-G30-0018 were affected. The positive and non-detected results reported for the target PAH compounds associated with perylene-d12 in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The internal standard area for perylene-d12 was less than the lower quality control limit in sample DSY-SD-RB14-101311. The non-detected benzo(a)pyrene result reported for DSY-SD-RB14-101311 was qualified as estimated, (UJ).

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RESULTS

The zinc MS/MSD %R for sample DSY-SD-AA13-2448 was greater than the upper quality control limit. All positive zinc results were qualified as estimated (J).

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE

The PCB LCS / LCSD associated with batch WG99856 had %Rs of Aroclor-1016 less than the lower quality control limit in the LCS/LCSD. Samples DSY-SD-AA28-0016, DSY-SD-DUP35-101311, DSY-SD-AA30-0012, DSY-SD-AA30-1224, and DSY-SD-G30-0018 were affected. Only nondetected results were reported in the affected samples and these results were qualified as estimated, (UJ).

RELATIVE PERCENT DIFFERENCE (RPD) BETWEEN COLUMNS

The RPD between columns in the PCB analysis was greater than 40% in the following samples. Positive results were qualified as estimated (J).

Sample	Analyte	RPD	Qualification
DSY-SD-AA17-0012	Aroclor-1254	48.1	J
DSY-SD-AA30-0012	Aroclor-1260	56.4	J

FIELD DUPLICATE RESULTS

Field duplicate imprecision (RPD > 50%) was noted for benzo(a)pyrene for sample pair DSY-SD-AA21-2448 / DSY-SD-DUP34-101311. The positive results reported for benzo(a)pyrene in the duplicate pair were qualified as estimated, (J).

PERCENT SOLIDS

The percent solids for sample DSY-SD-AA09-0012 was less than 30%. The positive and nondetected results for all analytical fractions have been qualified as estimated (J) and (UJ), respectively.

NOTES

The following contaminant was detected in the aqueous laboratory preparation blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Zinc	1.775 ug/L	8.875 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was warranted because the associated sample was a rinse blank and rinse blanks are not qualified due to blank contamination.

The analytes zinc and iron were detected in several continuing calibration blanks associated with the sediment samples. No action was taken on this basis because all sediment sample results were greater than the blank action levels.

The PAH continuing calibration verification (CCV) performed on instrument GCMS-N on 10/22/11 @ 09:28 had a percent difference (%D) greater than 20% for pyrene The method blank, LCS, and LCSD for batch WG99502 were affected. No action was taken on this basis because QC samples are not qualified.

The PCB CCV performed on instrument GC07 on 11/11/11 @1353 had %Ds greater than 20% for Aroclor-1016 and Aroclor-1260 on the primary column. No action was taken on this basis because only laboratory QC samples were associated with this calibration and QC samples are not qualified.

The PCB CCV performed on instrument GC07 on 11/12/11 @0254 had a %D greater than 20% for Aroclor-1016 on the primary column. No action was taken on this basis because Aroclor-1016 was not detected in the associated samples.

The PCB CCV performed on instrument GC07 on 11/12/11 @0410 had a %D greater than 20% for Aroclor-1254 on the primary column. No action was taken on this basis because the positive result for Aroclor-1254 was reported from the secondary column.

The surrogate 2-fluorobiphenyl had a percent recovery (%R) greater than the quality control limit for sample DSY-SD-DUP34-101311. The sample was not re-extracted or re-analyzed. No action was taken on this basis because only one surrogate per fraction was outside of quality control limits.

The surrogate 2-fluorobiphenyl had a %R less than the quality control limit for sample DSY-SD-AA28-0016. The sample was not re-extracted or re-analyzed. No action was taken on this basis because only one surrogate per fraction was outside of quality control limits.

Sample DSY-SD-RB14-101311 was not spiked for surrogates in the 8270 SIM analysis. The sample was spiked for surrogates in the full scan analysis and had acceptable recoveries. No action was taken on this basis because the full scan analysis had acceptable recoveries.

The PCB surrogate recoveries of decachlorobiphenyl were less than the lower quality control limit but greater than 10% on column 1 in samples DSY-SD-DUP34-101311 and DSY-SD-AA26-1224. No action was taken on this basis because all other surrogate recoveries were acceptable.

The PAH matrix spike/matrix spike duplicate (MS/MSD) %R for pyrene was greater than the upper quality control limit in the MSD. No action was taken on the pyrene result because the MS had an acceptable recovery.

The PAH SIM laboratory control sample / laboratory control sample duplicate (LCS/LCSD) associated with batch WG101687 was not spiked for benzo(a)pyrene at the SIM levels. The samples associated with batch WG101687 had acceptable %Rs of benzo(a)pyrene in the full scan LCS/LCSDs. No action was taken on this basis.

The laboratory reported the highest concentration of the two GC columns for positive PCB results.

All asbestos samples were dried and sieved into three components fine (<2mm), medium (>2mm), and course (<19mm). Each component was then analyzed via polarized light microscopy (PLM). Samples that did not have asbestos detected using PLM were analyzed via Qualitative Transmission Electron Microscopy (TEM).

Samples were analyzed for benzo(a)pyrene using 8270C SIM to achieve the project Limit of Quantitation (LOQ) goal of 180 µg/Kg as stated in the project specific Sampling and Analysis Plan (SAP). All samples were analyzed by 8270C SIM for benzo(a)pyrene, except for sample DSY-SD-G30-0018.

Samples DSY-SD-AA17-0013, DSY-SD-AA21-1224, and DSY-SD-AA30-1224 to be analyzed for asbestos were received broken at the EMSL laboratory. No action was taken because the laboratory was still able to analyze the samples.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance: Continuing calibration %D noncompliances resulted in qualification of data in the PAH and PCB fraction. PCB LCS/LCSD %R noncompliances resulted in the qualification of data.

Other Factors Affecting Data Quality: Surrogate noncompliances resulted in qualification of data in the PCB fraction. Internal standard areas were noncompliant in several PAH fraction samples resulting qualification of data. A zinc MS noncompliance resulted in qualification of the data. RPDs between columns noncompliance resulted in the qualification of PCB data. Field duplicate imprecision resulted in qualification of benzo(a)pyrene results. Percent solid for one sample was less than 30%. Positive results reported below the LOQ but above the MDL were qualified as estimated.

The Tier II data validation performed for these analyses were completed with reference to the criteria for SW-846 Methods 8270C, 8270C SIM, 8082, and 6010C listed in the project specific SAP, the "USEPA Region 1 Laboratory Data Validation Functional Guidelines – Part II" (12/96), and the Department of Defense (DOD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-24 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		840	UJ	Y	280	J	P	1100			800	U	
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		840	UJ	Y	690	U		870			800	U	
BENZO(G,H,I)PERYLENE		840	UJ	Y	690	U		620	U		800	U	
BENZO(K)FLUORANTHENE		840	UJ	Y	690	U		440	J	P	800	U	
CHRYSENE		840	UJ	Y	380	J	P	1200			800	U	
DIBENZO(A,H)ANTHRACENE		840	UJ	Y	690	U		620	U		800	U	
FLUORANTHENE		840	UJ	Y	470	J	P	2700			800	U	
INDENO(1,2,3-CD)PYRENE		840	UJ	Y	690	U		620	U		800	U	
PYRENE		420	J	CPY	550	J	CP	2800	J	C	800	UJ	C

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		760	U		530	J	C	730	U		270	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		760	U		560	J	P	730	U		760	U	
BENZO(G,H,I)PERYLENE		760	U		710	U		730	U		760	U	
BENZO(K)FLUORANTHENE		760	U		260	J	P	730	U		760	U	
CHRYSENE		760	U		640	J	P	730	U		310	J	P
DIBENZO(A,H)ANTHRACENE		760	U		710	U		730	U		760	U	
FLUORANTHENE		390	J	P	930	J	P	730	U		630	J	P
INDENO(1,2,3-CD)PYRENE		760	U		710	U		730	U		760	U	
PYRENE		450	J	CP	1100	J	C	440	J	CP	750	J	CP

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
SDG: DSY-24	LAB_ID	SE6841-9			SE6841-10			SE6841-11			SE6841-12		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		1400			800	U		720	U		540	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		1200			800	U		720	U		480	J	P
BENZO(G,H,I)PERYLENE		370	J	P	800	U		720	U		700	U	
BENZO(K)FLUORANTHENE		620	J	P	800	U		720	U		280	J	P
CHRYSENE		1600			800	U		720	U		780	J	P
DIBENZO(A,H)ANTHRACENE		720	U		800	U		720	U		700	U	
FLUORANTHENE		2700			800	U		720	U		1500		
INDENO(1,2,3-CD)PYRENE		400	J	P	800	U		720	UJ	C	700	UJ	C
PYRENE		3000			800	UJ	C	320	J	P	1500		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		580	U		720	U		540	J	P	320	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		580	U		720	U		640	J	P	330	J	P
BENZO(G,H,I)PERYLENE		580	U		720	U		690	U		480	U	
BENZO(K)FLUORANTHENE		580	U		720	U		300	J	P	180	J	P
CHRYSENE		580	U		720	U		760	J	P	380	J	P
DIBENZO(A,H)ANTHRACENE		580	U		720	U		690	U		480	U	
FLUORANTHENE		580	U		720	U		1100			670		
INDENO(1,2,3-CD)PYRENE		580	UJ	C	720	UJ	C	690	UJ	C	480	UJ	C
PYRENE		580	U		720	U		1800			770		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
	LAB_ID	SE6841-18			SE6841-19			SE6841-20			SE6841-22		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		880			370	J	P	330	J	P	360	J	P
BENZO(A)PYRENE													
BENZO(B)FLUORANTHENE		880	J	N	470	UJ	N	400	J	P	570	J	N
BENZO(G,H,I)PERYLENE		230	J	NP	470	UJ	N	390	U		170	J	NP
BENZO(K)FLUORANTHENE		370	J	NP	470	UJ	N	170	J	P	260	J	NP
CHRYSENE		1000			520	J	P	400	J	P	440		
DIBENZO(A,H)ANTHRACENE		500	UJ	N	470	UJ	N	390	U		320	UJ	N
FLUORANTHENE		2200			800			600			660		
INDENO(1,2,3-CD)PYRENE		260	J	NP	470	UJ	N	390	U		170	J	NP
PYRENE		3500			1500			1100			2300		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
SDG: DSY-24	LAB_ID	SE6841-23			SE6841-13			SE6841-21			SE6841-24		
FRACTION: OS	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		280	J	P	570	J	P	420	J	P	1600		
BENZO(A)PYRENE											1600	J	N
BENZO(B)FLUORANTHENE		410	J	P	520	J	P	520	J	P	2700	J	N
BENZO(G,H,I)PERYLENE		160	J	P	690	U		430	U		650	J	N
BENZO(K)FLUORANTHENE		200	J	P	270	J	P	220	J	P	1200	J	N
CHRYSENE		310	J	P	650	J	P	500	J	P	2200		
DIBENZO(A,H)ANTHRACENE		310	U		690	U		430	U		480	UJ	N
FLUORANTHENE		370	J	P	1200			510	J	P	2000		
INDENO(1,2,3-CD)PYRENE		160	J	P	690	U		430	U		780	J	N
PYRENE		1300			1300			1300			4600		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		120	J	Y	180			580			71		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		150			320			120			160		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
	LAB_ID	SE6841-9DL			SE6841-10			SE6841-11			SE6841-12		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		820			73			100			310	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
FRACTION: PAH	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		54			80			280			170		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
	LAB_ID	SE6841-18DL			SE6841-19			SE6841-20			SE6841-22		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		420			200			240			290		

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311		
	LAB_ID	SE6841-23			SE6841-13			SE6841-21		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		200			56	J	G	360		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-1			SE6841-2			SE6841-3			SE6841-4		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1221		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1232		32	UJ	Y	27	U		25	U		33	U	
AROCLOR-1242		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1248		27	UJ	Y	23	U		21	U		28	U	
AROCLOR-1254		27	UJ	Y	23	U		1300			28	U	
AROCLOR-1260		27	UJ	Y	23	U		21	U		28	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-5			SE6841-6			SE6841-7			SE6841-8		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		24	U		23	U		22	U	
AROCLOR-1221		24	U		24	U		23	U		22	U	
AROCLOR-1232		28	U		28	U		28	U		26	U	
AROCLOR-1242		24	U		24	U		23	U		22	U	
AROCLOR-1248		24	U		24	U		23	U		22	U	
AROCLOR-1254		24	U		24	U		240	J	CPU	22	U	
AROCLOR-1260		24	U		24	U		330			22	U	

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
	LAB_ID	SE6841-9			SE6841-10			SE6841-11			SE6841-12		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		24	U		26	U		25	U		24	U	
AROCLOR-1221		24	U		26	U		25	U		24	U	
AROCLOR-1232		28	U		31	U		30	U		28	U	
AROCLOR-1242		24	U		26	U		25	U		24	U	
AROCLOR-1248		24	U		26	U		25	U		24	U	
AROCLOR-1254		24	U		26	U		25	U		220	J	C
AROCLOR-1260		24	U		26	U		25	U		24	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-14			SE6841-15			SE6841-16			SE6841-17		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1221		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1232		22	UJ	R	29	U		27	U		19	U	
AROCLOR-1242		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1248		19	UJ	R	25	U		23	U		16	U	
AROCLOR-1254		19	UJ	R	25	U		190	J	C	97	J	C
AROCLOR-1260		19	UJ	R	25	U		23	U		16	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	SE6841-18			SE6841-19			SE6841-20			SE6841-22		
FRACTION: PCB	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		17	U		16	U		13	UJ	E	10	UJ	E
AROCLOR-1221		17	U		16	U		13	U		10	U	
AROCLOR-1232		20	U		18	U		15	U		12	U	
AROCLOR-1242		17	U		16	U		13	U		10	U	
AROCLOR-1248		17	U		16	U		13	U		10	U	
AROCLOR-1254		960			730			350			1100		
AROCLOR-1260		320			540			240			780	J	PU

PROJ_NO: 02747 SDG: DSY-24 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
	LAB_ID	SE6841-23			SE6841-13			SE6841-21			SE6841-24		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.2	UJ	E	24	U		14	UJ	E	17	UJ	E
AROCLOR-1221		9.2	U		24	U		14	U		17	U	
AROCLOR-1232		11	U		28	U		16	U		20	U	
AROCLOR-1242		9.2	U		24	U		14	U		17	U	
AROCLOR-1248		9.2	U		24	U		14	U		17	U	
AROCLOR-1254		160			220	J	C	470			260	J	CR
AROCLOR-1260		9.2	U		24	U		210			220		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012			DSY-SD-AA09-1224			DSY-SD-AA09-2448			DSY-SD-AA13-0012		
SDG: DSY-24	LAB_ID	SE6841-001			SE6841-002			SE6841-003			SE6841-004		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	29.6			35.5			39.6			30.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		63	J	Y	116			123			62		
LEAD		66.3	J	Y	96			111			58.5		
ZINC		156	J	DY	210	J	D	275	J	D	162	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224			DSY-SD-AA13-2448			DSY-SD-AA17-0012			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	SE6841-005			SE6841-006			SE6841-007			SE6841-008		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	32.2			34.1			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		89.7			126			77.8			90.5		
LEAD		80.7			115			76.8			74.8		
ZINC		242	J	D	289	J	D	397	J	D	237	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448			DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448		
SDG: DSY-24	LAB_ID	SE6841-009			SE6841-010			SE6841-011			SE6841-012		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	34.0			30.7			33.5			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		226			61.3			75.1			170		
LEAD		138			57.4			67.4			162		
ZINC		309	J	D	167	J	D	155	J	D	375	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012			DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012		
SDG: DSY-24	LAB_ID	SE6841-014			SE6841-015			SE6841-016			SE6841-017		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	42.2			34.2			36.0			51.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		24.5			93.5			87.8			48.8		
LEAD		25.2			70.6			81			44.9		
ZINC		66.8	J	D	229	J	D	197	J	D	158	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-1224			DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	SE6841-018			SE6841-019			SE6841-020			SE6841-022		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.9			52.2			61.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		154			183			82.2			37.5		
LEAD		180			148			90.1			59.8		
ZINC		583	J	D	570	J	D	216	J	D	206	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G30-0018		
SDG: DSY-24	LAB_ID	SE6841-023			SE6841-013			SE6841-021			SE6841-024		
FRACTION: M	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	78.6			35.6			58.1			48.2		
	DUP_OF				DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		32.4			132			62.9			107		
LEAD		48.9			116			73.8			98.2		
ZINC		129	J	D	286	J	D	243	J	D	243	J	D

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012						DSY-SD-AA09-0012C			DSY-SD-AA09-0012F		
SDG: DSY-24	LAB_ID	SE6841-1						041128162-0008 Coars			041128162-0008 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	29.6			29.6			29.0			29.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000	J	Y						
TOTAL SOLIDS		30											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-0012M			DSY-SD-AA09-1224			DSY-SD-AA09-1224C			DSY-SD-AA09-1224F		
SDG: DSY-24	LAB_ID	041128162-0008 Mediu			SE6841-2			041128162-0009 Coars			041128162-0009 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	29.0			35.5			31.9			31.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					35								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-1224M			DSY-SD-AA09-2448			DSY-SD-AA09-2448C			DSY-SD-AA09-2448F		
SDG: DSY-24	LAB_ID	041128162-0009 Mediu			SE6841-3			041128162-0010 Coars			041128162-0010 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	31.9			39.6			37.9			37.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					40								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA09-2448M			DSY-SD-AA13-0012						DSY-SD-AA13-0012C		
SDG: DSY-24	LAB_ID	041128162-0010 Mediu			SE6841-4						041128162-0011 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011						10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	37.9			30.4			30.4			27.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<								1	<	
ASBESTOS													
CHRYSOTILE		1	<								1	<	
TOTAL ORGANIC CARBON								49000					
TOTAL SOLIDS					30								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-0012F			DSY-SD-AA13-0012M			DSY-SD-AA13-1224			DSY-SD-AA13-1224C		
SDG: DSY-24	LAB_ID	041128162-0011 Fine			041128162-0011 Mediu			SE6841-5			041128162-0012 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	27.7			27.7			32.2			32.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								32					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-1224F			DSY-SD-AA13-1224M			DSY-SD-AA13-2448			DSY-SD-AA13-2448C		
SDG: DSY-24	LAB_ID	041128162-0012 Fine			041128162-0012 Mediu			SE6841-6			041128162-0013 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.2			32.2			34.1			34.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								34					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA13-2448F			DSY-SD-AA13-2448M			DSY-SD-AA17-0012					
SDG: DSY-24	LAB_ID	041128162-0013 Fine			041128162-0013 Mediu			SE6841-7					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	34.1			34.1			32.7			32.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE													
TOTAL ORGANIC CARBON											48000		
TOTAL SOLIDS								33					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-0013C			DSY-SD-AA17-0013F			DSY-SD-AA17-0013M			DSY-SD-AA17-1224		
SDG: DSY-24	LAB_ID	041128162-0015 Coars			041128162-0015 Fine			041128162-0015 Mediu			SE6841-8		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.7			32.7			32.7			32.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE						
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											32		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-1224C			DSY-SD-AA17-1224F			DSY-SD-AA17-1224M			DSY-SD-AA17-2448		
SDG: DSY-24	LAB_ID	041128162-0016 Coars			041128162-0016 Fine			041128162-0016 Mediu			SE6841-9		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	32.5			32.5			32.5			34.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS		1	U	NOT PRESE	1	U	NOT PRESE						
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											34		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA17-2448C			DSY-SD-AA17-2448F			DSY-SD-AA17-2448M			DSY-SD-AA21-0012		
SDG: DSY-24	LAB_ID	041128162-0017 Coars			041128162-0017 Fine			041128162-0017 Mediu			041128162-0018 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.0			34.0			34.0			31.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<					1	<				
ASBESTOS					1	U	NOT PRESE				0.25	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											31		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-0012			DSY-SD-AA21-0012C			DSY-SD-AA21-0012F			DSY-SD-AA21-0012M		
SDG: DSY-24	LAB_ID	041128162-0018 Fine			041128162-0018 Coars			041128162-0018 Fine			041128162-0018 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	31.0			31.0			31.0			31.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE													
TOTAL ORGANIC CARBON		48000											
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-1224			DSY-SD-AA21-1224C			DSY-SD-AA21-1224F			DSY-SD-AA21-1224M		
SDG: DSY-24	LAB_ID	SE6841-11			041128162-0019 Coars			041128162-0019 Fine			041128162-0019 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	33.5			33.5			33.5			33.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE			
CHRYSOTILE					1	<					1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		33											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA21-2448			DSY-SD-AA21-2448C			DSY-SD-AA21-2448F			DSY-SD-AA21-2448M		
SDG: DSY-24	LAB_ID	SE6841-12			041128162-0020 Coars			041128162-0020 Fine			041128162-0020 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	34.8			34.0			34.0			34.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		35											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012						DSY-SD-AA24-0012C			DSY-SD-AA24-0012F		
SDG: DSY-24	LAB_ID	SE6841-14						041128162-0022 Coars			041128162-0022 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	42.2			42.2			39.0			39.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					52000								
TOTAL SOLIDS		42											

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-0012M			DSY-SD-AA24-1224			DSY-SD-AA24-1224C			DSY-SD-AA24-1224F		
SDG: DSY-24	LAB_ID	041128162-0022 Mediu			SE6841-15			041128162-0023 Coars			041128162-0023 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	39.0			34.2			31.4			31.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					34								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-1224M			DSY-SD-AA24-2448			DSY-SD-AA24-2448C			DSY-SD-AA24-2448F		
SDG: DSY-24	LAB_ID	041128162-0023 Mediu			SE6841-16			041128162-0024 Coars			041128162-0024 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	31.4			36.0			32.7			32.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS		1	U	NOT PRESE							1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS					36								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA24-2448M			DSY-SD-AA26-0012						DSY-SD-AA26-0012C		
SDG: DSY-24	LAB_ID	041128162-0024 Mediu			SE6841-17						041128162-0025 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011						10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM						NM		
	UNITS	%			%			MG/KG			%		
	PCT_SOLIDS	32.7			51.7			51.7			45.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS													
CHRYSOTILE		1	<								1	<	
TOTAL ORGANIC CARBON								49000					
TOTAL SOLIDS					52								

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-0012F			DSY-SD-AA26-0012M			DSY-SD-AA26-1224			DSY-SD-AA26-1224C		
SDG: DSY-24	LAB_ID	041128162-0025 Fine			041128162-0025 Mediu			SE6841-18			041128162-0026 Coars		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	45.3			45.3			48.9			44.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<					2		
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								49					

PROJ_NO: 02747 SDG: DSY-24 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-1224F			DSY-SD-AA26-1224M			DSY-SD-AA26-2448			DSY-SD-AA26-2448C		
	LAB_ID	041128162-0026 Fine			041128162-0026 Mediu			SE6841-19			041128162-0027 Coars		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	44.8			44.8			52.2			44.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<					2		
TOTAL ORGANIC CARBON													
TOTAL SOLIDS								52					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA26-2448F			DSY-SD-AA26-2448M			DSY-SD-AA28-0016					
SDG: DSY-24	LAB_ID	041128162-0027 Fine			041128162-0027 Mediu			SE6841-20					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM					
	UNITS	%			%			%			MG/KG		
	PCT_SOLIDS	44.4			44.4			61.5			61.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE					1	<							
ASBESTOS		1	U	NOT PRESE									
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON											28000		
TOTAL SOLIDS								61					

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA28-0016C			DSY-SD-AA28-0016F			DSY-SD-AA28-0016M			DSY-SD-AA30-0012		
SDG: DSY-24	LAB_ID	041128162-0028 Coars			041128162-0028 Fine			041128162-0028 Mediu			SE6841-22		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	56.9			56.9			56.9			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<										
ASBESTOS					1	U	NOT PRESE						
CHRYSOTILE		1	<					1	<				
TOTAL ORGANIC CARBON													
TOTAL SOLIDS											74		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-0012			DSY-SD-AA30-0012C			DSY-SD-AA30-0012F			DSY-SD-AA30-0012M		
SDG: DSY-24	LAB_ID	SE6841-22			041128162-0030 Coars			041128162-0030 Fine			041128162-0030 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			%			%			%		
	PCT_SOLIDS	74.3			72.2			72.2			72.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE													
ASBESTOS								1	U	NOT PRESE	1	U	NOT PRESE
CHRYSOTILE					1	<							
TOTAL ORGANIC CARBON		17000											
TOTAL SOLIDS													

PROJ_NO: 02747	NSAMPLE	DSY-SD-AA30-1224			DSY-SD-AA30-1224C			DSY-SD-AA30-1224F			DSY-SD-AA30-1224M		
SDG: DSY-24	LAB_ID	SE6841-23			041128162-0031 Coars			041128162-0031 Fine			041128162-0031 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	78.6			78.6			78.6			78.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS					1	U	NOT PRESE	1	U	NOT PRESE			
CHRYSOTILE											1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		79											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP34-101311			DSY-SD-DUP34-101311C			DSY-SD-DUP34-101311F			DSY-SD-DUP34-101311M		
SDG: DSY-24	LAB_ID	SE6841-13			041128162-0021 Coars			041128162-0021 Fine			041128162-0021 Mediu		
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	35.6			34.1			34.1			34.1		
	DUP_OF	DSY-SD-AA21-2448			DSY-SD-AA21-2448			DSY-SD-AA21-2448			DSY-SD-AA21-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE											1	<	
ASBESTOS								1	U	NOT PRESE			
CHRYSOTILE					1	<					1	<	
TOTAL ORGANIC CARBON													
TOTAL SOLIDS		36											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP35-101311						DSY-SD-DUP35-101311C			DSY-SD-DUP35-101311F		
SDG: DSY-24	LAB_ID	SE6841-21						041128162-0029 Coars			041128162-0029 Fine		
FRACTION: MISC	SAMP_DATE	10/13/2011						10/13/2011			10/13/2011		
MEDIA: SEDIMENT	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	58.1			58.1			57.0			57.0		
	DUP_OF	DSY-SD-AA28-0016			DSY-SD-AA28-0016			DSY-SD-AA28-0016			DSY-SD-AA28-0016		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE								1	<				
ASBESTOS											1	U	NOT PRESE
CHRYSOTILE								1	<				
TOTAL ORGANIC CARBON					33000								
TOTAL SOLIDS		58											

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP35-101311M			DSY-SD-G30-0018					
SDG: DSY-24	LAB_ID	041128162-0029 Mediu			SE6841-24					
FRACTION: MISC	SAMP_DATE	10/13/2011			10/13/2011					
MEDIA: SEDIMENT	QC_TYPE	NM			NM					
	UNITS	%			%			MG/KG		
	PCT_SOLIDS	57.0			48.2			48.2		
	DUP_OF	DSY-SD-AA28-0016								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AMOSITE		1	<							
ASBESTOS										
CHRYSOTILE		1	<							
TOTAL ORGANIC CARBON								44000		
TOTAL SOLIDS					48					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2664.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	840	ug/Kgdrywt	1	330	1100	290	840
Benzo(b)fluoranthene	U	840	ug/Kgdrywt	1	330	1100	450	840
Benzo(g,h,i)perylene	U	840	ug/Kgdrywt	1	330	1100	350	840
Benzo(k)fluoranthene	U	840	ug/Kgdrywt	1	330	1100	280	840
Chrysene	U	840	ug/Kgdrywt	1	330	1100	320	840
Dibenzo(a,h)anthracene	U	840	ug/Kgdrywt	1	330	1100	430	840
Fluoranthene	U	840	ug/Kgdrywt	1	330	1100	360	840
Indeno(1,2,3-cd)pyrene	U	840	ug/Kgdrywt	1	330	1100	410	840
Pyrene	J	420	ug/Kgdrywt	1	330	1100	340	840
Nitrobenzene-d5		66.3	%					
2-Fluorobiphenyl		64.5	%					
Terphenyl-d14		69.8	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2665.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	280	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	U	690	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	U	690	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	380	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	350	690
Fluoranthene	J	470	ug/Kgdrywt	1	330	920	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene	J	550	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		58.6	%					
2-Fluorobiphenyl		61.7	%					
Terphenyl-d14		71.0	%					

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Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2666.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 40.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1100	ug/Kgdrywt	1	330	830	220	620
Benzo(b)fluoranthene		870	ug/Kgdrywt	1	330	830	340	620
Benzo(g,h,i)perylene	U	620	ug/Kgdrywt	1	330	830	260	620
Benzo(k)fluoranthene	J	440	ug/Kgdrywt	1	330	830	210	620
Chrysene		1200	ug/Kgdrywt	1	330	830	240	620
Dibenzo(a,h)anthracene	U	620	ug/Kgdrywt	1	330	830	320	620
Fluoranthene		2700	ug/Kgdrywt	1	330	830	260	620
Indeno(1,2,3-cd)pyrene	U	620	ug/Kgdrywt	1	330	830	310	620
Pyrene		2800	ug/Kgdrywt	1	330	830	250	620
Nitrobenzene-d5		58.1	%					
2-Fluorobiphenyl		61.2	%					
Terphenyl-d14		77.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2667.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 30.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	800	ug/Kgdrywt	1	330	1100	280	800
Benzo(b)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	430	800
Benzo(g,h,i)perylene	U	800	ug/Kgdrywt	1	330	1100	340	800
Benzo(k)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	270	800
Chrysene	U	800	ug/Kgdrywt	1	330	1100	310	800
Dibenzo(a,h)anthracene	U	800	ug/Kgdrywt	1	330	1100	410	800
Fluoranthene	U	800	ug/Kgdrywt	1	330	1100	340	800
Indeno(1,2,3-cd)pyrene	U	800	ug/Kgdrywt	1	330	1100	400	800
Pyrene	U	800	ug/Kgdrywt	1	330	1100	330	800
Nitrobenzene-d5		64.2	%					
2-Fluorobiphenyl		55.9	%					
Terphenyl-d14		78.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2668.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	760	ug/Kgdrywt	1	330	1000	260	760
Benzo(b)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	410	760
Benzo(g,h,i)perylene	U	760	ug/Kgdrywt	1	330	1000	320	760
Benzo(k)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	260	760
Chrysene	U	760	ug/Kgdrywt	1	330	1000	290	760
Dibenzo(a,h)anthracene	U	760	ug/Kgdrywt	1	330	1000	400	760
Fluoranthene	J	390	ug/Kgdrywt	1	330	1000	330	760
Indeno(1,2,3-cd)pyrene	U	760	ug/Kgdrywt	1	330	1000	380	760
Pyrene	J	450	ug/Kgdrywt	1	330	1000	310	760
Nitrobenzene-d5		51.8	%					
2-Fluorobiphenyl		39.1	%					
Terphenyl-d14		49.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WEt
SDG: DSY-24
Lab File ID: N2669.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	530	ug/Kgdrywt	1	330	940	240	710
Benzo(b)fluoranthene	J	560	ug/Kgdrywt	1	330	940	380	710
Benzo(g,h,i)perylene	U	710	ug/Kgdrywt	1	330	940	300	710
Benzo(k)fluoranthene	J	260	ug/Kgdrywt	1	330	940	240	710
Chrysene	J	640	ug/Kgdrywt	1	330	940	270	710
Dibenzo(a,h)anthracene	U	710	ug/Kgdrywt	1	330	940	360	710
Fluoranthene	J	930	ug/Kgdrywt	1	330	940	300	710
Indeno(1,2,3-cd)pyrene	U	710	ug/Kgdrywt	1	330	940	350	710
Pyrene		1100	ug/Kgdrywt	1	330	940	290	710
Nitrobenzene-d5		55.5	%					
2-Fluorobiphenyl		51.7	%					
Terphenyl-d14		67.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2672.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	730	ug/Kgdrywt	1	330	980	250	730
Benzo(b)fluoranthene	U	730	ug/Kgdrywt	1	330	980	400	730
Benzo(g,h,i)perylene	U	730	ug/Kgdrywt	1	330	980	310	730
Benzo(k)fluoranthene	U	730	ug/Kgdrywt	1	330	980	240	730
Chrysene	U	730	ug/Kgdrywt	1	330	980	280	730
Dibenzo(a,h)anthracene	U	730	ug/Kgdrywt	1	330	980	380	730
Fluoranthene	U	730	ug/Kgdrywt	1	330	980	310	730
Indeno(1,2,3-cd)pyrene	U	730	ug/Kgdrywt	1	330	980	360	730
Pyrene	J	440	ug/Kgdrywt	1	330	980	300	730
Nitrobenzene-d5		61.5	%					
2-Fluorobiphenyl		46.2	%					
Terphenyl-d14		62.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2673.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 32.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	270	ug/Kgdrywt	1	330	1000	260	760
Benzo(b)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	410	760
Benzo(g,h,i)perylene	U	760	ug/Kgdrywt	1	330	1000	320	760
Benzo(k)fluoranthene	U	760	ug/Kgdrywt	1	330	1000	250	760
Chrysene	J	310	ug/Kgdrywt	1	330	1000	290	760
Dibenzo(a,h)anthracene	U	760	ug/Kgdrywt	1	330	1000	390	760
Fluoranthene	J	630	ug/Kgdrywt	1	330	1000	320	760
Indeno(1,2,3-cd)pyrene	U	760	ug/Kgdrywt	1	330	1000	370	760
Pyrene	J	750	ug/Kgdrywt	1	330	1000	310	760
Nitrobenzene-d5		58.7	%					
2-Fluorobiphenyl		49.0	%					
Terphenyl-d14		69.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2700.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1400	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene		1200	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	J	370	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	J	620	ug/Kgdrywt	1	330	960	240	720
Chrysene		1600	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene		2700	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	J	400	ug/Kgdrywt	1	330	960	350	720
Pyrene		3000	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		50.2	%					
2-Fluorobiphenyl		44.0	%					
Terphenyl-d14		58.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2675.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 31.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	800	ug/Kgdrywt	1	330	1100	280	800
Benzo(b)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	430	800
Benzo(g,h,i)perylene	U	800	ug/Kgdrywt	1	330	1100	330	800
Benzo(k)fluoranthene	U	800	ug/Kgdrywt	1	330	1100	270	800
Chrysene	U	800	ug/Kgdrywt	1	330	1100	300	800
Dibenzo(a,h)anthracene	U	800	ug/Kgdrywt	1	330	1100	410	800
Fluoranthene	U	800	ug/Kgdrywt	1	330	1100	340	800
Indeno(1,2,3-cd)pyrene	U	800	ug/Kgdrywt	1	330	1100	390	800
Pyrene	U	800	ug/Kgdrywt	1	330	1100	320	800
Nitrobenzene-d5		57.5	%					
2-Fluorobiphenyl		58.2	%					
Terphenyl-d14		71.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2690.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 33.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	U	720	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	360	720
Pyrene	J	320	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		57.3	%					
2-Fluorobiphenyl		54.0	%					
Terphenyl-d14		63.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2691.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 35.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	540	ug/Kgdrywt	1	330	930	240	700
Benzo(b)fluoranthene	J	480	ug/Kgdrywt	1	330	930	380	700
Benzo(g,h,i)perylene	U	700	ug/Kgdrywt	1	330	930	290	700
Benzo(k)fluoranthene	J	280	ug/Kgdrywt	1	330	930	230	700
Chrysene	J	780	ug/Kgdrywt	1	330	930	270	700
Dibenzo(a,h)anthracene	U	700	ug/Kgdrywt	1	330	930	360	700
Fluoranthene		1500	ug/Kgdrywt	1	330	930	300	700
Indeno(1,2,3-cd)pyrene	U	700	ug/Kgdrywt	1	330	930	340	700
Pyrene		1500	ug/Kgdrywt	1	330	930	280	700
Nitrobenzene-d5		50.1	%					
2-Fluorobiphenyl		35.4	%					
Terphenyl-d14		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2692.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 42.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	580	ug/Kgdrywt	1	330	780	200	580
Benzo(b)fluoranthene	U	580	ug/Kgdrywt	1	330	780	320	580
Benzo(g,h,i)perylene	U	580	ug/Kgdrywt	1	330	780	240	580
Benzo(k)fluoranthene	U	580	ug/Kgdrywt	1	330	780	200	580
Chrysene	U	580	ug/Kgdrywt	1	330	780	220	580
Dibenzo(a,h)anthracene	U	580	ug/Kgdrywt	1	330	780	300	580
Fluoranthene	U	580	ug/Kgdrywt	1	330	780	250	580
Indeno(1,2,3-cd)pyrene	U	580	ug/Kgdrywt	1	330	780	290	580
Pyrene	U	580	ug/Kgdrywt	1	330	780	240	580
Nitrobenzene-d5		47.1	%					
2-Fluorobiphenyl		30.0	%					
Terphenyl-d14		63.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2693.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	720	ug/Kgdrywt	1	330	960	250	720
Benzo(b)fluoranthene	U	720	ug/Kgdrywt	1	330	960	390	720
Benzo(g,h,i)perylene	U	720	ug/Kgdrywt	1	330	960	300	720
Benzo(k)fluoranthene	U	720	ug/Kgdrywt	1	330	960	240	720
Chrysene	U	720	ug/Kgdrywt	1	330	960	280	720
Dibenzo(a,h)anthracene	U	720	ug/Kgdrywt	1	330	960	370	720
Fluoranthene	U	720	ug/Kgdrywt	1	330	960	310	720
Indeno(1,2,3-cd)pyrene	U	720	ug/Kgdrywt	1	330	960	350	720
Pyrene	U	720	ug/Kgdrywt	1	330	960	290	720
Nitrobenzene-d5		47.4	%					
2-Fluorobiphenyl		29.2	%					
Terphenyl-d14		66.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2694.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	540	ug/Kgdrywt	1	330	920	240	690
Benzo(b)fluoranthene	J	640	ug/Kgdrywt	1	330	920	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	920	290	690
Benzo(k)fluoranthene	J	300	ug/Kgdrywt	1	330	920	230	690
Chrysene	J	760	ug/Kgdrywt	1	330	920	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	920	360	690
Fluoranthene		1100	ug/Kgdrywt	1	330	920	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	920	340	690
Pyrene		1800	ug/Kgdrywt	1	330	920	280	690
Nitrobenzene-d5		39.3	%					
2-Fluorobiphenyl		31.1	%					
Terphenyl-d14		67.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: N2695.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 52.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	320	ug/Kgdrywt	1	330	630	160	480
Benzo(b)fluoranthene	J	330	ug/Kgdrywt	1	330	630	260	480
Benzo(g,h,i)perylene	U	480	ug/Kgdrywt	1	330	630	200	480
Benzo(k)fluoranthene	J	180	ug/Kgdrywt	1	330	630	160	480
Chrysene	J	380	ug/Kgdrywt	1	330	630	180	480
Dibenzo(a,h)anthracene	U	480	ug/Kgdrywt	1	330	630	240	480
Fluoranthene		670	ug/Kgdrywt	1	330	630	200	480
Indeno(1,2,3-cd)pyrene	U	480	ug/Kgdrywt	1	330	630	230	480
Pyrene		770	ug/Kgdrywt	1	330	630	190	480
Nitrobenzene-d5		40.9	%					
2-Fluorobiphenyl		29.8	%					
Terphenyl-d14		70.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2702.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 49.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		880	ug/Kgdrywt	1	330	660	170	500
Benzo(b)fluoranthene		880	ug/Kgdrywt	1	330	660	270	500
Benzo(g,h,i)perylene	J	230	ug/Kgdrywt	1	330	660	210	500
Benzo(k)fluoranthene	J	370	ug/Kgdrywt	1	330	660	170	500
Chrysene		1000	ug/Kgdrywt	1	330	660	190	500
Dibenzo(a,h)anthracene	U	500	ug/Kgdrywt	1	330	660	260	500
Fluoranthene		2200	ug/Kgdrywt	1	330	660	210	500
Indeno(1,2,3-cd)pyrene	J	260	ug/Kgdrywt	1	330	660	250	500
Pyrene		3500	ug/Kgdrywt	1	330	660	200	500
Nitrobenzene-d5		43.4	%					
2-Fluorobiphenyl		42.3	%					
Terphenyl-d14		65.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2703.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 52.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	370	ug/Kgdrywt	1	330	620	160	470
Benzo(b)fluoranthene	U	470	ug/Kgdrywt	1	330	620	250	470
Benzo(g,h,i)perylene	U	470	ug/Kgdrywt	1	330	620	200	470
Benzo(k)fluoranthene	U	470	ug/Kgdrywt	1	330	620	160	470
Chrysene	J	520	ug/Kgdrywt	1	330	620	180	470
Dibenzo(a,h)anthracene	U	470	ug/Kgdrywt	1	330	620	240	470
Fluoranthene		800	ug/Kgdrywt	1	330	620	200	470
Indeno(1,2,3-cd)pyrene	U	470	ug/Kgdrywt	1	330	620	230	470
Pyrene		1500	ug/Kgdrywt	1	330	620	190	470
Nitrobenzene-d5		46.8	%					
2-Fluorobiphenyl		46.5	%					
Terphenyl-d14		74.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2704.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 61.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	330	ug/Kgdrywt	1	330	520	140	390
Benzo(b)fluoranthene	J	400	ug/Kgdrywt	1	330	520	210	390
Benzo(g,h,i)perylene	U	390	ug/Kgdrywt	1	330	520	160	390
Benzo(k)fluoranthene	J	170	ug/Kgdrywt	1	330	520	130	390
Chrysene	J	400	ug/Kgdrywt	1	330	520	150	390
Dibenzo(a,h)anthracene	U	390	ug/Kgdrywt	1	330	520	200	390
Fluoranthene		600	ug/Kgdrywt	1	330	520	170	390
Indeno(1,2,3-cd)pyrene	U	390	ug/Kgdrywt	1	330	520	190	390
Pyrene		1100	ug/Kgdrywt	1	330	520	160	390
Nitrobenzene-d5		25.8	%					
2-Fluorobiphenyl	*	25.7	%					
Terphenyl-d14		47.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2706.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 74.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	360	ug/Kgdrywt	1	330	430	110	320
Benzo(b)fluoranthene		570	ug/Kgdrywt	1	330	430	180	320
Benzo(g,h,i)perylene	J	170	ug/Kgdrywt	1	330	430	140	320
Benzo(k)fluoranthene	J	260	ug/Kgdrywt	1	330	430	110	320
Chrysene		440	ug/Kgdrywt	1	330	430	120	320
Dibenzo(a,h)anthracene	U	320	ug/Kgdrywt	1	330	430	170	320
Fluoranthene		660	ug/Kgdrywt	1	330	430	140	320
Indeno(1,2,3-cd)pyrene	J	170	ug/Kgdrywt	1	330	430	160	320
Pyrene		2300	ug/Kgdrywt	1	330	430	130	320
Nitrobenzene-d5		38.0	%					
2-Fluorobiphenyl		55.0	%					
Terphenyl-d14		61.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2707.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 79.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	280	ug/Kgdrywt	1	330	420	110	310
Benzo(b)fluoranthene	J	410	ug/Kgdrywt	1	330	420	170	310
Benzo(g,h,i)perylene	J	160	ug/Kgdrywt	1	330	420	130	310
Benzo(k)fluoranthene	J	200	ug/Kgdrywt	1	330	420	100	310
Chrysene	J	310	ug/Kgdrywt	1	330	420	120	310
Dibenzo(a,h)anthracene	U	310	ug/Kgdrywt	1	330	420	160	310
Fluoranthene	J	370	ug/Kgdrywt	1	330	420	130	310
Indeno(1,2,3-cd)pyrene	J	160	ug/Kgdrywt	1	330	420	150	310
Pyrene		1300	ug/Kgdrywt	1	330	420	130	310
Nitrobenzene-d5		33.2	%					
2-Fluorobiphenyl		52.1	%					
Terphenyl-d14		64.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2701.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 36.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	570	ug/Kgdrywt	1	330	910	240	690
Benzo(b)fluoranthene	J	520	ug/Kgdrywt	1	330	910	370	690
Benzo(g,h,i)perylene	U	690	ug/Kgdrywt	1	330	910	290	690
Benzo(k)fluoranthene	J	270	ug/Kgdrywt	1	330	910	230	690
Chrysene	J	650	ug/Kgdrywt	1	330	910	260	690
Dibenzo(a,h)anthracene	U	690	ug/Kgdrywt	1	330	910	350	690
Fluoranthene		1200	ug/Kgdrywt	1	330	910	290	690
Indeno(1,2,3-cd)pyrene	U	690	ug/Kgdrywt	1	330	910	340	690
Pyrene		1300	ug/Kgdrywt	1	330	910	280	690
Nitrobenzene-d5		36.6	%					
2-Fluorobiphenyl	*	160.	%					
Terphenyl-d14		45.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2705.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 58.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	J	420	ug/Kgdrywt	1	330	570	150	430
Benzo(b)fluoranthene	J	520	ug/Kgdrywt	1	330	570	230	430
Benzo(g,h,i)perylene	U	430	ug/Kgdrywt	1	330	570	180	430
Benzo(k)fluoranthene	J	220	ug/Kgdrywt	1	330	570	140	430
Chrysene	J	500	ug/Kgdrywt	1	330	570	160	430
Dibenzo(a,h)anthracene	U	430	ug/Kgdrywt	1	330	570	220	430
Fluoranthene	J	510	ug/Kgdrywt	1	330	570	180	430
Indeno(1,2,3-cd)pyrene	U	430	ug/Kgdrywt	1	330	570	210	430
Pyrene		1300	ug/Kgdrywt	1	330	570	170	430
Nitrobenzene-d5		47.4	%					
2-Fluorobiphenyl		51.6	%					
Terphenyl-d14		64.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-24
Client ID: DSY-SD-G30-0018
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2708.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 48.
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene		1600	ug/Kgdrywt	1	330	640	170	480
Benzo(a)pyrene		1600	ug/Kgdrywt	1	330	640	180	480
Benzo(b)fluoranthene		2700	ug/Kgdrywt	1	330	640	260	480
Benzo(g,h,i)perylene		650	ug/Kgdrywt	1	330	640	200	480
Benzo(k)fluoranthene		1200	ug/Kgdrywt	1	330	640	160	480
Chrysene		2200	ug/Kgdrywt	1	330	640	180	480
Dibenzo(a,h)anthracene	U	480	ug/Kgdrywt	1	330	640	250	480
Fluoranthene		2000	ug/Kgdrywt	1	330	640	200	480
Indeno(1,2,3-cd)pyrene		780	ug/Kgdrywt	1	330	640	240	480
Pyrene		4600	ug/Kgdrywt	1	330	640	200	480
Nitrobenzene-d5		40.6	%					
2-Fluorobiphenyl		57.9	%					
Terphenyl-d14		54.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: N2663.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(b)fluoranthene	U	7.1	ug/L	1	10	9.4	1.1	7.1
Benzo(k)fluoranthene	U	7.1	ug/L	1	10	9.4	1.5	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.4	1.4	7.1
Chrysene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Dibenzo(a,h)anthracene	U	7.1	ug/L	1	10	9.4	1.6	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.4	2.3	7.1
Indeno(1,2,3-cd)pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Pyrene	U	7.1	ug/L	1	10	9.4	1.8	7.1
Nitrobenzene-d5		61.8						
2-Fluorobiphenyl		68.3						
Terphenyl-d14		99.2						

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4130.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	68.	11.	34.
2-Methylnaphthalene-D10		69.8	%					
Fluorene-D10		74.2	%					
Pyrene-D10		74.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4131.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	55.	9.2	28.
2-Methylnaphthalene-D10		56.2	%					
Fluorene-D10		64.3	%					
Pyrene-D10		66.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4132.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 40.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		580	ug/Kgdrywt	1	20	50.	8.3	25.
2-Methylnaphthalene-D10		54.9	%					
Fluorene-D10		60.5	%					
Pyrene-D10		62.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4133.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 30.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		71.	ug/Kgdrywt	1	20	65.	11.	32.
2-Methylnaphthalene-D10		42.4	%					
Fluorene-D10		51.8	%					
Pyrene-D10		65.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4134.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		150	ug/Kgdrywt	1	20	62.	10.	31.
2-Methylnaphthalene-D10		37.0	%					
Fluorene-D10		43.0	%					
Pyrene-D10		52.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4135.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		320	ug/Kgdrywt	1	20	57.	9.4	28.
2-Methylnaphthalene-D10		34.3	%					
Fluorene-D10		47.9	%					
Pyrene-D10		58.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4136.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	59.	9.8	30.
2-Methylnaphthalene-D10		39.1	%					
Fluorene-D10		52.3	%					
Pyrene-D10		58.9	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4137.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 32.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	61.	10.	30.
2-Methylnaphthalene-D10		29.6	%					
Fluorene-D10		42.0	%					
Pyrene-D10		57.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9DL
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4157.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		820	ug/Kgdrywt	2	20	120	19.	58.
2-Methylnaphthalene-D10		34.5	%					
Fluorene-D10		46.5	%					
Pyrene-D10		55.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WEt
SDG: DSY-24
Lab File ID: G4139.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 31.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		73.	ug/Kgdrywt	1	20	64.	11.	32.
2-Methylnaphthalene-D10		53.7	%					
Fluorene-D10		60.7	%					
Pyrene-D10		65.4	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4140.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 33.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		100	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		53.8	%					
Fluorene-D10		57.9	%					
Pyrene-D10		61.0	%					

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Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4141.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 26-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 35.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		310	ug/Kgdrywt	1	20	56.	9.3	28.
2-Methylnaphthalene-D10		22.1	%					
Fluorene-D10		34.7	%					
Pyrene-D10		53.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4160.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 42.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		54.	ug/Kgdrywt	1	20	47.	7.8	24.
2-Methylnaphthalene-D10		20.4	%					
Fluorene-D10		33.2	%					
Pyrene-D10		47.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: G4161.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 34.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		80.	ug/Kgdrywt	1	20	58.	9.6	29.
2-Methylnaphthalene-D10		19.6	%					
Fluorene-D10		29.3	%					
Pyrene-D10		43.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4162.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		280	ug/Kgdrywt	1	20	56.	9.2	28.
2-Methylnaphthalene-D10		18.8	%					
Fluorene-D10		29.4	%					
Pyrene-D10		49.2	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4163.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 52.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		170	ug/Kgdrywt	1	20	38.	6.3	19.
2-Methylnaphthalene-D10		20.3	%					
Fluorene-D10		35.2	%					
Pyrene-D10		53.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18DL
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4158.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 49.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		420	ug/Kgdrywt	2	20	81.	13.	40.
2-Methylnaphthalene-D10		27.7	%					
Fluorene-D10		36.0	%					
Pyrene-D10		83.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4164.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 52.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	38.	6.2	19.
2-Methylnaphthalene-D10		41.8	%					
Fluorene-D10		69.4	%					
Pyrene-D10		69.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4186.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 61.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	32.	5.2	16.
2-Methylnaphthalene-D10		14.4	%					
Fluorene-D10		25.3	%					
Pyrene-D10		38.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4187.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 74.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		290	ug/Kgdrywt	1	20	26.	4.3	13.
2-Methylnaphthalene-D10		29.6	%					
Fluorene-D10		49.5	%					
Pyrene-D10		64.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4188.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 30-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 79.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		200	ug/Kgdrywt	1	20	25.	4.2	13.
2-Methylnaphthalene-D10		28.2	%					
Fluorene-D10		45.9	%					
Pyrene-D10		51.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4159.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 36.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		56.	ug/Kgdrywt	1	20	55.	9.1	28.
2-Methylnaphthalene-D10		50.6	%					
Fluorene-D10		55.1	%					
Pyrene-D10		55.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4128.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: 58.
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene		360	ug/Kgdrywt	1	20	34.	5.7	17.
2-Methylnaphthalene-D10		42.1	%					
Fluorene-D10		41.5	%					
Pyrene-D10		52.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: G4127.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.094	ug/L	1	.2	0.19	0.062	0.094
2-Methylnaphthalene-D10	*	0.00	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10	*	0.00	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-1
Client ID: DSY-SD-AA09-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK229.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1221	U	27.	ug/Kgdrywt	1	17	54.	25.	27.
Aroclor-1232	U	32.	ug/Kgdrywt	1	17	54.	30.	32.
Aroclor-1242	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Aroclor-1248	U	27.	ug/Kgdrywt	1	17	54.	20.	27.
Aroclor-1254	U	27.	ug/Kgdrywt	1	17	54.	15.	27.
Aroclor-1260	U	27.	ug/Kgdrywt	1	17	54.	19.	27.
Tetrachloro-M-Xylene		64.3	%					
Decachlorobiphenyl		61.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-2
Client ID: DSY-SD-AA09-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK230.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	46.	21.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	46.	25.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Aroclor-1254	U	23.	ug/Kgdrywt	1	17	46.	12.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	46.	16.	23.
Tetrachloro-M-Xylene		68.9	%					
Decachlorobiphenyl		71.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-3
Client ID: DSY-SD-AA09-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK231.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 40.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1221	U	21.	ug/Kgdrywt	1	17	42.	20.	21.
Aroclor-1232	U	25.	ug/Kgdrywt	1	17	42.	23.	25.
Aroclor-1242	U	21.	ug/Kgdrywt	1	17	42.	14.	21.
Aroclor-1248	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Aroclor-1254		1300	ug/Kgdrywt	1	17	42.	12.	21.
Aroclor-1260	U	21.	ug/Kgdrywt	1	17	42.	15.	21.
Tetrachloro-M-Xylene		79.9	%					
Decachlorobiphenyl		86.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-4
Client ID: DSY-SD-AA13-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK246.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 30.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Aroclor-1221	U	28.	ug/Kgdrywt	1	17	55.	26.	28.
Aroclor-1232	U	33.	ug/Kgdrywt	1	17	55.	30.	33.
Aroclor-1242	U	28.	ug/Kgdrywt	1	17	55.	19.	28.
Aroclor-1248	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Aroclor-1254	U	28.	ug/Kgdrywt	1	17	55.	15.	28.
Aroclor-1260	U	28.	ug/Kgdrywt	1	17	55.	20.	28.
Tetrachloro-M-Xylene		83.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-5
Client ID: DSY-SD-AA13-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK247.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		83.4	%					
Decachlorobiphenyl		97.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK248.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		82.8	%					
Decachlorobiphenyl		89.1	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-7
Client ID: DSY-SD-AA17-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK249.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	47.	22.	23.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	47.	17.	23.
Aroclor-1254	J	240	ug/Kgdrywt	1	17	47.	13.	23.
Aroclor-1260		330	ug/Kgdrywt	1	17	47.	16.	23.
Tetrachloro-M-Xylene		96.1	%					
Decachlorobiphenyl		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-8
Client ID: DSY-SD-AA17-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK250.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 32.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1221	U	22.	ug/Kgdrywt	1	17	44.	20.	22.
Aroclor-1232	U	26.	ug/Kgdrywt	1	17	44.	24.	26.
Aroclor-1242	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Aroclor-1248	U	22.	ug/Kgdrywt	1	17	44.	16.	22.
Aroclor-1254	U	22.	ug/Kgdrywt	1	17	44.	12.	22.
Aroclor-1260	U	22.	ug/Kgdrywt	1	17	44.	15.	22.
Tetrachloro-M-Xylene		64.0	%					
Decachlorobiphenyl		72.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-9
Client ID: DSY-SD-AA17-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK251.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	48.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	48.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	48.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Aroclor-1254	U	24.	ug/Kgdrywt	1	17	48.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	48.	17.	24.
Tetrachloro-M-Xylene		70.9	%					
Decachlorobiphenyl		77.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-10
Client ID: DSY-SD-AA21-0012
Project: NAVSTA Newport CTO WE
SDG: DSY-24
Lab File ID: 7EK257.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 31.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	53.	24.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	53.	29.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	53.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1254	U	26.	ug/Kgdrywt	1	17	53.	15.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Tetrachloro-M-Xylene		85.0	%					
Decachlorobiphenyl		106.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-11
Client ID: DSY-SD-AA21-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK258.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 33.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	50.	23.	25.
Aroclor-1232	U	30.	ug/Kgdrywt	1	17	50.	28.	30.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	50.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	50.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	50.	18.	25.
Tetrachloro-M-Xylene		98.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-12
Client ID: DSY-SD-AA21-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK259.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 35.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254		220	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		76.3	%					
Decachlorobiphenyl		72.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-14
Client ID: DSY-SD-AA24-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK261.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 42.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1221	U	19.	ug/Kgdrywt	1	17	38.	18.	19.
Aroclor-1232	U	22.	ug/Kgdrywt	1	17	38.	21.	22.
Aroclor-1242	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Aroclor-1248	U	19.	ug/Kgdrywt	1	17	38.	14.	19.
Aroclor-1254	U	19.	ug/Kgdrywt	1	17	38.	10.	19.
Aroclor-1260	U	19.	ug/Kgdrywt	1	17	38.	13.	19.
Tetrachloro-M-Xylene		81.8	%					
Decachlorobiphenyl	*	40.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-15
Client ID: DSY-SD-AA24-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK457.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1221	U	25.	ug/Kgdrywt	1	17	49.	23.	25.
Aroclor-1232	U	29.	ug/Kgdrywt	1	17	49.	27.	29.
Aroclor-1242	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Aroclor-1248	U	25.	ug/Kgdrywt	1	17	49.	18.	25.
Aroclor-1254	U	25.	ug/Kgdrywt	1	17	49.	14.	25.
Aroclor-1260	U	25.	ug/Kgdrywt	1	17	49.	17.	25.
Tetrachloro-M-Xylene		86.9	%					
Decachlorobiphenyl		71.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-16
Client ID: DSY-SD-AA24-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1221	U	23.	ug/Kgdrywt	1	17	47.	22.	23.
Aroclor-1232	U	27.	ug/Kgdrywt	1	17	47.	26.	27.
Aroclor-1242	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Aroclor-1248	U	23.	ug/Kgdrywt	1	17	47.	17.	23.
Aroclor-1254		190	ug/Kgdrywt	1	17	47.	13.	23.
Aroclor-1260	U	23.	ug/Kgdrywt	1	17	47.	16.	23.
Tetrachloro-M-Xylene		87.0	%					
Decachlorobiphenyl		86.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-17
Client ID: DSY-SD-AA26-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK264.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 52.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	32.	18.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	12.	16.
Aroclor-1254		97.	ug/Kgdrywt	1	17	32.	8.9	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		89.4	%					
Decachlorobiphenyl		76.0	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-18
Client ID: DSY-SD-AA26-1224
Project: NAVSTA Newport CTO WE
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 12-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 49.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	19.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		960	ug/Kgdrywt	1	17	34.	9.5	17.
Aroclor-1260		320	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		78.5	%					
Decachlorobiphenyl		87.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-19
Client ID: DSY-SD-AA26-2448
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK266.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 52.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	18.	ug/Kgdrywt	1	17	32.	17.	18.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1254		730	ug/Kgdrywt	1	17	32.	8.7	16.
Aroclor-1260		540	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		71.7	%					
Decachlorobiphenyl		82.6	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-20
Client ID: DSY-SD-AA28-0016
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK117.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 61.
Report Date: 07-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	13.	ug/Kgdrywt	1	17	26.	9.2	13.
Aroclor-1221	U	13.	ug/Kgdrywt	1	17	26.	12.	13.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	26.	14.	15.
Aroclor-1242	U	13.	ug/Kgdrywt	1	17	26.	8.9	13.
Aroclor-1248	U	13.	ug/Kgdrywt	1	17	26.	9.4	13.
Aroclor-1254		350	ug/Kgdrywt	1	17	26.	7.2	13.
Aroclor-1260		240	ug/Kgdrywt	1	17	26.	9.2	13.
Tetrachloro-M-Xylene		70.5	%					
Decachlorobiphenyl		70.5	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-22
Client ID: DSY-SD-AA30-0012
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 74.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254		1100	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	J	780	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		71.6	%					
Decachlorobiphenyl		104.	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-23
Client ID: DSY-SD-AA30-1224
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK120.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 79.
Report Date: 07-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254		160	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		67.6	%					
Decachlorobiphenyl		70.4	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-24
Client ID: DSY-SD-G30-0018
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 48.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	34.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	34.	19.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	34.	12.	17.
Aroclor-1254		260	ug/Kgdrywt	1	17	34.	9.5	17.
Aroclor-1260		220	ug/Kgdrywt	1	17	34.	12.	17.
Tetrachloro-M-Xylene		70.7	%					
Decachlorobiphenyl		77.3	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-13
Client ID: DSY-SD-DUP34-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EK260.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 07-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 36.
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1221	U	24.	ug/Kgdrywt	1	17	47.	22.	24.
Aroclor-1232	U	28.	ug/Kgdrywt	1	17	47.	26.	28.
Aroclor-1242	U	24.	ug/Kgdrywt	1	17	47.	16.	24.
Aroclor-1248	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Aroclor-1254		220	ug/Kgdrywt	1	17	47.	13.	24.
Aroclor-1260	U	24.	ug/Kgdrywt	1	17	47.	17.	24.
Tetrachloro-M-Xylene		85.6	%					
Decachlorobiphenyl		66.7	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-21
Client ID: DSY-SD-DUP35-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 58.
Report Date: 08-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	27.	9.6	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	27.	13.	14.
Aroclor-1232	U	16.	ug/Kgdrywt	1	17	27.	15.	16.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	27.	9.3	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	27.	9.8	14.
Aroclor-1254		470	ug/Kgdrywt	1	17	27.	7.6	14.
Aroclor-1260		210	ug/Kgdrywt	1	17	27.	9.6	14.
Tetrachloro-M-Xylene		73.4	%					
Decachlorobiphenyl		67.8	%					

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SE6841-25
Client ID: DSY-SD-RB14-101311
Project: NAVSTA Newport CTO WE(
SDG: DSY-24
Lab File ID: 7EJ803.D

Sample Date: 13-OCT-11
Received Date: 17-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.47	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.47	0.084	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.47	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.47	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.47	0.077	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.47	0.16	0.24
Tetrachloro-M-Xylene		73.5	%					
Decachlorobiphenyl	*	22.9	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA09-0012

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 29.6 **Lab Sample ID:** SE6841-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	63.0			P	1	6.4	0.40	2.6
7439-92-1	LEAD, TOTAL	66.3			P	1	1.3	0.22	1.0
7440-66-6	ZINC, TOTAL	156			P	1	6.4	0.43	2.6

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA09-1224
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 35.5
Lab Sample ID: SE6841-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	116			P	1	5.0	0.31	2.0
7439-92-1	LEAD, TOTAL	96.0			P	1	1.0	0.18	0.80
7440-66-6	ZINC, TOTAL	210			P	1	5.0	0.34	2.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA09-2448
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 39.6
Lab Sample ID: SE6841-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	123			P	1	3.1	0.19	1.2
7439-92-1	LEAD, TOTAL	111			P	1	0.61	0.11	0.49
7440-66-6	ZINC, TOTAL	275			P	1	3.1	0.21	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 30.4
Lab Sample ID: SE6841-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	62.0			P	1	7.9	0.49	3.2
7439-92-1	LEAD, TOTAL	58.5			P	1	1.6	0.28	1.3
7440-66-6	ZINC, TOTAL	162			P	1	7.9	0.53	3.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-1224

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 32.2
Lab Sample ID: SE6841-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	89.7			P	1	4.2	0.26	1.7
7439-92-1	LEAD, TOTAL	80.7			P	1	0.84	0.15	0.67
7440-66-6	ZINC, TOTAL	242			P	1	4.2	0.28	1.7

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	126			P	1	5.6	0.35	2.2
7439-92-1	LEAD, TOTAL	115			P	1	1.1	0.19	0.90
7440-66-6	ZINC, TOTAL	289		N	P	1	5.6	0.38	2.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA17-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 32.7
Lab Sample ID: SE6841-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	77.8			P	1	7.1	0.44	2.8
7439-92-1	LEAD, TOTAL	76.8			P	1	1.4	0.25	1.1
7440-66-6	ZINC, TOTAL	397		N	P	1	7.1	0.48	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA17-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 32.4 **Lab Sample ID:** SE6841-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	90.5			P	1	5.7	0.36	2.3
7439-92-1	LEAD, TOTAL	74.8			P	1	1.1	0.20	0.92
7440-66-6	ZINC, TOTAL	237		N	P	1	5.7	0.39	2.3

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA17-2448

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 34.0 **Lab Sample ID:** SE6841-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	226			P	1	5.9	0.37	2.4
7439-92-1	LEAD, TOTAL	138			P	1	1.2	0.20	0.94
7440-66-6	ZINC, TOTAL	309		N	P	1	5.9	0.40	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA21-0012

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 30.6 **Lab Sample ID:** SE6841-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	61.3			P	1	6.2	0.39	2.5
7439-92-1	LEAD, TOTAL	57.4			P	1	1.2	0.22	1.0
7440-66-6	ZINC, TOTAL	167		N	P	1	6.2	0.42	2.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA21-1224
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 33.5
Lab Sample ID: SE6841-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	75.1			P	1	5.7	0.36	2.3
7439-92-1	LEAD, TOTAL	67.4			P	1	1.1	0.20	0.92
7440-66-6	ZINC, TOTAL	155		N	P	1	5.7	0.39	2.3

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA21-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.8
Lab Sample ID: SE6841-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	170			P	1	7.1	0.44	2.8
7439-92-1	LEAD, TOTAL	162			P	1	1.4	0.25	1.1
7440-66-6	ZINC, TOTAL	375		N	P	1	7.1	0.48	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA24-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 42.2
Lab Sample ID: SE6841-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	24.5			P	1	3.6	0.23	1.4
7439-92-1	LEAD, TOTAL	25.2			P	1	0.73	0.13	0.58
7440-66-6	ZINC, TOTAL	66.8		N	P	1	3.6	0.24	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA24-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 34.2 **Lab Sample ID:** SE6841-015

Concentration Units : mg/Kgdrywt

							ADJUSTED		
CAS No.	**Analyte**	**Concentration**	**C**	**Q**	**M**	**DF**	**LOQ**	**MDL**	**LOD**
7440-50-8	COPPER, TOTAL	93.5			P	1	5.9	0.37	2.4
7439-92-1	LEAD, TOTAL	70.6			P	1	1.2	0.21	0.95
7440-66-6	ZINC, TOTAL	229		N	P	1	5.9	0.40	2.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA24-2448

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 36.0
Lab Sample ID: SE6841-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	87.8			P	1	4.5	0.28	1.8
7439-92-1	LEAD, TOTAL	81.0			P	1	0.90	0.16	0.72
7440-66-6	ZINC, TOTAL	197		N	P	1	4.5	0.30	1.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA26-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 51.7
Lab Sample ID: SE6841-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	48.8			P	1	3.6	0.22	1.4
7439-92-1	LEAD, TOTAL	44.9			P	1	0.71	0.12	0.57
7440-66-6	ZINC, TOTAL	158		N	P	1	3.6	0.24	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA26-1224

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 48.9 **Lab Sample ID:** SE6841-018

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	154			P	1	3.8	0.24	1.5
7439-92-1	LEAD, TOTAL	180			P	1	0.76	0.13	0.60
7440-66-6	ZINC, TOTAL	583		N	P	1	3.8	0.25	1.5

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA26-2448

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 52.2 **Lab Sample ID:** SE6841-019

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	183			P	1	2.9	0.18	1.1
7439-92-1	LEAD, TOTAL	148			P	1	0.57	0.10	0.46
7440-66-6	ZINC, TOTAL	570		N	P	1	2.9	0.19	1.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AA28-0016

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 61.5 **Lab Sample ID:** SE6841-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	82.2			P	1	2.1	0.13	0.84
7439-92-1	LEAD, TOTAL	90.1			P	1	0.42	0.07	0.34
7440-66-6	ZINC, TOTAL	216		N	P	1	2.1	0.14	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA30-0012
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 74.3
Lab Sample ID: SE6841-022

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	37.5			P	1	2.3	0.14	0.92
7439-92-1	LEAD, TOTAL	59.8			P	1	0.46	0.08	0.37
7440-66-6	ZINC, TOTAL	206		N	P	1	2.3	0.15	0.92

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA30-1224

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 78.6
Lab Sample ID: SE6841-023

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	32.4			P	1	1.4	0.09	0.56
7439-92-1	LEAD, TOTAL	48.9			P	1	0.28	0.05	0.23
7440-66-6	ZINC, TOTAL	129		N	P	1	1.4	0.09	0.56

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-G30-0018

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 48.2 **Lab Sample ID:** SE6841-024

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	107			P	1	3.0	0.19	1.2
7439-92-1	LEAD, TOTAL	98.2			P	1	0.61	0.11	0.49
7440-66-6	ZINC, TOTAL	243		N	P	1	3.0	0.20	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP34-101311

Matrix: SOIL **SDG Name:** DSY-24

Percent Solids: 35.6 **Lab Sample ID:** SE6841-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	132			P	1	6.9	0.43	2.8
7439-92-1	LEAD, TOTAL	116			P	1	1.4	0.24	1.1
7440-66-6	ZINC, TOTAL	286		N	P	1	6.9	0.46	2.8

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-DUP35-101311
Matrix: SOIL
SDG Name: DSY-24
Percent Solids: 58.1
Lab Sample ID: SE6841-021

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	62.9			P	1	2.5	0.16	1.0
7439-92-1	LEAD, TOTAL	73.8			P	1	0.51	0.09	0.40
7440-66-6	ZINC, TOTAL	243		N	P	1	2.5	0.17	1.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-RB14-101311
Matrix: WATER
SDG Name: DSY-24
Percent Solids: 0.00
Lab Sample ID: SE6841-025

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.63	10
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0
7440-66-6	ZINC, TOTAL	2.2	J		P	1	25	0.72	10

Comments:

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-1
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	55000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-OCT-11 10:11:23	N/A	N/A	
Toc In Soil(2)	50000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-OCT-11 10:33:56	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	1400	290	1000	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	30. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:48:47	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A00003

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-2
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:00	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0003

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-3
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA09-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:09	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0000365

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-4
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	48000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-OCT-11 11:10:02	N/A	N/A	
Toc In Soil(2)	50000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-OCT-11 11:23:06	N/A	N/A	
Toc In Soil(Avg)	49000 ug/gdrywt	1300	280	990	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	30. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:18	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A0003465

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-5
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:35	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A000036

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-6
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA13-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100043	31-OCT-11 08:49:41	ASTM D2216	28-OCT-11	

Katahdin Analytical Services A000034

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-7
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	51000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-OCT-11 11:36:02	N/A	N/A	
Toc In Soil(2)	45000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-OCT-11 11:45:43	N/A	N/A	
Toc In Soil(Avg)	48000 ug/gdrywt	1200	260	920	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	33. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:06	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000348

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-8
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	32. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:24	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000350

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-9
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA17-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:35	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000311

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-10
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	55000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-OCT-11 12:02:01	N/A	N/A	
Toc In Soil(2)	41000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-OCT-11 12:41:29	N/A	N/A	
Toc In Soil(Avg)	48000 ug/gdrywt	1300	280	980	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	31. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:46	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000032

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-11
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	33. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:11:58	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000363

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-12
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA21-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	35. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:20	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000336

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-14
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	62000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-OCT-11 12:54:40	N/A	N/A	
Toc In Soil(2)	42000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-OCT-11 13:06:27	N/A	N/A	
Toc In Soil(Avg)	52000 ug/gdrywt	950	200	710	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	42. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:44	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0003[illegible]

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-15
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	34. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:54	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000037

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-16
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA24-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:03	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000388

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-17
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	34000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-OCT-11 13:25:01	N/A	N/A	
Toc In Soil(2)	64000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-OCT-11 13:48:26	N/A	N/A	
Toc In Soil(Avg)	49000 ug/gdrywt	770	160	580	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	52. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:18	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A00003

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-18
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	49. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:33	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-19
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA26-2448	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	52. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:42	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Katahdin
ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-20
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA28-0016	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	29000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-OCT-11 14:00:07	N/A	N/A	
Toc In Soil(2)	27000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-OCT-11 14:26:25	N/A	N/A	
Toc In Soil(Avg)	28000 ug/gdrywt	650	140	490	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	61. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:51	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A000036

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-22
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA30-0012	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	15000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-OCT-11 15:18:50	N/A	N/A	
Toc In Soil(2)	19000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-OCT-11 15:50:02	N/A	N/A	
Toc In Soil(Avg)	17000 ug/gdrywt	540	110	400	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	74. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:32:56	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A000036

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-23
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AA30-1224	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	79. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:34:04	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A000365

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-24
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-G30-0018	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	42000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-OCT-11 16:00:06	N/A	N/A	
Toc In Soil(2)	45000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-OCT-11 16:10:54	N/A	N/A	
Toc In Soil(Avg)	44000 ug/gdrywt	830	180	620	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	48. %	1		N/A	SM2540G	WG100087	02-NOV-11 12:34:28	ASTM D2216	01-NOV-11	

Katahdin Analytical Services A0000366

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-13
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP34-101311	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	36. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:12:35	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000358

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6841-21
Report Date: 01-DEC-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-24

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP35-101311	SL	13-OCT-11	17-OCT-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	29000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-OCT-11 14:40:42	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-OCT-11 15:05:39	N/A	N/A	
Toc In Soil(Avg)	33000 ug/gdrywt	690	140	520	LLOYD KAHN	WG99551	20-NOV-11 08:40:37	N/A	N/A	
Total Solids	58. %	1		N/A	SM2540G	WG100067	31-OCT-11 10:13:59	ASTM D2216	29-OCT-11	

Katahdin Analytical Services A0000333

APPENDIX C

REGIONAL WORKSHEETS

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Newport
Reference No. _____

See DV Report

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Kathidin
Case/Project No. _____
SDG No. DSY-27
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. _____

PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Edward Kelly Company Name Tetra Tech Phone Number 412-921-8407

Date Validation Started 12/22/11

Date Validation Completed 12/27/11

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: there is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	
VOA/SV-III	INITIAL CALIBRATION	
VOA/SV-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	
SV-VI	SV SURROGATE SPIKE RECOVERIES	
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

Pest/PCB worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	
Pest/PCB-III	INITIAL CALIBRATION	
Pest/PCB-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	
VOA/SV-Pest/PCB-XI	ACCURACY CHECK	
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	

I certify that all criteria were met for the worksheets checked above.

Signature: Edward Sedlmyer

Name: Edward Sedlmyer

Date: 12/27/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Lodmyer

Date: 12/27/11

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Edward Ledlow

Date: 12/27/11

See DV Report

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: _____

Missing Information	Date Lab Contacted	Date Received

Validator: Edward Sedlmayer Date: 12/22/11

EPA-NE - Data Validation
VOA/SV - Pest/PCB-I

See DV Report

Sampler: _____ Company: _____ Contacted: Yes No Date: _____

I. PRESERVATION AND HOLDING TIMES -

Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Acti

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Edward Hedlayer

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-II

See DV Report

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action
Comments:							

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Edward Sedlayer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	$\overline{RRF}$	Samples Affected	Action

Comments:

Validator: Edward Hallenger

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-IV

See DV Report

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action

Comments

Validator: Edward Ledbetter

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-A

See DV Report

V. BLANK ANALYSIS

List the blank contamination below.

Sampler: _____ Company: _____ Concentration Level: _____

1. Laboratory: Method, Storage and Instrument Blanks

Contacted: Yes No Date: _____

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

2. Field: Equipment (Rinsate), Trip and Bottle Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Edward Ludlow

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-B

3. Blank Actions - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action

Comments: _____

Validator: Edward Hedbergs

Date: 12/27/11

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	Action
	NA				

Validator: Edward Sedlmyer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
SV-VI

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

* Advisory Surrogates - OLM03.2

Validator: Edward Sudlow

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria: _____
IS Retention Time method QC acceptance criteria: _____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	__IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action

Validator: Edward Ledbetter

Date: 12/22/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		

Validator: Edward Sedlmayer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number _____ Duplicate Sample Number _____ Matrix _____

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: _____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Edward Ashley Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-X

See DV Report

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: _____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action

Validator: Edward Ludlow

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XI

See DV Report

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: _____ CASE: _____

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Edward Medlarz

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XII

See DV Report

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	___MS Ions	____RRT	Action

Validator: Edward Lodbouyer

Date: 12/27/11

See DV Report

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-XIII

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an exampl for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? Y N
If no, list sample numbers_____

Fraction		Calculation
VOA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Edward Ludlow

Date: 12/27/11

EPA-NE - Data Validation Worksheet
VOA/SV-XIV

NA

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	RRT	Est. Conc.	Action

Validator: Edward Sedlmayer

Date: 12/27/01

EPA-NE - Data Validation Worksheet
VOA/SV-XV

See DV Report

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Edward Sullivan

Date: 12/27/11

APPENDIX D

SUPPORT DOCUMENTATION

HOLDTIME

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-N24-2448	SE6617-009	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-DUP26-100511	SE6617-010	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-1224	SE6617-018	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N30-0012	SE6617-017	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-2448	SE6617-016	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N28-1224	SE6617-015	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N28-0012	SE6617-014	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N26-2448	SE6617-013	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N30-2448	SE6617-019	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-N26-0012	SE6617-011	NM	10/05/2011	10/23/2011	10/27/2011	18	4	22
DSY-18	M	MG/KG	DSY-SD-Q25-0012	SE6617-020	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-1224	SE6617-008	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-N24-0012	SE6617-007	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-18	M	MG/KG	DSY-SD-L26-2448	SE6617-002	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L26-1224	SE6617-001	NM	10/04/2011	10/23/2011	10/26/2011	19	3	22
DSY-18	M	MG/KG	DSY-SD-L24-2448	SE6617-005	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	M	MG/KG	DSY-SD-L24-1224	SE6617-004	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-L24-0012	SE6617-003	NM	10/04/2011	10/23/2011	10/27/2011	19	4	23
DSY-18	M	MG/KG	DSY-SD-N26-1224	SE6617-012	NM	10/05/2011	10/23/2011	10/26/2011	18	3	21
DSY-19	M	MG/KG	DSY-SD-T25-2448	SE6618-010	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-2448	SE6618-005	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-1224	SE6618-004	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W26-0012	SE6618-003	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-W24-2448	SE6618-019	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-1224	SE6618-018	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-W24-0012	SE6618-017	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-2448	SE6618-016	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-DUP27-100511	SE6618-006	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T29-0012	SE6618-014	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T25-1224	SE6618-009	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-T25-0012	SE6618-008	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-Q29-2448	SE6618-013	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-1224	SE6618-012	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q29-0012	SE6618-011	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-Q25-2448	SE6618-002	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	M	MG/KG	DSY-SD-Q25-1224	SE6618-001	NM	10/05/2011	10/25/2011	10/27/2011	20	2	22
DSY-19	M	MG/KG	DSY-SD-DUP28-100611	SE6618-020	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-19	M	MG/KG	DSY-SD-T29-1224	SE6618-015	NM	10/06/2011	10/25/2011	10/27/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-C25-1224	SE6619-009	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-W30-0012	SE6619-001	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-2448	SE6619-006	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W28-1224	SE6619-005	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-18-0012	SE6619-015	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-18-1224	SE6619-016	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-20	M	MG/KG	DSY-SD-18-2448	SE6619-017	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-0012	SE6619-018	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-1224	SE6619-019	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C09-2448	SE6619-020	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-0012	SE6619-012	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C21-1224	SE6619-013	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-W30-1224	SE6619-002	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C25-0012	SE6619-008	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-C25-2448	SE6619-010	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20
DSY-20	M	MG/KG	DSY-SD-DUP29-100711	SE6619-011	NM	10/07/2011	10/26/2011	10/27/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	M	MG/KG	DSY-SD-W28-0012	SE6619-004	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-W30-2448	SE6619-003	NM	10/06/2011	10/26/2011	10/27/2011	20	1	21
DSY-20	M	MG/KG	DSY-SD-C21-2448	SE6619-014	NM	10/07/2011	10/26/2011	10/28/2011	19	2	21
DSY-21	M	MG/KG	DSY-SD-C17-2448	SE6620-010	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-0012	SE6620-008	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-2448	SE6620-006	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-1224	SE6620-005	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-1224	SE6620-003	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C17-1224	SE6620-009	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-0012	SE6620-002	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C29-2448	SE6620-007	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-DUP30-100711	SE6620-001	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-21	M	MG/KG	DSY-SD-C13-0012	SE6620-004	NM	10/07/2011	10/23/2011	10/24/2011	16	1	17
DSY-22	M	MG/KG	DSY-SD-G09-1224	SE6767-009	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-0012	SE6767-008	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-0012	SE6767-018	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G25-2448	SE6767-023	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-G25-1224	SE6767-022	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP31-101211	SE6767-007	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	M	MG/KG	DSY-SD-G25-0012	SE6767-021	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-22	M	MG/KG	DSY-SD-DUP32-101211	SE6767-017	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/31/2011	15	4	19
DSY-22	M	MG/KG	DSY-SD-G21-2448	SE6767-020	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-1224	SE6767-005	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-0012	SE6767-001	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-2448	SE6767-006	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-2448	SE6767-016	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-0012	SE6767-011	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G21-1224	SE6767-019	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G09-2448	SE6767-010	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-1224	SE6767-015	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G05-0012	SE6767-004	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-2448	SE6767-003	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-1224	SE6767-012	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G13-2448	SE6767-013	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G17-0012	SE6767-014	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-22	M	MG/KG	DSY-SD-G01-1224	SE6767-002	NM	10/12/2011	10/27/2011	10/28/2011	15	1	16
DSY-23	M	MG/KG	DSY-SD-AA01-0012	SE6768-001	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	M	MG/KG	DSY-SD-AA01-1224	SE6768-002	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA01-2448	SE6768-003	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-0012	SE6768-005	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-1224	SE6768-006	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-AA05-2448	SE6768-007	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-23	M	MG/KG	DSY-SD-DUP33-101211	SE6768-004	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-G30-0018	SE6841-024	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-0012	SE6841-022	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-0012	SE6841-014	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA28-0016	SE6841-020	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA30-1224	SE6841-023	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-DUP34-101311	SE6841-013	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-0012	SE6841-001	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA26-2448	SE6841-019	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA09-1224	SE6841-002	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA09-2448	SE6841-003	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-0012	SE6841-004	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-AA13-1224	SE6841-005	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	M	MG/KG	DSY-SD-DUP35-101311	SE6841-021	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	M	MG/KG	DSY-SD-AA21-0012	SE6841-010	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-1224	SE6841-015	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA24-2448	SE6841-016	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-2448	SE6841-012	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA21-1224	SE6841-011	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-1224	SE6841-018	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA26-0012	SE6841-017	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-2448	SE6841-009	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-1224	SE6841-008	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA17-0012	SE6841-007	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-24	M	MG/KG	DSY-SD-AA13-2448	SE6841-006	NM	10/13/2011	11/02/2011	11/02/2011	20	0	20
DSY-18	M	UG/L	DSY-SD-RB09-100411	SE6617-006	NM	10/04/2011	10/20/2011	10/21/2011	16	1	17
DSY-19	M	UG/L	DSY-SD-RB10-100511	SE6618-007	NM	10/05/2011	10/20/2011	10/21/2011	15	1	16
DSY-20	M	UG/L	DSY-SD-RB11-100611	SE6619-007	NM	10/06/2011	10/20/2011	10/21/2011	14	1	15
DSY-21	M	UG/L	DSY-SD-RB12-100711	SE6620-011	NM	10/07/2011	10/20/2011	10/21/2011	13	1	14
DSY-23	M	UG/L	DSY-SD-RB13-101211	SE6768-008	NM	10/12/2011	10/31/2011	11/01/2011	19	1	20
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/03/2011	11/03/2011	21	0	21
DSY-24	M	UG/L	DSY-SD-RB14-101311	SE6841-025	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-18	TOC	MG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TOC	MG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/17/2011	10/17/2011	13	0	13
DSY-18	TOC	MG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-18	TOC	MG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/17/2011	10/17/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-19	TOC	MG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-19	TOC	MG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	10/18/2011	13	0	13
DSY-20	TOC	MG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-20	TOC	MG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	10/18/2011	12	0	12
DSY-20	TOC	MG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	10/18/2011	11	0	11
DSY-21	TOC	MG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-21	TOC	MG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TOC	MG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	10/19/2011	12	0	12
DSY-22	TOC	MG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-22	TOC	MG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-23	TOC	MG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	10/19/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/20/2011	10/20/2011	7	0	7
DSY-24	TOC	MG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	11/20/2011	11/20/2011	38	0	38
DSY-18	TS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	10/22/2011	17	1	18
DSY-18	TS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	TS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-18	TS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-18	TS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	10/22/2011	16	1	17
DSY-19	TS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	TS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/24/2011	10/26/2011	18	2	20
DSY-19	TS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-19	TS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-19	TS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/22/2011	10/24/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	TS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/24/2011	10/25/2011	17	1	18
DSY-20	TS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-20	TS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-20	TS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/24/2011	10/25/2011	18	1	19
DSY-21	TS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	TS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-21	TS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/24/2011	10/26/2011	17	2	19
DSY-22	TS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	TS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-22	TS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-23	TS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	10/27/2011	14	1	15
DSY-24	TS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	TS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	11/01/2011	11/02/2011	19	1	20
DSY-24	TS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-24	TS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/29/2011	10/31/2011	16	2	18
DSY-24	TS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/28/2011	10/31/2011	15	3	18
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N24-0012	SE6617-7	SUR	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-1224	SE6617-8	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N24-2448	SE6617-9	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-DUP26-100511	SE6617-10	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-L24-2448	SE6617-5	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L24-0012	SE6617-3	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-RB09-100411	SE6617-6	SUR	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-18	OS	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-Q25-0012	SE6617-20	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-L26-1224	SE6617-1	SUR	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	%	DSY-SD-N26-1224	SE6617-12	SUR	10/05/2011	10/18/2011	11/14/2011	13	27	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	%	DSY-SD-N30-1224	SE6617-18	SUR	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-0012	SE6618-14	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-1224	SE6618-15	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T29-2448	SE6618-16	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-W26-2448	SE6618-5	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP28-100611	SE6618-20	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-1224	SE6618-1	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-Q25-2448	SE6618-2	SUR	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	%	DSY-SD-T25-2448	SE6618-10	SUR	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-1224	SE6618-12	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-Q29-2448	SE6618-13	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-RB10-100511	SE6618-7	SUR	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	OS	%	DSY-SD-W24-0012	SE6618-17	SUR	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	%	DSY-SD-T25-0012	SE6618-8	SUR	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	SUR	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-C21-1224	SE6619-13	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	SUR	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	SUR	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-1224	SE6619-5	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-2448	SE6619-6	SUR	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	%	DSY-SD-W30-0012	SE6619-1	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-1224	SE6619-2	SUR	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-0012	SE6620-2	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-2448	SE6620-7	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-DUP30-100711	SE6620-1	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C29-1224	SE6620-3	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	SUR	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-RB12-100711	SE6620-11	SUR	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	OS	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	%	DSY-SD-C17-0012	SE6620-8	SUR	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-DUP31-101211	SE6767-7	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G09-2448	SE6767-10	SUR	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	%	DSY-SD-DUP32-101211	SE6767-17	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G01-0012	SE6767-1	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-1224	SE6767-2	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G01-2448	SE6767-3	SUR	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	%	DSY-SD-G21-2448	SE6767-20	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G05-2448	SE6767-6	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-1224	SE6767-12	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-1224	SE6767-22	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-2448	SE6767-13	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G21-0012	SE6767-18	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	SUR	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	SUR	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	%	DSY-SD-G25-2448	SE6767-23	SUR	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	SUR	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-23	OS	%	DSY-SD-AA01-0012	SE6768-1	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-1224	SE6768-2	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA01-2448	SE6768-3	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-0012	SE6768-5	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-1224	SE6768-6	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-AA05-2448	SE6768-7	SUR	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA21-2448	SE6841-12	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-0012	SE6841-14	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA24-1224	SE6841-15	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-1224	SE6841-18	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	SUR	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-DUP35-101311	SE6841-21	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA26-2448	SE6841-19	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-G30-0018	SE6841-24	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA28-0016	SE6841-20	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-RB14-101311	SE6841-25	SUR	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-24	OS	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA30-0012	SE6841-22	SUR	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	SUR	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-2448	SE6841-3	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA09-1224	SE6841-2	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-1224	SE6841-5	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	%	DSY-SD-AA17-0012	SE6841-7	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA13-2448	SE6841-6	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	%	DSY-SD-AA21-0012	SE6841-10	SUR	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/19/2011	11/14/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40
DSY-18	OS	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/13/2011	14	26	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	OS	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	OS	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	OS	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-18	OS	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/14/2011	13	27	40
DSY-19	OS	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/18/2011	13	31	44
DSY-19	OS	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	OS	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-19	OS	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/20/2011	12	33	45
DSY-19	OS	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/20/2011	13	33	46
DSY-19	OS	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/19/2011	13	32	45
DSY-20	OS	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41
DSY-20	OS	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/18/2011	11	31	42
DSY-20	OS	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/18/2011	11/16/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-20	OS	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/17/2011	12	30	42
DSY-20	OS	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/17/2011	11	30	41
DSY-21	OS	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/15/2011	12	27	39
DSY-21	OS	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-21	OS	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/16/2011	12	28	40
DSY-22	OS	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G17-0012	SE6767-14RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19RE	NM	10/12/2011	11/17/2011	11/22/2011	36	5	41
DSY-22	OS	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/20/2011	11/18/2011	8	29	37
DSY-22	OS	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-22	OS	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35
DSY-22	OS	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/16/2011	8	27	35

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	OS	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/17/2011	8	28	36
DSY-22	OS	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/17/2011	26	10	36
DSY-22	OS	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/15/2011	8	26	34
DSY-23	OS	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7DL	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	OS	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-23	OS	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/19/2011	7	31	38
DSY-24	OS	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	OS	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/23/2011	13	28	41
DSY-24	OS	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/21/2011	12	27	39
DSY-24	OS	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/23/2011	12	29	41
DSY-24	OS	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-24	OS	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/22/2011	12	28	40
DSY-18	OS	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/13/2011	7	33	40
DSY-19	OS	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	OS	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	OS	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	OS	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/19/2011	5	33	38
DSY-24	OS	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/21/2011	7	32	39
DSY-18	SIM	%	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-18	SIM	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-19	SIM	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	%	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-20	SIM	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-20	SIM	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-21	SIM	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-21	SIM	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-22	SIM	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-23	SIM	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-24	SIM	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48
DSY-18	SIM	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14RE	NM	10/05/2011	11/21/2011	11/23/2011	47	2	49
DSY-18	SIM	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	SIM	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/18/2011	11/15/2011	14	28	42
DSY-18	SIM	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/18/2011	11/14/2011	14	27	41
DSY-18	SIM	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	11/15/2011	11/15/2011	41	0	41
DSY-18	SIM	UG/KG	DSY-SD-N24-1224	SE6617-8DL	NM	10/05/2011	10/18/2011	11/23/2011	13	36	49
DSY-18	SIM	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/18/2011	11/16/2011	13	29	42
DSY-18	SIM	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/18/2011	11/17/2011	13	30	43
DSY-18	SIM	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/18/2011	11/15/2011	13	28	41
DSY-19	SIM	UG/KG	DSY-SD-Q29-1224	SE6618-12DL	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/18/2011	11/21/2011	12	34	46
DSY-19	SIM	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	SIM	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/18/2011	11/21/2011	13	34	47
DSY-19	SIM	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-19	SIM	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/18/2011	11/22/2011	12	35	47
DSY-20	SIM	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-20	SIM	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	SIM	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/18/2011	11/20/2011	11	33	44
DSY-20	SIM	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	10/18/2011	11/19/2011	12	32	44
DSY-20	SIM	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/18/2011	11/19/2011	11	32	43
DSY-21	SIM	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C29-1224	SE6620-3DL	NM	10/07/2011	10/19/2011	11/29/2011	12	41	53
DSY-21	SIM	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-21	SIM	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/19/2011	11/18/2011	12	30	42
DSY-21	SIM	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/19/2011	11/17/2011	12	29	41
DSY-22	SIM	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	SIM	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/20/2011	11/22/2011	8	33	41
DSY-22	SIM	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-22	SIM	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	11/07/2011	11/23/2011	26	16	42
DSY-22	SIM	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/20/2011	11/25/2011	8	36	44
DSY-22	SIM	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/20/2011	11/23/2011	8	34	42
DSY-23	SIM	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	SIM	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/19/2011	11/20/2011	7	32	39
DSY-23	SIM	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-23	SIM	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/19/2011	11/21/2011	7	33	40
DSY-24	SIM	UG/KG	DSY-SD-AA26-1224	SE6841-18DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/25/2011	11/30/2011	12	36	48

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	SIM	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-24	SIM	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA17-2448	SE6841-9DL	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/28/2011	12	34	46
DSY-24	SIM	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/25/2011	13	30	43
DSY-24	SIM	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/26/2011	12	32	44
DSY-24	SIM	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/30/2011	13	35	48
DSY-18	SIM	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	11/14/2011	7	34	41
DSY-19	SIM	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	11/15/2011	6	35	41
DSY-20	SIM	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	11/15/2011	5	35	40
DSY-21	SIM	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	11/15/2011	4	35	39
DSY-23	SIM	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	11/20/2011	5	34	39
DSY-24	SIM	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	11/25/2011	7	36	43
DSY-18	PCB	%	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	%	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-18	PCB	%	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	%	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	%	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	%	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	%	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-19	PCB	%	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20
DSY-19	PCB	%	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	%	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	%	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	%	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	%	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	%	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	%	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	%	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-20	PCB	%	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	%	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-20	PCB	%	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	%	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	%	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-21	PCB	%	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	%	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	%	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-21	PCB	%	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	%	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	%	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	%	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	%	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	%	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	%	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	%	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	%	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-23	PCB	%	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	%	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-23	PCB	%	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	%	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	%	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11
DSY-24	PCB	%	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	%	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	%	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	%	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	%	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16RE	NM	10/05/2011	11/21/2011	11/22/2011	47	1	48
DSY-18	PCB	UG/KG	DSY-SD-N26-1224	SE6617-12	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-DUP26-100511	SE6617-10	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N30-2448	SE6617-19	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-1224	SE6617-18	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N30-0012	SE6617-17	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-2448	SE6617-16	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-1224	SE6617-15	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N28-0012	SE6617-14	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-Q25-0012	SE6617-20	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-18	PCB	UG/KG	DSY-SD-N26-2448	SE6617-13	NM	10/05/2011	10/21/2011	11/03/2011	16	13	29
DSY-18	PCB	UG/KG	DSY-SD-N26-0012	SE6617-11	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-2448	SE6617-9	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-1224	SE6617-8	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-N24-0012	SE6617-7	NM	10/05/2011	10/21/2011	11/02/2011	16	12	28
DSY-18	PCB	UG/KG	DSY-SD-L24-2448	SE6617-5	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-2448	SE6617-2	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-1224	SE6617-4	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-18	PCB	UG/KG	DSY-SD-L26-1224	SE6617-1	NM	10/04/2011	10/21/2011	11/01/2011	17	11	28
DSY-18	PCB	UG/KG	DSY-SD-L24-0012	SE6617-3	NM	10/04/2011	10/21/2011	11/02/2011	17	12	29
DSY-19	PCB	UG/KG	DSY-SD-T29-0012	SE6618-14	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-1224	SE6618-9	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W26-2448	SE6618-5	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-2448	SE6618-19	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-1224	SE6618-15	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-T25-0012	SE6618-8	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-T25-2448	SE6618-10	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-W24-0012	SE6618-17	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-T29-2448	SE6618-16	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-19	PCB	UG/KG	DSY-SD-W26-1224	SE6618-4	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-1224	SE6618-12	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W24-1224	SE6618-18	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-0012	SE6618-11	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-W26-0012	SE6618-3	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-2448	SE6618-2	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-Q25-1224	SE6618-1	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-19	PCB	UG/KG	DSY-SD-DUP28-100611	SE6618-20	NM	10/06/2011	10/21/2011	10/29/2011	15	8	23
DSY-19	PCB	UG/KG	DSY-SD-Q29-2448	SE6618-13	NM	10/06/2011	10/21/2011	10/28/2011	15	7	22
DSY-19	PCB	UG/KG	DSY-SD-DUP27-100511	SE6618-6	NM	10/05/2011	10/21/2011	10/28/2011	16	7	23
DSY-20	PCB	UG/KG	DSY-SD-W28-1224	SE6619-5	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-W28-2448	SE6619-6	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-2448	SE6619-10	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-1224	SE6619-2	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W28-0012	SE6619-4	NM	10/06/2011	11/09/2011	11/11/2011	34	2	36
DSY-20	PCB	UG/KG	DSY-SD-C25-1224	SE6619-9	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-W30-0012	SE6619-1	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-W30-2448	SE6619-3	NM	10/06/2011	10/23/2011	11/06/2011	17	14	31
DSY-20	PCB	UG/KG	DSY-SD-C25-0012	SE6619-8	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/KG	DSY-SD-C21-2448	SE6619-14	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-1224	SE6619-13	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-1224	SE6619-16	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-2448	SE6619-20	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-1224	SE6619-19	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C09-0012	SE6619-18	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-18-2448	SE6619-17	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-DUP29-100711	SE6619-11	NM	10/07/2011	10/23/2011	11/06/2011	16	14	30
DSY-20	PCB	UG/KG	DSY-SD-18-0012	SE6619-15	NM	10/07/2011	10/23/2011	11/07/2011	16	15	31
DSY-20	PCB	UG/KG	DSY-SD-C21-0012	SE6619-12	NM	10/07/2011	11/21/2011	11/22/2011	45	1	46
DSY-21	PCB	UG/KG	DSY-SD-DUP30-100711	SE6620-1	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C29-2448	SE6620-7	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-2448	SE6620-6	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-1224	SE6620-5	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C13-0012	SE6620-4	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-0012	SE6620-8	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-1224	SE6620-9	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-21	PCB	UG/KG	DSY-SD-C17-2448	SE6620-10	NM	10/07/2011	10/26/2011	11/05/2011	19	10	29
DSY-21	PCB	UG/KG	DSY-SD-C29-1224	SE6620-3	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-21	PCB	UG/KG	DSY-SD-C29-0012	SE6620-2	NM	10/07/2011	10/26/2011	11/04/2011	19	9	28
DSY-22	PCB	UG/KG	DSY-SD-G25-1224	SE6767-22	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G25-0012	SE6767-21	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G21-2448	SE6767-20	NM	10/12/2011	10/31/2011	11/15/2011	19	15	34
DSY-22	PCB	UG/KG	DSY-SD-G21-1224	SE6767-19	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G21-0012	SE6767-18	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-2448	SE6767-16	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-1224	SE6767-15	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G17-0012	SE6767-14	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-1224	SE6767-9	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-0012	SE6767-11	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G13-2448	SE6767-13	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-DUP31-101211	SE6767-7	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-0012	SE6767-1	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-0012	SE6767-4	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G01-1224	SE6767-2	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-DUP32-101211	SE6767-17	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-2448	SE6767-10	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G05-1224	SE6767-5	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-22	PCB	UG/KG	DSY-SD-G05-2448	SE6767-6	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G13-1224	SE6767-12	NM	10/12/2011	10/31/2011	11/14/2011	19	14	33
DSY-22	PCB	UG/KG	DSY-SD-G09-0012	SE6767-8	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-22	PCB	UG/KG	DSY-SD-G25-2448	SE6767-23	NM	10/12/2011	10/26/2011	11/03/2011	14	8	22
DSY-22	PCB	UG/KG	DSY-SD-G01-2448	SE6767-3	NM	10/12/2011	10/31/2011	11/08/2011	19	8	27
DSY-23	PCB	UG/KG	DSY-SD-AA01-2448	SE6768-3	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-DUP33-101211	SE6768-4	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-1224	SE6768-6	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-0012	SE6768-5	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA05-2448	SE6768-7	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-0012	SE6768-1	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-23	PCB	UG/KG	DSY-SD-AA01-1224	SE6768-2	NM	10/12/2011	10/26/2011	11/05/2011	14	10	24
DSY-24	PCB	UG/KG	DSY-SD-AA09-2448	SE6841-3	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA21-0012	SE6841-10	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-2448	SE6841-9	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-G30-0018	SE6841-24	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA24-0012	SE6841-14	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA17-1224	SE6841-8	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP35-101311	SE6841-21	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-24	PCB	UG/KG	DSY-SD-AA24-1224	SE6841-15	NM	10/13/2011	11/09/2011	11/11/2011	27	2	29
DSY-24	PCB	UG/KG	DSY-SD-AA17-0012	SE6841-7	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-0012	SE6841-1	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA09-1224	SE6841-2	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-2448	SE6841-19	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-DUP34-101311	SE6841-13	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-0012	SE6841-22	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-2448	SE6841-12	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA28-0016	SE6841-20	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA21-1224	SE6841-11	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA26-1224	SE6841-18	NM	10/13/2011	11/09/2011	11/12/2011	27	3	30
DSY-24	PCB	UG/KG	DSY-SD-AA26-0012	SE6841-17	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA24-2448	SE6841-16	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-1224	SE6841-5	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA13-0012	SE6841-4	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-24	PCB	UG/KG	DSY-SD-AA30-1224	SE6841-23	NM	10/13/2011	10/26/2011	11/03/2011	13	8	21
DSY-24	PCB	UG/KG	DSY-SD-AA13-2448	SE6841-6	NM	10/13/2011	10/25/2011	11/07/2011	12	13	25
DSY-18	PCB	UG/L	DSY-SD-RB09-100411	SE6617-6	NM	10/04/2011	10/11/2011	10/25/2011	7	14	21
DSY-19	PCB	UG/L	DSY-SD-RB10-100511	SE6618-7	NM	10/05/2011	10/11/2011	10/25/2011	6	14	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DSY-20	PCB	UG/L	DSY-SD-RB11-100611	SE6619-7	NM	10/06/2011	10/11/2011	10/25/2011	5	14	19
DSY-21	PCB	UG/L	DSY-SD-RB12-100711	SE6620-11	NM	10/07/2011	10/11/2011	10/26/2011	4	15	19
DSY-23	PCB	UG/L	DSY-SD-RB13-101211	SE6768-8	NM	10/12/2011	10/17/2011	10/19/2011	5	2	7
DSY-24	PCB	UG/L	DSY-SD-RB14-101311	SE6841-25	NM	10/13/2011	10/20/2011	10/24/2011	7	4	11

NAVSTA NEWPORT
SEDIMENT DATA
DSY-24

FRACTION	CHEMICAL	DSY-SD-AA21-2448	UNITS	DSY-SD-DUP34-101311	RPD	D	
M	COPPER	170	MG/KG	132	25.17	38.00	
M	LEAD	162	MG/KG	116	33.09	46.00	
M	ZINC	375 J	MG/KG	286 J	26.93	89.00	
OS	BENZO(A)ANTHRACENE	540 J	UG/KG	570 J	5.41	30.00	
OS	BENZO(B)FLUORANTHENE	480 J	UG/KG	520 J	8.00	40.00	
OS	BENZO(K)FLUORANTHENE	280 J	UG/KG	270 J	3.64	10.00	
OS	CHRYSENE	780 J	UG/KG	650 J	18.18	130.00	
OS	FLUORANTHENE	1500	UG/KG	1200	22.22	300.00	
OS	PYRENE	1500	UG/KG	1300	14.29	200.00	
PAH	BENZO(A)PYRENE	310	UG/KG	56	138.80	254.00	J
PCB	AROCLOR-1254	220 J	UG/KG	220 J	0.00	0.00	

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SEDIMENT DATA
DSY-24

FRACTION	CHEMICAL	DSY-SD-AA28-0016	UNITS	DSY-SD-DUP35-101311	RPD	D
M	COPPER	82.2	MG/KG	62.9	26.60	19.30
M	LEAD	90.1	MG/KG	73.8	19.89	16.30
M	ZINC	216 J	MG/KG	243 J	11.76	27.00
MISC	TOTAL ORGANIC CARBON	28000	MG/KG	33000	16.39	5000.00
MISC	TOTAL SOLIDS	61	%	58	5.04	3.00
MISC	TRIBUTYLTIN (AS TIN)	2.5	UG/KG	1.3 J	63.16	1.20
OS	BENZO(A)ANTHRACENE	330 J	UG/KG	420 J	24.00	90.00
OS	BENZO(B)FLUORANTHENE	400 J	UG/KG	520 J	26.09	120.00
OS	BENZO(K)FLUORANTHENE	170 J	UG/KG	220 J	25.64	50.00
OS	CHRYSENE	400 J	UG/KG	500 J	22.22	100.00
OS	FLUORANTHENE	600	UG/KG	510 J	16.22	90.00
OS	PYRENE	1100	UG/KG	1300	16.67	200.00
PAH	BENZO(A)PYRENE	240	UG/KG	360	40.00	120.00
PCB	AROCLOR-1254	350	UG/KG	470	29.27	120.00
PCB	AROCLOR-1260	240	UG/KG	210	13.33	30.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-24
SE6841

Sample Receipt

The following samples were received on October 17, 2011 and were logged in under Katahdin Analytical Services work order number SE6841 for a hardcopy due date of November 4, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6841-1	DSY-SD-AA09-0012
SE6841-2	DSY-SD-AA09-1224
SE6841-3	DSY-SD-AA09-2448
SE6841-4	DSY-SD-AA13-0012
SE6841-5	DSY-SD-AA13-1224
SE6841-6	DSY-SD-AA13-2448
SE6841-7	DSY-SD-AA17-0012
SE6841-8	DSY-SD-AA17-1224
SE6841-9	DSY-SD-AA17-2448
SE6841-10	DSY-SD-AA21-0012
SE6841-11	DSY-SD-AA21-1224
SE6841-12	DSY-SD-AA21-2448
SE6841-13	DSY-SD-DUP34-101311
SE6841-14	DSY-SD-AA24-0012
SE6841-15	DSY-SD-AA24-1224
SE6841-16	DSY-SD-AA24-2448
SE6841-17	DSY-SD-AA26-0012
SE6841-18	DSY-SD-AA26-1224
SE6841-19	DSY-SD-AA26-2448
SE6841-20	DSY-SD-AA28-0016
SE6841-21	DSY-SD-DUP35-101311
SE6841-22	DSY-SD-AA30-0012
SE6841-23	DSY-SD-AA30-1224
SE6841-24	DSY-SD-G30-0018
SE6841-25	DSY-SD-RB14-101311

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin.** This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-24 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE6841-6 was used for the matrix spike (MS) and matrix spike duplicate (MSD) sample, per client request.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were subjected to the GPC cleanup process except for SE6841-13.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. Sample SE6841-25 was spiked only with the 8270-SCAN surrogates. The soil LCS/LCSD associated with samples SE6841-1 through 20 were spiked with only the 8270-SCAN LCS/LCSD spike mix. The report package for SIM analysis does not have a Form 3 for this soil LCS/LCSD.

Samples SE6841-3, 12, 18DL, 19, 20, 21, 22, and 23 were manually integrated for the surrogates fluorene-d10, internal standards acenaphthene-d10, and/or chrysene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Sample SE6841-25 had a low response for the internal standard perylene-d12, which was outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the responses for the other five internal standards were acceptable, the sample was not reanalyzed.

The LCSD WG99504-3 had this sample had low responses for the internal standards chrysene-d12 and perylene-d12, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the LCS had acceptable internal standard responses and the LCS/LCSD had acceptable spike recoveries, the LCSD was not reanalyzed.

8270C SCAN Analysis

Surrogate recoveries for all samples and QC were evaluated using laboratory established acceptance limits.

All of the soil samples were subjected to the GPC cleanup process except for sample SE6841-13. The Form 5 for the semivolatile organics instrument performance check (DFTPP) Decafluorotriphenylphosphine (file ND180) is flagged for % Relative Abundance for m/z 442 that is above 100% that of m/z 198. The Ion Abundance Criteria for m/z 442 is up to 100.0% on the Form 5. The actual acceptance criterion is up to 100%. The % Relative Abundance is 100.2%, which rounds to the value 100%. Since the Ion Abundance Criteria was met, no further action was taken.

Sample SE6841-20 had a low recovery for the surrogate 2-flurobiphenyl, which was outside the laboratory established acceptance limits. The deviation is within the allowable exceedances according to EPA guidelines, which is one acid and/or base surrogate with a minimal recovery of 10%. Therefore, the sample was not reextracted.

Sample SE6841-13 had a high recovery for the surrogate 2-flurobiphenyl, which was outside of the laboratory established acceptance limits. Due to a laboratory error, the sample was spiked with the EPH fractionation surrogate mix, which also contains the surrogate 2-flurobiphenyl. This resulted in a high recovery for this surrogate. Because the surrogate mix contained hexane, the sample could not be put through the GPC. For these reasons, the sample was not reextracted.

Samples SE6841-18, 19, 22, and 24 had low responses for the internal standard perylene-d12, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard. Since the responses for the other five internal standards were acceptable and the surrogate recoveries were acceptable, the samples were not reanalyzed.

Samples SE6841-3, 8, 12, 13, 16, 17, 18, 20, 21, 22, 23 were manually integrated for the analytes benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The CV (file N2122) had a low response for the surrogate terphenyl-d14. The CV (file N2659) had a high response for the analyte pyrene. The CV (file N2682) had a low response for the analyte indeno(1,2,3-cd)pyrene. These responses resulted in %D's that were greater than the acceptance limit of 20% from DoD QSM Version 4.1.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

8082 Analysis

Surrogate recoveries for the samples and QC were evaluated using laboratory established acceptance limits.

Samples SE6841-11, 12, 13, 16, 21, 22, and 24 were manually integrated for Aroclor 1254, Aroclor 1260 and/or the surrogate TCX. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6841-7 and 22 had %RPD's for Aroclor 1254 or Aroclor 1260 that were outside of the method acceptance limits of 40%. The analyte is flagged with a "J" qualifier on the report of analysis (ROA).

One of the five peaks that was used to quantitate Aroclor 1254 or Aroclor 1260 on one or both channels had an elevated concentration due to interference from one of the aroclors for the following samples: Samples SE6841-16, 18, 21, 22, and 24. The peak was deleted electronically. However, due to software limitations, the average calculated concentration was still based on five peaks. Therefore, the mean concentration was manually calculated based on the correct amount of peaks and was manually corrected on the Form 10. The %RPD was also manually corrected on the Form 10.

Samples SE6841-19 through 24 and the MSD WG99756-5 had low recoveries for TCX and DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

The method blank WG100719-1 and the LCS WG100719-2 had high recoveries for TCX and DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

Samples SE6841-14 and 25 had low recoveries for DCB on both channels that were outside of laboratory established acceptance limits.

The method blank WG99509-1 had no recoveries for TCX on both channels. Due to a laboratory error and noted in the prep log sheet, this extract went close to dryness when it was concentrated. The associated sample SE6841-25 had low recoveries for DCB on both channels. Since the recoveries for DCB were acceptable in the associated method blank and LCS/LCSD, no further action was taken.

Samples SE6841-13 and 18 had low recoveries for DCB on channel A that were outside of laboratory established acceptance limits. Since the recoveries were acceptable on channel B, no further action was taken.

The opening/closing calibration verification standard (CV) (file 7EK122) had a low response for DCB on both channels, as well as a low response for Aroclor 1260 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1260 was acceptable on channel B, the associated samples were not reanalyzed. The recovery of DCB may be biased low.

The closing CV (file 7EK137) had a high response for TCX and a low response for DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK107 and 7EK218) had high responses for TCX on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EK188) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK268) had low responses for DCB and Aroclor 1260 on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK241, 7EK256 and 7EK467) had high responses for Aroclor 1254 on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening/closing CV's (files 7EK253 and 7EK449) had high responses for TCX and DCB on channel A, which resulted in %Ds that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EK434) had a high responses for Aroclor 1016, Aroclor 1260, TCX, and DCB on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (file 7EK464) had high responses for TCX on both channels and Aroclor 1016 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1016 was acceptable on channel B, the associated samples were not reanalyzed. The samples may be biased high for TCX.

The LCS WG99856-2 had a low recovery for Aroclor 1016 which was outside of the laboratory established acceptance limits. The LCS also had low recoveries for TCX on both channels that were outside of laboratory established acceptance limits. Since the LCSD had acceptable surrogate and spike recoveries, the associated samples were not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-24 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition,

1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6841-25 was originally digested for ICP analysis on 11/01/11 (QC Batch BK01ICW2) in accordance with USEPA Method 3010A. The measured copper recovery of the laboratory control sample in this batch was outside of the project acceptance limit. For this reason, Katahdin Sample Number SE6841-25 was redigested on 11/03/11 (QC Batch BK03ICW3). This redigestate is identified throughout the raw data with the suffix "R" appended to the Katahdin Sample Number (e.g. "SE6841-025R"). This redigestate was successfully analyzed for copper.

Solid-matrix Katahdin Sample Numbers SE6841-(1-5) were digested for ICP analysis on 11/01/11 (QC Batch BK01ICS2) in accordance with USEPA Method 3050B. Katahdin.

Solid-matrix Katahdin Sample Numbers SE6841-(6-24) were digested for ICP analysis on 11/02/11 (QC Batch BK02ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6841-6 was prepared in duplicate and with a matrix-spiked aliquot.

ICP analyses of SDG DSY-24 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of zinc in the matrix-spiked aliquot of Katahdin Sample Number SE6841-6 is outside the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6841-6 is within the laboratory's acceptance limit (<20% relative difference between duplicate aliquots) for all elements.

The measured recovery of all elements in a post-digestion spike of Katahdin Sample Number SE6841-6 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6841-6 is within the project acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for all elements.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the

concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-24 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

Subcontracted Analysis

Analyses for Asbestos were performed by a subcontract laboratory. Please refer to the section of the data package titled Subcontracted Data.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
12.08.11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Jennifer Obrin

From: Horton, Mike [Mike.Horton@tetratech.com]
Sent: Tuesday, October 18, 2011 10:59 AM
To: Guzman, Lucy; Jennifer Obrin
Subject: RE: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841
Attachments: DOC.PDF

Jennifer, please find the attached corrected COC for your records (changing all AA11 locations to AA09 locations) thanks for catching that.

Mike Horton

From: Guzman, Lucy
Sent: Tuesday, October 18, 2011 10:44 AM
To: Horton, Mike; Parker, Stephen
Subject: FW: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841

One of the samples was written on the chain as AA11, but on the bottles was written as AA09. The sample was logged in as AA09. Dates and times matched between the chain and the bottles.

Is this correct? Katahdin should always use what is written in the COC-form!

Please let me know
Lucy

From: Jennifer Obrin [mailto:jobrin@katahdinlab.com]
Sent: Tuesday, October 18, 2011 9:51 AM
To: Guzman, Lucy; Sedlmyer, Tobrena
Subject: COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11-SE6841

Please find attached the COC for NAVSTA Newport CTO WE61 Derecktor Samples received 10/18/11 under the work order SE6841. Please let me know if you have any questions.

Jennifer Obrin
Project Manager
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
(207) 874-2400 Ext. 17

10000

PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

000012

Katahdin ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13136

Send Results to:
Name Steve Parker
Company Tetra Tech NUS
Address 250 Andover St.
City Wilmington
State, Zip MA 01887
Phone (978) 471-8434
Fax (978) 471-8499
E-mail

Send Invoice to:
Name
Company
Address
City
State, Zip
Phone
Fax
E-mail

Project No./Name: CTO WE61 Detector SY

Sampler's (Signature): Michael Horton [signature]

Lab Use Only:
VOA Headspace Y N NA
Field Filtered Y N NA
Correct Containers Y N NA
Discrepancies Y N NA
Cust. Seals Intact Y N NA
Containers Intact Y N NA
Airbill #:
CAR #:

Analysis Requirements:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1155	DSY-SD-AA09-0012	SED	1	1	1	1		4	
	1158	DSY-SD-AA09-1224		1	1	1			3	
	1201	DSY-SD-AA09-2448		1	1	1			3	
	1220	DSY-SD-AA13-0012		1	1	1	1		4	
	1223	DSY-SD-AA13-1224		1	1	1			3	
	1226	DSY-SD-AA13-2448		2	2	2	1	Lab QC	6	
	1245	DSY-SD-AA17-0012		1	1	1	1		4	
	1248	DSY-SD-AA17-1224		1	1	1			3	
	1251	DSY-SD-AA17-2448		1	1	1			3	
	1305	DSY-SD-AA21-0012		1	1	1	1		4	
	1308	DSY-SD-AA21-1224		1	1	1			3	
	1311	DSY-SD-AA21-2448		1	1	1			3	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
[signature]	10/17/11 1300	[signature]
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	Temperature

REMARKS: COC updated to change all AA11 samples to AA09
[signature] Michael Horton

Details:
Page 1 of 3
Cooler No. ___ of ___
Date Shipped
Shipped By
Turnaround

Distribution: Original and yellow copies accompany sample shipment to laboratory. Pink retained by samplers.

000015

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: K1S
KAS Work Order#: SE6841	KIMS Review By: JO	Received By: GN
SDG #:	Cooler: 1 of 4	Date/Time Rec.: 10-17-11/15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 1.4
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Sample set AA11 on chain is marked AA09 on bottles, all times match

0000014

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6341	KIMS Review By: GN	Received By: GN
SDG #:	Cooler: 2 of 4	Date/Time Rec.: 10-17-11 / 15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.7
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GV	Delivered By: KAS
KAS Work Order#: SE6841	KIMS Review By:	Received By: GV
SDG #:	Cooler: 3 of 4	Date/Time Rec.: 10-17-11 / 15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.2
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,				✓	
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin Analytical Services, Inc. **Sample Receipt Condition Report**

Client: Tetra Tech	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: KAS
KAS Work Order#: SE6841	KIMS Review By: JO	Received By: GN
SDG #:	Cooler: 4 of 4	Date/Time Rec.: 10-17-11/15:30

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		—			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?		✓			
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 2.6
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol,	✓				
TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9 Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin

SE 6841

~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

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13136

Send Results to:	Send Invoice to:
Name Stac Parker	Name
Company Tetra Tech NUS	Company
Address 250 Andover St.	Address
City Wilmington	City
State, Zip MA 01887	State, Zip
Phone (978) 474-8434	Phone
Fax (978) 474-8499	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Derecktor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals (Pb, Cu, Zn)	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1155	OSY-SD-AA11-0012	SED	1	1	1	1		4	
	1158	OSY-SD-AA11-1224		1	1	1			3	
	1201	OSY-SD-AA11-2448		1	1	1			3	
	1220	OSY-SD-AA13-0012		1	1	1	1		4	
	1223	OSY-SD-AA13-1224		1	1	1			3	
	1226	OSY-SD-AA13-2448		2	2	2	1	Lab QC	7	
	1245	OSY-SD-AA17-0012		1	1	1	1		4	
	1248	OSY-SD-AA17-1224		1	1	1			3	
	1251	OSY-SD-AA17-2448		1	1	1			3	
	1305	OSY-SD-AA21-0012		1	1	1	1		4	
	1308	OSY-SD-AA21-1224		1	1	1			3	
	1311	OSY-SD-AA21-2448		1	1	1			3	

	Date/Time	
Sample Kit Prep'd by: (Signature)		Received By: (Signature)
Michael Horton	10/17/11 1300	Andrew Harlow
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 1 of 3

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

KATAHDIN ~~EMPIRICAL~~ LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SE6841

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13133

Send Results to:	Send Invoice to:
Name SEE PAGE ONE	Name
Company	Company
Address	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Dereckor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements: PAH, Metals (Pb, Cu, Zn); PCB; Asbestos; TOC

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: _____

CAR #: _____

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PAH, Metals	PCB	Asbestos	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 —	DSY-SD-DUP34-101311	SED	1	1	1			3	
	1325	DSY-SD-AA28-0012		1	1	1	1		4	
	1328	DSY-SD-AA28-1224		1	1	1			3	
	1331	DSY-SD-AA28-2448		1	1	1			3	
	1400	DSY-SD-AA26-0012		1	1	1	1		4	
	1403	DSY-SD-AA26-1224		1	1	1			3	
	1406	DSY-SD-AA26-2448		1	1	1			3	
	1430	DSY-SD-AA28-0016		1	1	1	1		4	
	—	DSY-SD-~~AA~~DUP35-101311		1	1	1	1		4	
	1445	DSY-SD-AA30-0012		1	1	1	1		4	
	1448	DSY-SD-AA30-1224		1	1	1			3	
	1455	DSY-SD-G30-0018		1	1		1		3	

	Date/Time	
Sample Kit Prep'd by: (Signature)	10/17/11 1300	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 2 of 3

Cooler No. ____ of ____

Date Shipped _____

Shipped By _____

Turnaround _____

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SE6841

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13134

Send Results to:	Send Invoice to:
Name	Name
Company SEE PAGE ONE	Company
Address	Address
City	City
State, Zip	State, Zip
Phone	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: CTO WE61, Docktor SY	**Sampler's (Signature):** Michael Horton

Analysis Requirements:

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	PCB	Metals (Pb, Cu, Zn)	PAH	TOC	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	10/13/11 1630	DSY-SD-RB14-101311	AQ	2	1	2			5	
(6768-5 TOC)	10/12/11 1445	DSY-SD-AA05-0012	SED				1		1	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
	10/17/11 1300	Andrew Harlan
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	Temperature

REMARKS:

Details:

Page 3 of 3

Cooler No. ____ of ____

Date Shipped

Shipped By

Turnaround

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-AA09-0012	SE6841-1	64.5		66.3		69.8		0
DSY-SD-AA21-0012	SE6841-10	58.2		57.5		71.1		0
DSY-SD-AA21-1224	SE6841-11	54.0		57.3		63.4		0
DSY-SD-AA21-2448	SE6841-12	35.4		50.1		65.7		0
DSY-SD-DUP34-101311	SE6841-13	160.	*	36.5		45.7		1
DSY-SD-AA24-0012	SE6841-14	30.0		47.1		63.6		0
DSY-SD-AA24-1224	SE6841-15	29.2		47.4		66.0		0
DSY-SD-AA24-2448	SE6841-16	31.1		39.3		67.4		0
DSY-SD-AA26-0012	SE6841-17	29.8		40.9		70.0		0
DSY-SD-AA26-1224	SE6841-18	42.0		43.5		65.9		0
DSY-SD-AA26-2448	SE6841-19	46.7		47.0		74.6		0
DSY-SD-AA09-1224	SE6841-2	61.7		58.6		71.0		0
DSY-SD-AA28-0016	SE6841-20	25.8	*	25.8		47.6		1
DSY-SD-DUP35-101311	SE6841-21	51.6		47.4		64.8		0
DSY-SD-AA30-0012	SE6841-22	54.9		37.9		60.7		0
DSY-SD-AA30-1224	SE6841-23	52.4		33.2		64.2		0
DSY-SD-G30-0018	SE6841-24	57.8		40.8		54.0		0
DSY-SD-AA09-2448	SE6841-3	61.2		58.1		77.8		0
DSY-SD-AA13-0012	SE6841-4	55.9		64.2		78.0		0
DSY-SD-AA13-1224	SE6841-5	39.1		51.8		49.6		0
DSY-SD-AA13-2448	SE6841-6	51.7		55.5		67.1		0
DSY-SD-AA17-0012	SE6841-7	46.2		61.5		62.3		0
DSY-SD-AA17-1224	SE6841-8	49.0		58.7		69.5		0
DSY-SD-AA17-2448	SE6841-9	43.9		50.4		58.2		0
Method Blank Sample	WG99775-1	62.6		54.9		94.9		0
Laboratory Control S	WG99775-2	64.8		54.2		84.8		0
Laboratory Control S	WG99775-3	60.9		52.1		87.6		0
Matrix Spike	WG99775-4	59.3		58.1		73.2		0
Matrix Spike Duplica	WG99775-5	62.2		61.2		71.9		0
Method Blank Sample	WG99859-1	55.2		49.2		73.6		0

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
Laboratory Control S	WG99859-2	53.0		44.1		68.3		0
Laboratory Control S	WG99859-3	63.1		51.9		77.5		0

		QC Limits
NBZ	NITROBENZENE-D5	24-81
2FBP	2-FLUOROBIPHENYL	29-83
TPH	TERPHENYL-D14	24-136

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2FBP	#	NBZ	#	TPH	#	Total Out
DSY-SD-RB14-101311	SE6841-25	68.3		61.8		99.2		0
Method Blank Sample	WG99502-1	81.4		75.3		70.9		0
Laboratory Control S	WG99502-2	79.8		75.8		78.1		0
Laboratory Control S	WG99502-3	73.3		67.2		71.2		0

		QC Limits
2FBP	2-FLUOROBIPHENYL	43-90
TPH	TERPHENYL-D14	36-156
NBZ	NITROBENZENE-D5	41-91

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND139 DFTPP ~~BFB~~ Injection Date: 10/13/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 1102

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.1
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Less than 100.0% of mass 198	36.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	54.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.5
441	0.0 - 100.0% of mass 443	11.1 (74.2)2
442	40.0 - 100.0% of mass 198	77.2
443	17.0 - 23.0% of mass 442	15.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1013	N1952	10/13/11	1127
02		SSTD010N1013	N1953	10/13/11	1209
03		SSTD025N1013	N1954	10/13/11	1252
04		SSTD075N1013	N1955	10/13/11	1334
05		SSTD100N1013	N1956	10/13/11	1416
06		SSTD125N1013	N1957	10/13/11	1459
07		8270C IND CHEC	N1958	10/13/11	1541
08					
09					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-N Calibration Date(s): 10/13/11 10/13/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 1127 1459

LAB FILE ID: RF10: N1953 RF25: N1954 RF50: N1952
RF75: N1955 RF100: N1956 RF125: N1957

COMPOUND	RF10	RF25	RF50	RF75	RF100	RF125	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2
Fluoranthene	1.097	0.974	0.928	0.840	0.836	0.729	AVRG		0.90072996	14.211	30.000
Pyrene	1.509	1.565	1.504	1.403	1.311	1.250	AVRG		1.42351937	8.730	15.000
Benzo(a)anthracene	1.063	1.053	1.061	0.984	0.959	0.911	AVRG		1.00509683	6.307	15.000
Chrysene	1.058	1.040	1.003	0.916	0.889	0.830	AVRG		0.95600873	9.536	15.000
Benzo(b)fluoranthene	1.125	1.162	1.116	1.075	1.096	0.983	AVRG		1.09290468	5.620	15.000
Benzo(k)fluoranthene	1.216	1.199	1.184	1.164	1.100	1.025	AVRG		1.14810451	6.322	15.000
Benzo(a)pyrene	1.009	1.037	1.048	0.976	0.964	0.882	AVRG		0.98594835	6.154	30.000
Indeno(1,2,3-cd)pyrene	218300	323180	594600	743080	917840	1117000	LINR	-9.42e-002	1.70884978	0.99692	0.99000
Dibenzo(a,h)anthracene	0.676	0.725	0.702	0.655	0.636	0.636	AVRG		0.67176429	5.419	15.000
Benzo(g,h,i)perylene	0.726	0.746	0.714	0.651	0.634	0.628	AVRG		0.68322461	7.554	15.000
Nitrobenzene-D5	0.331	0.342	0.345	0.322	0.314	0.298	AVRG		0.32524779	5.495	15.000
2-Fluorobiphenyl	1.257	1.212	1.139	1.025	0.960	0.893	AVRG		1.08086780	13.395	15.000
Terphenyl-D14	0.820	0.861	0.860	0.830	0.788	0.750	AVRG		0.81840048	5.285	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND150 DFTPP ~~BFB~~ Injection Date: 10/22/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0903

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	47.0
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Less than 100.0% of mass 198	37.3
70	Less than 2.0% of mass 69	0.3 (0.9)1
127	40.0 - 60.0% of mass 198	53.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	20.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	10.0 (68.2)2
442	40.0 - 100.0% of mass 198	72.7
443	17.0 - 23.0% of mass 442	14.6 (20.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1022	N2122	10/22/11	0928
02	WG99502-BLANK	WG99502-1	N2123	10/22/11	1017
03	WG99502-LCS	WG99502-2	N2125	10/22/11	1142
04	WG99502-LCSD	WG99502-3	N2126	10/22/11	1224
05					
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17					

Katahdin Analytical Services A0000045

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-N Calibration Date: 10/22/11 Time: 0928

Lab File ID: N2122 Init. Calib. Date(s): 10/13/11 10/13/11

Init. Calib. Times: 1127 1459

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Fluoranthene	0.9010000	0.9310200	0.9310200	0.01	3.33	20.01	AVRG	
Pyrene	1.4240000	1.1369000	1.1369000	0.01	-20.16	20.00	AVRG	<-
Benzo(a)anthracene	1.0050000	0.9300300	0.9300300	0.01	-7.46	20.00	AVRG	
Chrysene	0.9560000	0.8936300	0.8936300	0.01	-6.52	20.00	AVRG	
Benzo(b)fluoranthene	1.0930000	0.9685900	0.9685900	0.01	-11.38	20.00	AVRG	
Benzo(k)fluoranthene	1.1480000	1.0630000	1.0630000	0.01	-7.40	20.00	AVRG	
Benzo(a)pyrene	0.9860000	0.9015000	0.9015000	0.01	-8.57	20.01	AVRG	
Indeno(1,2,3-cd)pyrene	46.462000	50.000000	0.5878800	0.01	-7.08	20.00	LINR	
Dibenzo(a,h)anthracene	0.6720000	0.6412800	0.6412800	0.01	-4.57	20.00	AVRG	
Benzo(g,h,i)perylene	0.6830000	0.6372600	0.6372600	0.01	-6.70	20.00	AVRG	
Nitrobenzene-D5	0.3250000	0.3003600	0.3003600	0.01	-7.58	20.00	AVRG	
2-Fluorobiphenyl	1.0810000	0.9911500	0.9911500	0.01	-8.31	20.00	AVRG	
Terphenyl-D14	0.8180000	0.6380800	0.6380800	0.01	-22.00	20.00	AVRG	<-

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND180 DFTPP ~~BFB~~ Injection Date: 11/15/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 1604

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	34.3	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Less than 100.0% of mass 198	33.4	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.4	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.4	
365	1.0 - 100.0% of mass 198	2.8	
441	0.0 - 100.0% of mass 443	14.4	(73.4)2
442	40.0 - 100.0% of mass 198	100.2	<-
443	17.0 - 23.0% of mass 442	19.6	(19.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1115	N2555	11/15/11	1623
02		SSTD010N1115	N2556	11/15/11	1706
03		SSTD025N1115	N2557	11/15/11	1752
04		SSTD075N1115	N2558	11/15/11	1837
05		SSTD100N1115	N2559	11/15/11	1923
06		SSTD125N1115	N2560	11/15/11	2007
07		8270C IND CHEC	N2561	11/15/11	2052
08					
09					
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14					
15					
16					
17					

FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** DSY-24
Project : NAVSTA Newport CTO WE61 Derecktor **Instrument ID:** GCMS-N
Lab File IDs : N2556.DN2557.DN2555.D **Calibration Date(s):** 15-NOV-11 16:23
N2558.DN2559.DN2560.D 15-NOV-11 20:07

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	10.0000	25.0000	50.0000	75.0000	100.0000	125.0000	New	b	m1	m2	%RSD	%RSD	
Fluoranthene	558752	1422052	2304238	4306477	5111984	6314071	QUA	-0.0081	0.95099	0.20145	0.99971	0.99000	O
Pyrene	1.35704	1.32974	1.16554	1.10244	1.02761	0.98510	AVG		1.16125		13.29001	15.00000	O
Benzo(a)anthracene	0.95816	0.94601	0.87590	0.87144	0.85598	0.84135	AVG		0.89147		5.45799	15.00000	O
Chrysene	0.92893	0.89955	0.78848	0.79504	0.77132	0.76175	AVG		0.82418		8.65987	15.00000	O
Benzo(b)fluoranthene	1.03381	0.99641	1.01878	1.02056	1.00035	1.11500	AVG		1.03082		4.21928	15.00000	O
Benzo(k)fluoranthene	1.01777	1.07940	0.98180	0.92536	0.90933	0.95028	AVG		0.97732		6.49217	15.00000	O
Benzo(a)pyrene	0.87140	0.89980	0.84876	0.84229	0.85409	0.83227	AVG		0.85810		2.82393	30.00000	O
Indeno(1,2,3-cd)pyrene	0.62585	0.69894	0.65196	0.61158	0.65143	0.54298	AVG		0.63046		8.27918	15.00000	O
Dibenzo(a,h)anthracene	0.66592	0.74007	0.69378	0.65089	0.69463	0.59130	AVG		0.67276		7.46543	15.00000	O
Benzo(g,h,i)perylene	0.66159	0.72178	0.66545	0.60243	0.62372	0.53286	AVG		0.63464		10.15921	15.00000	O
Nitrobenzene-D5	0.32744	0.33867	0.30688	0.30398	0.30079	0.28936	AVG		0.31119		5.88091	15.00000	
2-Fluorobiphenyl	1.18443	1.18635	1.04086	0.97163	0.94843	0.88824	AVG		1.03666		12.07191	15.00000	
Terphenyl-D14	0.76913	0.76985	0.68789	0.68306	0.64778	0.63881	AVG		0.69942		8.22861	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND186 DFTPP ~~BFB~~ Injection Date: 11/21/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0733

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.0
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Less than 100.0% of mass 198	34.4
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	40.0 - 60.0% of mass 198	54.0
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	10.2 (74.1)2
442	40.0 - 100.0% of mass 198	71.0
443	17.0 - 23.0% of mass 442	13.8 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1121	N2659	11/21/11	0750
02	WG99775-BLANK	WG99775-1	N2660	11/21/11	0833
03	DSY-SD-RB14-101311	SE6841-25	N2663	11/21/11	1040
04	DSY-SD-AA09-0012	SE6841-1	N2664	11/21/11	1124
05	DSY-SD-AA09-1224	SE6841-2	N2665	11/21/11	1206
06	DSY-SD-AA09-2448	SE6841-3	N2666	11/21/11	1248
07	DSY-SD-AA13-0012	SE6841-4	N2667	11/21/11	1330
08	DSY-SD-AA13-1224	SE6841-5	N2668	11/21/11	1413
09	DSY-SD-AA13-2448	SE6841-6	N2669	11/21/11	1455
10	DSY-SD-AA13-2448MS	WG99775-4	N2670	11/21/11	1550
11	DSY-SD-AA13-2448MSD	WG99775-5	N2671	11/21/11	1632
12	DSY-SD-AA17-0012	SE6841-7	N2672	11/21/11	1714
13	DSY-SD-AA17-1224	SE6841-8	N2673	11/21/11	1756
14	DSY-SD-AA21-0012	SE6841-10	N2675	11/21/11	1918
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID : WG101818-1 **Analytical Date:** 11/21/11 07:50
Lab File ID : N2659.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
126 Fluoranthene	50.00000	46.19038	0.80618	0.010	-7.61923	20.01000	Quadratic	
128 Pyrene	1.16125	1.44448	1.44448	0.010	24.39051	20.00000	Averaged	*
139 Benzo(a)anthracene	0.89147	0.94648	0.94648	0.010	6.17009	20.00000	Averaged	
142 Chrysene	0.82418	0.86213	0.86213	0.010	4.60509	20.00000	Averaged	
145 Benzo(b)fluoranthene	1.03082	1.02505	1.02505	0.010	-0.55929	20.00000	Averaged	
147 Benzo(k)fluoranthene	0.97732	1.05448	1.05448	0.010	7.89459	20.00000	Averaged	
149 Benzo(a)pyrene	0.85810	0.90730	0.90730	0.010	5.73366	20.01000	Averaged	
153 Indeno(1,2,3-cd)pyrene	0.63046	0.68498	0.68498	0.010	8.64775	20.00000	Averaged	
154 Dibenzo(a,h)anthracene	0.67276	0.71912	0.71912	0.010	6.89082	20.00000	Averaged	
155 Benzo(g,h,i)perylene	0.63464	0.71264	0.71264	0.010	12.29026	20.00000	Averaged	
33 Nitrobenzene-D5	0.31119	0.30690	0.30690	0.010	-1.37863	20.00000	Averaged	
62 2-Fluorobiphenyl	1.03666	1.05141	1.05141	0.010	1.42277	20.00000	Averaged	
129 Terphenyl-D14	0.69942	0.82601	0.82601	0.010	18.09957	20.00000	Averaged	

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND187 DFTPP ~~BFB~~ Injection Date: 11/22/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0846

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Less than 100.0% of mass 198	31.3
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	12.0 (73.1)2
442	40.0 - 100.0% of mass 198	87.2
443	17.0 - 23.0% of mass 442	16.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1122	N2682	11/22/11	0907
02	WG99775-LCS	WG99775-2	N2686	11/22/11	1156
03	WG99775-LCSD	WG99775-3	N2687	11/22/11	1238
04	DSY-SD-AA21-1224	SE6841-11	N2690	11/22/11	1452
05	DSY-SD-AA21-2448	SE6841-12	N2691	11/22/11	1534
06	DSY-SD-AA24-0012	SE6841-14	N2692	11/22/11	1616
07	DSY-SD-AA24-1224	SE6841-15	N2693	11/22/11	1658
08	DSY-SD-AA24-2448	SE6841-16	N2694	11/22/11	1740
09	DSY-SD-AA26-0012	SE6841-17	N2695	11/22/11	1822
10					
11					
12					
13					
14					
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101496-1
Lab File ID : N2682.D
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

SDG: DSY-24
Analytical Date: 11/22/11 09:07
Instrument ID: GCMS-N

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
126 Fluoranthene	50.00000	45.52873	0.79641	0.010	-8.94254	20.01000	Quadratic	
128 Pyrene	1.16125	1.36738	1.36738	0.010	17.75120	20.00000	Averaged	
139 Benzo(a)anthracene	0.89147	0.85711	0.85711	0.010	-3.85443	20.00000	Averaged	
142 Chrysene	0.82418	0.81908	0.81908	0.010	-0.61896	20.00000	Averaged	
145 Benzo(b)fluoranthene	1.03082	1.04332	1.04332	0.010	1.21295	20.00000	Averaged	
147 Benzo(k)fluoranthene	0.97732	1.10486	1.10486	0.010	13.04943	20.00000	Averaged	
149 Benzo(a)pyrene	0.85810	0.85368	0.85368	0.010	-0.51471	20.01000	Averaged	
153 Indeno(1,2,3-cd)pyrene	0.63046	0.49796	0.49796	0.010	-21.01595	20.00000	Averaged	*
154 Dibenzo(a,h)anthracene	0.67276	0.54577	0.54577	0.010	-18.87657	20.00000	Averaged	
155 Benzo(g,h,i)perylene	0.63464	0.52368	0.52368	0.010	-17.48376	20.00000	Averaged	
33 Nitrobenzene-D5	0.31119	0.27849	0.27849	0.010	-10.50576	20.00000	Averaged	
62 2-Fluorobiphenyl	1.03666	0.98773	0.98773	0.010	-4.71998	20.00000	Averaged	
129 Terphenyl-D14	0.69942	0.81041	0.81041	0.010	15.86939	20.00000	Averaged	

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: ND188 DFTPP ~~BFB~~ Injection Date: 11/23/11

Instrument ID: GCMS-N DFTPP ~~BFB~~ Injection Time: 0929

GC Column: RTX-5SILMS ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	32.5
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Less than 100.0% of mass 198	33.1
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	52.8
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	10.4 (72.5)2
442	40.0 - 100.0% of mass 198	75.0
443	17.0 - 23.0% of mass 442	14.3 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050N1123	N2696	11/23/11	0949
02	WG99859-BLANK	WG99859-1	N2697	11/23/11	1034
03	WG99859-LCS	WG99859-2	N2698	11/23/11	1144
04	WG99859-LCSD	WG99859-3	N2699	11/23/11	1226
05	DSY-SD-AA17-2448	SE6841-9	N2700	11/23/11	1309
06	DSY-SD-DUP34-101311	SE6841-13	N2701	11/23/11	1351
07	DSY-SD-AA26-1224	SE6841-18	N2702	11/23/11	1433
08	DSY-SD-AA26-2448	SE6841-19	N2703	11/23/11	1516
09	DSY-SD-AA28-0016	SE6841-20	N2704	11/23/11	1559
10	DSY-SD-DUP35-101311	SE6841-21	N2705	11/23/11	1641
11	DSY-SD-AA30-0012	SE6841-22	N2706	11/23/11	1724
12	DSY-SD-AA30-1224	SE6841-23	N2707	11/23/11	1806
13	DSY-SD-G30-0018	SE6841-24	N2708	11/23/11	1849
14					
15					
16					
17					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID :WG101563-1 **Analytical Date:** 11/23/11 09:49
Lab File ID :N2696.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 11/15/11 16:23 11/15/11 20:07

Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
126 Fluoranthene	50.00000	43.67008	0.76878	0.010	-12.65983	20.01000	Quadratic
128 Pyrene	1.16125	1.33815	1.33815	0.010	15.23415	20.00000	Averaged
139 Benzo(a)anthracene	0.89147	0.87828	0.87828	0.010	-1.48033	20.00000	Averaged
142 Chrysene	0.82418	0.83349	0.83349	0.010	1.12988	20.00000	Averaged
145 Benzo(b)fluoranthene	1.03082	0.97834	0.97834	0.010	-5.09073	20.00000	Averaged
147 Benzo(k)fluoranthene	0.97732	1.00272	1.00272	0.010	2.59887	20.00000	Averaged
149 Benzo(a)pyrene	0.85810	0.87490	0.87490	0.010	1.95812	20.01000	Averaged
153 Indeno(1,2,3-cd)pyrene	0.63046	0.64371	0.64371	0.010	2.10170	20.00000	Averaged
154 Dibenzo(a,h)anthracene	0.67276	0.67161	0.67161	0.010	-0.17192	20.00000	Averaged
155 Benzo(g,h,i)perylene	0.63464	0.69734	0.69734	0.010	9.88091	20.00000	Averaged
33 Nitrobenzene-D5	0.31119	0.29081	0.29081	0.010	-6.54722	20.00000	Averaged
62 2-Fluorobiphenyl	1.03666	1.02373	1.02373	0.010	-1.24703	20.00000	Averaged
129 Terphenyl-D14	0.69942	0.76120	0.76120	0.010	8.83317	20.00000	Averaged

*** = Compound out of QC criteria**

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2123.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : DSY-24
Lab Sample ID : WG99502-1
Date Extracted : 20-OCT-11
Date Analyzed : 22-OCT-11
Time Analyzed : 10:17

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99502-2	N2125.D	10/22/11	11:42
Laboratory Control S	WG99502-3	N2126.D	10/22/11	12:24
DSY-SD-RB14-101311	SE6841-25	N2663.D	11/21/11	10:40

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Report of Analytical Results

Client:
Lab ID: WG99502-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2123.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 22-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(a)pyrene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(b)fluoranthene	U	7.5	ug/L	1	10	10.	1.2	7.5
Benzo(k)fluoranthene	U	7.5	ug/L	1	10	10.	1.6	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
Chrysene	U	7.5	ug/L	1	10	10.	1.7	7.5
Dibenzo(a,h)anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Indeno(1,2,3-cd)pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Nitrobenzene-d5		75.3						
2-Fluorobiphenyl		81.4						
Terphenyl-d14		70.9						

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LCS/LCSD Recovery Report

LCS ID: WG99502-2
LCSD ID: WG99502-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99502

Analysis Date: 22-OCT-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	50.0	37.5	75.0	34.2	68.4	ug/L	9	30	66-109
Benzo(a)pyrene	50.0	42.6	85.2	38.6	77.2	ug/L	10	30	63-118
Benzo(b)fluoranthene	50.0	38.0	76.0	34.9	69.8	ug/L	8	30	60-108
Benzo(k)fluoranthene	50.0	39.8	79.6	36.7	73.4	ug/L	8	30	59-125
Benzo(g,h,i)perylene	50.0	41.8	83.6	37.5	75.0	ug/L	11	30	58-115
Chrysene	50.0	43.4	86.8	40.1	80.2	ug/L	8	30	68-114
Dibenzo(a,h)anthracene	50.0	41.4	82.8	37.3	74.6	ug/L	10	30	61-111
Fluoranthene	50.0	45.8	91.6	42.7	85.4	ug/L	7	30	67-119
Indeno(1,2,3-cd)pyrene	50.0	40.2	80.4	35.0	70.0	ug/L	14	30	55-111
Pyrene	50.0	39.9	79.8	36.7	73.4	ug/L	8	30	58-135
Nitrobenzene-d5			75.8		67.2				41-91
2-Fluorobiphenyl			79.8		73.3				43-90
Terphenyl-d14			78.1		71.2				36-156

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2660.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99775-1
Date Extracted : 25-OCT-11
Date Analyzed : 21-NOV-11
Time Analyzed : 08:33

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA09-0012	SE6841-1	N2664.D	11/21/11	11:24
DSY-SD-AA09-1224	SE6841-2	N2665.D	11/21/11	12:06
DSY-SD-AA09-2448	SE6841-3	N2666.D	11/21/11	12:48
DSY-SD-AA13-0012	SE6841-4	N2667.D	11/21/11	13:30
DSY-SD-AA13-1224	SE6841-5	N2668.D	11/21/11	14:13
DSY-SD-AA13-2448	SE6841-6	N2669.D	11/21/11	14:55
Matrix Spike	WG99775-4	N2670.D	11/21/11	15:50
Matrix Spike Duplica	WG99775-5	N2671.D	11/21/11	16:32
DSY-SD-AA17-0012	SE6841-7	N2672.D	11/21/11	17:14
DSY-SD-AA17-1224	SE6841-8	N2673.D	11/21/11	17:56
DSY-SD-AA21-0012	SE6841-10	N2675.D	11/21/11	19:18
Laboratory Control S	WG99775-2	N2686.D	11/22/11	11:56
Laboratory Control S	WG99775-3	N2687.D	11/22/11	12:38
DSY-SD-AA21-1224	SE6841-11	N2690.D	11/22/11	14:52
DSY-SD-AA21-2448	SE6841-12	N2691.D	11/22/11	15:34
DSY-SD-AA24-0012	SE6841-14	N2692.D	11/22/11	16:16
DSY-SD-AA24-1224	SE6841-15	N2693.D	11/22/11	16:58
DSY-SD-AA24-2448	SE6841-16	N2694.D	11/22/11	17:40
DSY-SD-AA26-0012	SE6841-17	N2695.D	11/22/11	18:22
DSY-SD-AA17-2448	SE6841-9	N2700.D	11/23/11	13:09
DSY-SD-DUP34-101311	SE6841-13	N2701.D	11/23/11	13:51
DSY-SD-AA26-1224	SE6841-18	N2702.D	11/23/11	14:33
DSY-SD-AA26-2448	SE6841-19	N2703.D	11/23/11	15:16
DSY-SD-AA28-0016	SE6841-20	N2704.D	11/23/11	15:59

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99775-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2660.D

Sample Date:
Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		54.9	%					
2-Fluorobiphenyl		62.6	%					
Terphenyl-d14		94.9	%					

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LCS/LCSD Recovery Report

LCS ID: WG99775-2
LCSD ID: WG99775-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775

Analysis Date: 22-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	1030	61.7	1030	61.7	ug/Kgdrywt	0	30	40-100
Benzo(a)pyrene	1670	1140	68.3	1100	65.9	ug/Kgdrywt	4	30	40-100
Benzo(b)fluoranthene	1670	1180	70.6	1050	62.9	ug/Kgdrywt	12	30	40-100
Benzo(g,h,i)perylene	1670	899.	53.8	960.	57.5	ug/Kgdrywt	6	30	40-100
Benzo(k)fluoranthene	1670	1250	74.8	1250	74.8	ug/Kgdrywt	0	30	40-100
Chrysene	1670	1200	71.8	1190	71.2	ug/Kgdrywt	1	30	40-100
Dibenzo(a,h)anthracene	1670	956.	57.2	955.	57.2	ug/Kgdrywt	0	30	40-100
Fluoranthene	1670	1200	71.8	1120	67.1	ug/Kgdrywt	7	30	40-100
Indeno(1,2,3-cd)pyrene	1670	785.	47.0	798.	47.8	ug/Kgdrywt	2	30	40-100
Pyrene	1670	1410	84.4	1490	89.2	ug/Kgdrywt	6	30	40-100
Nitrobenzene-d5			54.2		52.1				24-81
2-Fluorobiphenyl			64.8		60.9				29-83
Terphenyl-d14			84.8		87.6				24-136

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MS/MSD Recovery Report

MS ID: WG99775-4
MSD ID: WG99775-5
Sample ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project:
SDG: DSY-24

Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99775
Report Date: 06-DEC-11

Analysis Date: 21-NOV-11
Analyst: WAS
Analysis Method: SW846 8270D
Matrix: SL
% Solids: 34.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	4890	4870	ug/Kgdrywt	J530	3800	4200	66.8	74.9	10	30	40-100
Benzo(b)fluoranthene	4890	4870	ug/Kgdrywt	J560	3800	4500	66.6	80.6	16	30	40-100
Benzo(g,h,i)perylene	4890	4870	ug/Kgdrywt	U710	3200	3200	65.9	65.7	1	30	40-100
Benzo(k)fluoranthene	4890	4870	ug/Kgdrywt	J260	3800	4200	71.6	80.3	10	30	40-100
Chrysene	4890	4870	ug/Kgdrywt	J640	4100	4700	71.5	82.6	12	30	40-100
Dibenzo(a,h)anthracene	4890	4870	ug/Kgdrywt	U710	2900	2900	60.0	58.7	2	30	40-100
Fluoranthene	4890	4870	ug/Kgdrywt	J930	5100	5100	85.0	85.0	0	30	40-100
Indeno(1,2,3-cd)pyrene	4890	4870	ug/Kgdrywt	U710	3100	3100	63.6	63.4	1	30	40-100
Pyrene	4890	4870	ug/Kgdrywt	1100	5800	6300	95.1	107.*	10	30	40-100
Nitrobenzene-d5							58.1	61.2			24-81
2-Fluorobiphenyl							59.3	62.2			29-83
Terphenyl-d14							73.2	71.9			24-136

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : N2697.D
Instrument ID : GCMS-N
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99859-1
Date Extracted : 26-OCT-11
Date Analyzed : 23-NOV-11
Time Analyzed : 10:34

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99859-2	N2698.D	11/23/11	11:44
Laboratory Control S	WG99859-3	N2699.D	11/23/11	12:26
DSY-SD-DUP35-101311	SE6841-21	N2705.D	11/23/11	16:41
DSY-SD-AA30-0012	SE6841-22	N2706.D	11/23/11	17:24
DSY-SD-AA30-1224	SE6841-23	N2707.D	11/23/11	18:06
DSY-SD-G30-0018	SE6841-24	N2708.D	11/23/11	18:49

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99859-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: N2697.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA
Report Date: 01-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)anthracene	U	250	ug/Kgdrywt	1	330	330	86.	250
Benzo(a)pyrene	U	250	ug/Kgdrywt	1	330	330	93.	250
Benzo(b)fluoranthene	U	250	ug/Kgdrywt	1	330	330	130	250
Benzo(g,h,i)perylene	U	250	ug/Kgdrywt	1	330	330	100	250
Benzo(k)fluoranthene	U	250	ug/Kgdrywt	1	330	330	83.	250
Chrysene	U	250	ug/Kgdrywt	1	330	330	95.	250
Dibenzo(a,h)anthracene	U	250	ug/Kgdrywt	1	330	330	130	250
Fluoranthene	U	250	ug/Kgdrywt	1	330	330	110	250
Indeno(1,2,3-cd)pyrene	U	250	ug/Kgdrywt	1	330	330	120	250
Pyrene	U	250	ug/Kgdrywt	1	330	330	100	250
Nitrobenzene-d5		49.2	%					
2-Fluorobiphenyl		55.2	%					
Terphenyl-d14		73.6	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99859-2
LCSD ID: WG99859-3
Project:
SDG: DSY-24
Report Date: 01-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99859

Analysis Date: 23-NOV-11
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)anthracene	1670	909.	54.4	1030	61.7	ug/Kgdrywt	12	30	40-100
Benzo(a)pyrene	1670	983.	58.9	1160	69.5	ug/Kgdrywt	16	30	40-100
Benzo(b)fluoranthene	1670	964.	57.7	1030	61.7	ug/Kgdrywt	7	30	40-100
Benzo(g,h,i)perylene	1670	945.	56.6	1120	67.1	ug/Kgdrywt	17	30	40-100
Benzo(k)fluoranthene	1670	1050	62.9	1230	73.6	ug/Kgdrywt	16	30	40-100
Chrysene	1670	1040	62.3	1180	70.6	ug/Kgdrywt	13	30	40-100
Dibenzo(a,h)anthracene	1670	878.	52.6	1040	62.3	ug/Kgdrywt	17	30	40-100
Fluoranthene	1670	977.	58.5	1020	61.1	ug/Kgdrywt	4	30	40-100
Indeno(1,2,3-cd)pyrene	1670	847.	50.7	997.	59.7	ug/Kgdrywt	16	30	40-100
Pyrene	1670	1200	71.8	1330	79.6	ug/Kgdrywt	10	30	40-100
Nitrobenzene-d5			44.1		51.9				24-81
2-Fluorobiphenyl			53.0		63.1				29-83
Terphenyl-d14			68.3		77.5				24-136

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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

GC Column: ZB5-MS ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		473663	8.20	1846906	11.03	1025757	15.13
UPPER LIMIT		947326	8.70	3693812	11.53	2051514	15.63
LOWER LIMIT		236832	7.70	923453	10.53	512879	14.63
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050N1022	566855	7.99	2130395	10.83	1121530	14.93
02	WG99502-BLANK	WG99502-1	639765	8.00	2442965	10.83	1231078	14.93
03	WG99502-LCS	WG99502-2	556696	8.00	2104982	10.83	1131311	14.93
04	WG99502-LCSD	WG99502-3	521876	8.00	1936699	10.83	1053701	14.93
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): N1952 Date Analyzed: 10/13/11

Instrument ID: GCMS-N Time Analyzed: 1127

GC Column: ZB5-MS ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		1611574	18.64	1003007	24.93	701766	28.06
UPPER LIMIT		3223148	19.14	2006014	25.43	1403532	28.56
LOWER LIMIT		805787	18.14	501504	24.43	350883	27.56
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD050N1022	1708726	18.43	1453222	24.70	1127864	27.81
02	WG99502-BLANK	WG99502-1	1912455	18.42	1657934	24.69	1451828*	27.81
03	WG99502-LCS	WG99502-2	1833575	18.43	1442377	24.70	1140068	27.81
04	WG99502-LCSD	WG99502-3	1677924	18.43	1320555	24.70	1056228	27.81
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-24
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4		NAPHTHALENE-D8		ACENAPHTHENE-D10	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	600003	8.76	2389440	11.57	1317918	15.69
	Upper Limit	1200006	9.26	4778880	12.07	2635836	16.19
	Lower Limit	300001.5	8.26	1194720	11.07	658959	15.19
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101818-1	550506	8.73	2158734	11.53	1277364	15.66
Method Blank Sample	WG99775-1	589407	8.73	2216123	11.53	1294946	15.66
DSY-SD-RB14-101311	SE6841-25	592109	8.73	2205087	11.53	1274078	15.66
DSY-SD-AA09-0012	SE6841-1	502479	8.73	1961757	11.53	1171130	15.66
DSY-SD-AA09-1224	SE6841-2	547331	8.73	2145445	11.53	1273302	15.66
DSY-SD-AA09-2448	SE6841-3	581051	8.73	2266836	11.53	1350254	15.66
DSY-SD-AA13-0012	SE6841-4	590435	8.73	2265006	11.53	1333773	15.66
DSY-SD-AA13-1224	SE6841-5	614597	8.73	2350093	11.53	1398541	15.66
DSY-SD-AA13-2448	SE6841-6	659691	8.73	2492983	11.53	1463022	15.66
Matrix Spike	WG99775-4	657303	8.73	2570362	11.53	1502687	15.66
Matrix Spike Duplica	WG99775-5	646421	8.73	2549000	11.53	1497244	15.66
DSY-SD-AA17-0012	SE6841-7	655455	8.73	2502079	11.53	1454542	15.66
DSY-SD-AA17-1224	SE6841-8	636654	8.73	2442521	11.53	1426963	15.66
DSY-SD-AA21-0012	SE6841-10	676661	8.73	2587108	11.53	1488783	15.66
Continuing Calibrati	WG101496-1	590683	8.73	2251914	11.53	1307467	15.66
Laboratory Control S	WG99775-2	598186	8.73	2283600	11.53	1337101	15.66
Laboratory Control S	WG99775-3	550741	8.73	2109001	11.53	1237912	15.66
DSY-SD-AA21-1224	SE6841-11	657636	8.73	2496119	11.53	1391253	15.66
DSY-SD-AA21-2448	SE6841-12	646594	8.73	2436903	11.53	1360679	15.66
DSY-SD-AA24-0012	SE6841-14	557533	8.73	2099813	11.53	1186932	15.66
DSY-SD-AA24-1224	SE6841-15	704143	8.73	2615805	11.53	1450937	15.66
DSY-SD-AA24-2448	SE6841-16	737002	8.73	2740301	11.53	1526552	15.66
DSY-SD-AA26-0012	SE6841-17	687038	8.73	2563806	11.53	1457543	15.66
Continuing Calibrati	WG101563-1	591562	8.73	2226993	11.53	1262658	15.66
Method Blank Sample	WG99859-1	659911	8.72	2476209	11.53	1418458	15.66
Laboratory Control S	WG99859-2	684949	8.73	2559185	11.53	1443350	15.66
Laboratory Control S	WG99859-3	626103	8.73	2351282	11.53	1333971	15.66
DSY-SD-AA17-2448	SE6841-9	665622	8.73	2498122	11.53	1418822	15.66
DSY-SD-DUP34-1013	SE6841-13	611009	8.72	2297133	11.53	1205245	15.66
DSY-SD-AA26-1224	SE6841-18	649590	8.73	2422320	11.53	1299195	15.66
DSY-SD-AA26-2448	SE6841-19	732300	8.73	2672437	11.53	1385364	15.66
DSY-SD-AA28-0016	SE6841-20	643732	8.73	2470287	11.53	1418711	15.66
DSY-SD-DUP35-1013	SE6841-21	682562	8.73	2591286	11.53	1458261	15.66
DSY-SD-AA30-0012	SE6841-22	742947	8.73	2768260	11.53	1579834	15.66
DSY-SD-AA30-1224	SE6841-23	678656	8.73	2557174	11.53	1465435	15.66
DSY-SD-G30-0018	SE6841-24	726639	8.73	2732583	11.53	1418646	15.66

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 : **SDG:** DSY-24
Lab ID : WG101161-3 **Analytical Date:** 11/15/11 16:23
Lab File ID : N2555.D **Instrument ID:** GCMS-N

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std.	2174245	19.23	1621980	25.55	1257422	28.69
	Upper Limit	4348490	19.73	3243960	26.05	2514844	29.19
	Lower Limit	1087122.5	18.73	810990	25.05	628711	28.19
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG101818-1	2067778	19.20	1156450	25.51	922753	28.67
Method Blank Sample	WG99775-1	2073625	19.18	1416321	25.51	1049103	28.67
DSY-SD-RB14-101311	SE6841-25	1988576	19.18	1253192	25.50	857009	28.66
DSY-SD-AA09-0012	SE6841-1	1929222	19.18	1244127	25.51	814967	28.66
DSY-SD-AA09-1224	SE6841-2	2106206	19.19	1395256	25.51	828110	28.67
DSY-SD-AA09-2448	SE6841-3	2000896	19.19	1138740	25.51	666465	28.67
DSY-SD-AA13-0012	SE6841-4	2203296	19.19	1380853	25.51	779457	28.65
DSY-SD-AA13-1224	SE6841-5	2246625	19.19	1385862	25.51	770669	28.66
DSY-SD-AA13-2448	SE6841-6	2324044	19.19	1485858	25.51	837677	28.66
Matrix Spike	WG99775-4	2412607	19.19	1471788	25.52	955280	28.67
Matrix Spike Duplica	WG99775-5	2302360	19.19	1279298	25.51	712204	28.67
DSY-SD-AA17-0012	SE6841-7	2359511	19.18	1465209	25.51	787320	28.66
DSY-SD-AA17-1224	SE6841-8	2357307	19.18	1446840	25.51	782744	28.66
DSY-SD-AA21-0012	SE6841-10	2419720	19.18	1705412	25.51	899388	28.67
Continuing Calibrati	WG101496-1	2161615	19.19	1257109	25.52	717257	28.67
Laboratory Control S	WG99775-2	2281813	19.19	1569688	25.51	837743	28.67
Laboratory Control S	WG99775-3	2080200	19.19	1264179	25.51	758463	28.66
DSY-SD-AA21-1224	SE6841-11	2291524	19.18	1472261	25.51	853162	28.67
DSY-SD-AA21-2448	SE6841-12	2172663	19.19	1339081	25.51	755894	28.67
DSY-SD-AA24-0012	SE6841-14	2004673	19.18	1395205	25.51	800912	28.66
DSY-SD-AA24-1224	SE6841-15	2303852	19.18	1390367	25.51	683433	28.65
DSY-SD-AA24-2448	SE6841-16	2331488	19.19	1340760	25.52	696429	28.67
DSY-SD-AA26-0012	SE6841-17	2421596	19.19	1560819	25.51	823434	28.67
Continuing Calibrati	WG101563-1	1943591	19.19	1124934	25.51	834864	28.67
Method Blank Sample	WG99859-1	2175498	19.18	1536384	25.51	1205462	28.67
Laboratory Control S	WG99859-2	2305189	19.19	1556827	25.51	1033197	28.67
Laboratory Control S	WG99859-3	2037717	19.19	1293521	25.51	883696	28.67
DSY-SD-AA17-2448	SE6841-9	2026994	19.18	1199887	25.51	792386	28.67
DSY-SD-DUP34-1013	SE6841-13	1709754	19.18	1092897	25.51	650424	28.67
DSY-SD-AA26-1224	SE6841-18	1840629	19.20	1013648	25.52	523668 *	28.68
DSY-SD-AA26-2448	SE6841-19	1857512	19.20	925669	25.52	473783 *	28.68
DSY-SD-AA28-0016	SE6841-20	2007585	19.19	1151315	25.51	699298	28.67
DSY-SD-DUP35-1013	SE6841-21	1900274	19.19	1100090	25.51	642064	28.67
DSY-SD-AA30-0012	SE6841-22	2232306	19.19	1141032	25.52	559794 *	28.68
DSY-SD-AA30-1224	SE6841-23	2102583	19.19	1220737	25.52	644703	28.68
DSY-SD-G30-0018	SE6841-24	1872486	19.19	921131	25.52	420215 *	28.68

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101161-3
Lab File ID : N2555.D

SDG: DSY-24
Analytical Date: 11/15/11 16:23
Instrument ID: GCMS-N

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
DSY-SD-AA09-0012	SE6841-1		69.8		74.2		74.7	
DSY-SD-AA21-0012	SE6841-10		53.7		60.7		65.4	
DSY-SD-AA21-1224	SE6841-11		53.8		57.9		61.0	
DSY-SD-AA21-2448	SE6841-12		22.1		34.7		53.2	
DSY-SD-DUP34-101311	SE6841-13		50.6		55.1		55.7	
DSY-SD-AA24-0012	SE6841-14		20.4		33.2		47.6	
DSY-SD-AA24-1224	SE6841-15		19.6		29.3		43.4	
DSY-SD-AA24-2448	SE6841-16		18.8		29.4		49.2	
DSY-SD-AA26-0012	SE6841-17		20.3		35.2		53.8	
DSY-SD-AA26-1224	SE6841-18DL		27.7		36.0		83.6	
DSY-SD-AA26-2448	SE6841-19		41.8		69.4		69.8	
DSY-SD-AA09-1224	SE6841-2		56.2		64.3		66.5	
DSY-SD-AA28-0016	SE6841-20		14.4		25.3		38.8	
DSY-SD-DUP35-101311	SE6841-21		42.1		41.5		52.3	
DSY-SD-AA30-0012	SE6841-22		29.7		49.5		64.3	
DSY-SD-AA30-1224	SE6841-23		28.2		45.9		51.6	
DSY-SD-AA09-2448	SE6841-3		54.9		60.5		62.3	
DSY-SD-AA13-0012	SE6841-4		42.4		51.8		65.7	
DSY-SD-AA13-1224	SE6841-5		37.0		43.0		52.4	
DSY-SD-AA13-2448	SE6841-6		34.3		47.9		58.4	
DSY-SD-AA17-0012	SE6841-7		39.1		52.3		58.9	
DSY-SD-AA17-1224	SE6841-8		29.6		42.0		57.1	
DSY-SD-AA17-2448	SE6841-9DL		34.5		46.5		55.4	
Method Blank Sample	WG101687-1		54.5		70.0		71.9	
Method Blank Sample	WG99860-1		46.8		51.5		75.4	
Laboratory Control S	WG99860-2		35.5		52.5		67.2	

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** SL
Lab Code: KAS **SDG:** DSY-24

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	14-131
FLO	FLUORENE-D10	18-77
PYR	PYRENE-D10	34-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Lab Name: Katahdin Analytical Services **Project:** NAVSTA Newport CTO WE61 Derecktor **Matrix:** AQ
Lab Code: KAS **SDG:** DSY-24

Client Sample ID	Lab Sample ID	2MN	#	FLO	#	PYR	#	Total Out
DSY-SD-RB14-101311	SE6841-25	0.00	*	0.00	*	0.00	*	3
Method Blank Sample	WG99504-1	75.1		85.5		84.2		0
Laboratory Control S	WG99504-2	56.5		73.3		66.9		0
Laboratory Control S	WG99504-3	53.8		74.5		65.8		0

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G3446.D
Instrument ID : GCMS-G
Matrix : AQ

SDG : DSY-24
Lab Sample ID : WG99504-1
Date Extracted : 20-OCT-11
Date Analyzed : 21-OCT-11
Time Analyzed : 17:25

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99504-2	G3447.D	10/21/11	18:09
Laboratory Control S	WG99504-3	G3448.D	10/21/11	18:54
DSY-SD-RB14-101311	SE6841-25	G4127.D	11/25/11	19:39

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Report of Analytical Results

Client:
Lab ID: WG99504-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G3446.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 21-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		75.1	%					
Fluorene-D10		85.5	%					
Pyrene-D10		84.2	%					

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99504-2
LCSD ID: WG99504-3
Project:
SDG: DSY-24
Report Date: 05-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99504

Analysis Date: 21-OCT-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Benzo(a)pyrene	2.00	1.39	69.5	1.39	69.5	ug/L	0	30	63-98
2-Methylnaphthalene-D10			56.5		53.8				43-92
Fluorene-D10			73.3		74.5				29-101
Pyrene-D10			66.9		65.8				53-166

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4124.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG99860-1
Date Extracted : 26-OCT-11
Date Analyzed : 25-NOV-11
Time Analyzed : 17:28

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG99860-2	G4125.D	11/25/11	18:12
DSY-SD-DUP35-101311	SE6841-21	G4128.D	11/25/11	20:22
DSY-SD-AA30-0012	SE6841-22	G4187.D	11/30/11	12:10
DSY-SD-AA30-1224	SE6841-23	G4188.D	11/30/11	12:56

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Report of Analytical Results

Client:
Lab ID: WG99860-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G4124.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		46.8	%					
Fluorene-D10		51.5	%					
Pyrene-D10		75.4	%					

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LCS Recovery Report

Client:
Lab ID: WG99860-2
Client ID: LCS
Project:
SDG: DSY-24

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG99860

Analysis Date: 25-NOV-11
Analyst: WAS
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzo(a)pyrene	61.9	66.7	41.3	ug/Kgdrywt	61-101
2-Methylnaphthalene-D10	35.5				14-131
Fluorene-D10	52.5				18-77
Pyrene-D10	67.2				34-131

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File ID : G4156.D
Instrument ID : GCMS-G
Matrix : SL

SDG : DSY-24
Lab Sample ID : WG101687-1
Date Extracted : 25-OCT-11
Date Analyzed : 28-NOV-11
Time Analyzed : 17:32

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
DSY-SD-AA09-0012	SE6841-1	G4130.D	11/26/11	11:33
DSY-SD-AA09-1224	SE6841-2	G4131.D	11/26/11	12:16
DSY-SD-AA09-2448	SE6841-3	G4132.D	11/26/11	13:00
DSY-SD-AA13-0012	SE6841-4	G4133.D	11/26/11	13:43
DSY-SD-AA13-1224	SE6841-5	G4134.D	11/26/11	14:27
DSY-SD-AA13-2448	SE6841-6	G4135.D	11/26/11	15:11
DSY-SD-AA17-0012	SE6841-7	G4136.D	11/26/11	15:54
DSY-SD-AA17-1224	SE6841-8	G4137.D	11/26/11	16:38
DSY-SD-AA21-0012	SE6841-10	G4139.D	11/26/11	18:05
DSY-SD-AA21-1224	SE6841-11	G4140.D	11/26/11	18:49
DSY-SD-AA21-2448	SE6841-12	G4141.D	11/26/11	19:32
DSY-SD-AA17-2448	SE6841-9DL	G4157.D	11/28/11	18:16
DSY-SD-AA26-1224	SE6841-18DL	G4158.D	11/28/11	19:00
DSY-SD-DUP34-101311	SE6841-13	G4159.D	11/28/11	19:44
DSY-SD-AA24-0012	SE6841-14	G4160.D	11/28/11	20:28
DSY-SD-AA24-1224	SE6841-15	G4161.D	11/28/11	21:12
DSY-SD-AA24-2448	SE6841-16	G4162.D	11/28/11	21:56
DSY-SD-AA26-0012	SE6841-17	G4163.D	11/28/11	22:40
DSY-SD-AA26-2448	SE6841-19	G4164.D	11/28/11	23:24
DSY-SD-AA28-0016	SE6841-20	G4186.D	11/30/11	11:24

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Report of Analytical Results

Client:
Lab ID: WG101687-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: G4156.D

Sample Date:
Received Date: 28-NOV-11
Extract Date: 25-OCT-11
Extracted By: EC
Extraction Method: SW846 3550
Lab Prep Batch: WG101687

Analysis Date: 28-NOV-11
Analyst: JCG
Analysis Method: SW846 M8270D
Matrix: SL
% Solids: NA
Report Date: 05-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2-Methylnaphthalene-D10		54.5	%					
Fluorene-D10		70.0	%					
Pyrene-D10		71.9	%					

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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD886 DFTPP Injection Date: 10/14/11

Instrument ID: GCMS-G DFTPP Injection Time: 0828

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.5
68	Less than 2.0% of mass 69	0.4 (0.9)1
69	Less than 100.0% of mass 198	39.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	56.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	7.6 (70.8)2
442	40.0 - 100.0% of mass 198	56.9
443	17.0 - 23.0% of mass 442	10.7 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1013	G3278	10/14/11	0848
02		SSTD8.00G1013	G3279	10/14/11	0933
03		SSTD5.00G1013	G3280	10/14/11	1018
04		SSTD2.00G1013	G3281	10/14/11	1103
05		SSTD0.50G1013	G3282	10/14/11	1148
06		SSTD0.20G1013	G3283	10/14/11	1233
07		SIM IND CHECK	G3284	10/14/11	1318
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-G Calibration Date(s): 10/14/11 10/14/11

Column: ZB5-MS ID: 0.25 (mm) Calibration Time(s): 0848 1233

LAB FILE ID: RF0.2: G3283 RF0.5: G3282 RF1: G3278
RF2: G3281 RF5: G3280 RF8: G3279

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF5	RF8	CURVE	COEFF. A1	%RSD OR R^2	MAX %RSD OR R^2
Benzo(a)pyrene	1.636	1.436	1.450	1.294	1.315	1.277	AVRG	1.40142787	9.734	15.000
2-Methylnaphthalene-D10	1.111	0.991	1.310	1.080	1.098	1.109	AVRG	1.11637914	9.395	15.000
Fluorene-D10	0.813	0.781	0.928	0.892	0.915	0.900	AVRG	0.87153153	6.886	15.000
Pyrene-D10	1.523	1.296	1.240	1.113	1.132	1.109	AVRG	1.23568336	12.960	15.000

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD897 DFTPP Injection Date: 10/21/11

Instrument ID: GCMS-G DFTPP Injection Time: 1533

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	32.3
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Less than 100.0% of mass 198	40.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	8.5 (70.0)2
442	40.0 - 100.0% of mass 198	62.3
443	17.0 - 23.0% of mass 442	12.1 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1021	G3444	10/21/11	1553
02	WG99504-BLANK	WG99504-1	G3446	10/21/11	1725
03	WG99504-LCS	WG99504-2	G3447	10/21/11	1809
04	WG99504-LCSD	WG99504-3	G3448	10/21/11	1854
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Instrument ID: GCMS-G Calibration Date: 10/21/11 Time: 1553

Lab File ID: G3444 Init. Calib. Date(s): 10/14/11 10/14/11

Init. Calib. Times: 0848 1233

GC Column: ZB5-MS ID: 0.25 (mm)

COMPOUND	RRF OR AMOUNT	RRF1.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzo(a)pyrene	1.4010000	1.2724000	0.01	-9.18	20.01	AVRG
2-Methylnaphthalene-D10	1.1160000	1.1474000	0.01	2.81	20.00	AVRG
Fluorene-D10	0.8720000	0.9202900	0.01	5.54	20.00	AVRG
Pyrene-D10	1.2360000	1.2828000	0.01	3.79	20.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD932 DFTPP Injection Date: 11/19/11

Instrument ID: GCMS-G DFTPP Injection Time: 1121

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	0.7 (1.7)1
69	Less than 100.0% of mass 198	41.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	56.6
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	12.3 (70.6)2
442	40.0 - 100.0% of mass 198	90.2
443	17.0 - 23.0% of mass 442	17.4 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1119	G4018	11/19/11	1147
02		SSTD8.00G1119	G4019	11/19/11	1231
03		SSTD5.00G1119	G4020	11/19/11	1316
04		SSTD2.00G1119	G4021	11/19/11	1400
05		SSTD0.50G1119	G4022	11/19/11	1443
06		SSTD0.20G1119	G4023	11/19/11	1527
07		SIM IND CHECK	G4024	11/19/11	1611
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : G4023.DG4022.DG4018.D
G4021.DG4020.DG4019.D

SDG: DSY-24
Instrument ID: GCMS-G
Calibration Date(s): 19-NOV-11 11:47
19-NOV-11 15:27

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	0.200000(	0.500000(	1.0000	2.0000	5.0000	8.0000	New	b	m1	m2	%RSD	%RSD	
Benzo(a)pyrene	1.22562	1.33406	1.37656	1.28456	1.31940	1.36721	AVG		1.31790		4.26039	15.00000	O
2-Methylnaphthalene-D10	0.89364	1.10537	1.15001	1.06192	1.07206	1.10290	AVG		1.06432		8.37362	15.00000	
Fluorene-D10	0.70351	0.89827	0.92806	0.97534	0.99465	1.04100	AVG		0.92347		12.86845	15.00000	
Pyrene-D10	0.96288	1.12542	1.16069	1.02833	1.13105	1.14947	AVG		1.09297		7.24856	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD937 DFTPP Injection Date: 11/25/11

Instrument ID: GCMS-G DFTPP Injection Time: 0912

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Less than 100.0% of mass 198	44.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	23.9
365	1.0 - 100.0% of mass 198	3.6
441	0.0 - 100.0% of mass 443	11.3 (76.3)2
442	40.0 - 100.0% of mass 198	78.6
443	17.0 - 23.0% of mass 442	14.8 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1125	G4113	11/25/11	0930
02	WG99860-BLANK	WG99860-1	G4124	11/25/11	1728
03	WG99860-LCS	WG99860-2	G4125	11/25/11	1812
04	DSY-SD-RB14-101311	SE6841-25	G4127	11/25/11	1939
05	DSY-SD-DUP35-101311	SE6841-21	G4128	11/25/11	2022
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 [illegible]
SDG: DSY-24
Lab ID : WG101756-1
Analytical Date: 11/25/11 09:30
Lab File ID : G4113.D
Instrument ID: GCMS-G
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.43126	1.43126	0.010	8.60164	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.17687	1.17687	0.010	10.57536	20.00000	Averaged
47 Fluorene-D10	0.92347	0.99377	0.99377	0.010	7.61255	20.00000	Averaged
64 Pyrene-D10	1.09297	1.29053	1.29053	0.010	18.07479	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD938 DFTPP Injection Date: 11/26/11

Instrument ID: GCMS-G DFTPP Injection Time: 1032

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Less than 100.0% of mass 198	42.2
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.2
365	1.0 - 100.0% of mass 198	4.0
441	0.0 - 100.0% of mass 443	11.8 (76.2)2
442	40.0 - 100.0% of mass 198	82.3
443	17.0 - 23.0% of mass 442	15.5 (18.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1126	G4129	11/26/11	1049
02	DSY-SD-AA09-0012	SE6841-1	G4130	11/26/11	1133
03	DSY-SD-AA09-1224	SE6841-2	G4131	11/26/11	1216
04	DSY-SD-AA09-2448	SE6841-3	G4132	11/26/11	1300
05	DSY-SD-AA13-0012	SE6841-4	G4133	11/26/11	1343
06	DSY-SD-AA13-1224	SE6841-5	G4134	11/26/11	1427
07	DSY-SD-AA13-2448	SE6841-6	G4135	11/26/11	1511
08	DSY-SD-AA17-0012	SE6841-7	G4136	11/26/11	1554
09	DSY-SD-AA17-1224	SE6841-8	G4137	11/26/11	1638
10	DSY-SD-AA21-0012	SE6841-10	G4139	11/26/11	1805
11	DSY-SD-AA21-1224	SE6841-11	G4140	11/26/11	1849
12	DSY-SD-AA21-2448	SE6841-12	G4141	11/26/11	1932
13					
14					
15					
16					
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FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 :
Lab ID :WG102033-1
Lab File ID :G4129.D
Initial Calibration Date(s): 11/19/11 11:47 11/19/11 15:27

SDG: DSY-24
Analytical Date: 11/26/11 10:49
Instrument ID: GCMS-G

Compound	$\overline{RRF}$/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.31790	1.24192	1.24192	0.010	-5.76549	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.06432	1.06540	1.06540	0.010	0.10178	20.00000	Averaged
47 Fluorene-D10	0.92347	0.92499	0.92499	0.010	0.16454	20.00000	Averaged
64 Pyrene-D10	1.09297	1.16221	1.16221	0.010	6.33446	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD939 DFTPP Injection Date: 11/28/11

Instrument ID: GCMS-G DFTPP Injection Time: 1154

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.1
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Less than 100.0% of mass 198	41.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	55.9
197	Less than 1.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	24.6
365	1.0 - 100.0% of mass 198	3.5
441	0.0 - 100.0% of mass 443	11.9 (71.0)2
442	40.0 - 100.0% of mass 198	84.5
443	17.0 - 23.0% of mass 442	16.8 (19.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1128	G4149	11/28/11	1215
02		SSTD8.00G1128	G4150	11/28/11	1306
03		SSTD5.00G1128	G4151	11/28/11	1350
04		SSTD2.00G1128	G4152	11/28/11	1434
05		SSTD0.50G1128	G4153	11/28/11	1519
06		SSTD0.20G1128	G4154	11/28/11	1603
07		SIM IND CHECK	G4155	11/28/11	1647
08	WG101687-BLANK	WG101687-1	G4156	11/28/11	1732
09	DSY-SD-AA17-2448	SE6841-9DL	G4157	11/28/11	1816
10	DSY-SD-AA26-1224	SE6841-18DL	G4158	11/28/11	1900
11	DSY-SD-DUP34-101311	SE6841-13	G4159	11/28/11	1944
12	DSY-SD-AA24-0012	SE6841-14	G4160	11/28/11	2028
13	DSY-SD-AA24-1224	SE6841-15	G4161	11/28/11	2112
14	DSY-SD-AA24-2448	SE6841-16	G4162	11/28/11	2156
15	DSY-SD-AA26-0012	SE6841-17	G4163	11/28/11	2240
16	DSY-SD-AA26-2448	SE6841-19	G4164	11/28/11	2324
17					
18					
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FORM V SV

Initial Calibration Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 Derecktor
Lab File IDs : G4154.DG4153.DG4149.D
G4151.DG4150.D

SDG: DSY-24
Instrument ID: GCMS-G
Calibration Date(s): 28-NOV-11 12:15
28-NOV-11 16:03

	Level 1	Level 2	Level 3	Level 5	Level 6		Crv					Max	
	0.2000000	0.5000000	1.0000	5.0000	8.0000		New	b	m1	m2	%RSD	%RSD	
Benzo(a)pyrene	1.89233	1.55864	1.54681	1.44534	1.35704		AVG		1.56003		13.01747	15.00000	O
2-Methylnaphthalene-D10	1.13264	1.13443	1.21101	1.11800	1.04193		AVG		1.12760		5.33236	15.00000	
Fluorene-D10	0.96222	0.93614	1.05214	1.00846	0.93775		AVG		0.97934		5.11501	15.00000	
Pyrene-D10	1.47812	1.16666	1.33304	1.13716	1.00758		AVG		1.22451		14.95457	15.00000	

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID: GD941 DFTPP Injection Date: 11/30/11

Instrument ID: GCMS-G DFTPP Injection Time: 0718

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.1
68	Less than 2.0% of mass 69	0.8 (1.9)1
69	Less than 100.0% of mass 198	42.9
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	40.0 - 60.0% of mass 198	58.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.0
365	1.0 - 100.0% of mass 198	3.8
441	0.0 - 100.0% of mass 443	11.3 (74.0)2
442	40.0 - 100.0% of mass 198	81.6
443	17.0 - 23.0% of mass 442	15.3 (18.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00G1130	G4181	11/30/11	0736
02	DSY-SD-AA28-0016	SE6841-20	G4186	11/30/11	1124
03	DSY-SD-AA30-0012	SE6841-22	G4187	11/30/11	1210
04	DSY-SD-AA30-1224	SE6841-23	G4188	11/30/11	1256
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FORM V SV

Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61 :
SDG: DSY-24
Lab ID : WG101899-1
Analytical Date: 11/30/11 07:36
Lab File ID : G4181.D
Instrument ID: GCMS-G
Initial Calibration Date(s): 11/28/11 12:15 11/28/11 16:03

Compound	RRF/Amount	RF1	CCAL RRF1	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
75 Benzo(a)pyrene	1.56003	1.49969	1.49969	0.010	-3.86772	20.01000	Averaged
25 2-Methylnaphthalene-D10	1.12760	1.17098	1.17098	0.010	3.84642	20.00000	Averaged
47 Fluorene-D10	0.97934	1.05231	1.05231	0.010	7.45123	20.00000	Averaged
64 Pyrene-D10	1.22451	1.31901	1.31901	0.010	7.71668	20.00000	Averaged

*** = Compound out of QC criteria**

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		40725	9.17	99977	12.13	46587	16.45
UPPER LIMIT		81450	9.71	199954	12.67	93174	16.99
LOWER LIMIT		20363	8.63	49989	11.59	23294	15.91
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1021	50308	9.08	124469	12.04	57882	16.35
02	WG99504-BLANK	WG99504-1	53932	9.09	141261	12.05	67183	16.35
03	WG99504-LCS	WG99504-2	47803	9.08	124863	12.04	61798	16.35
04	WG99504-LCSD	WG99504-3	50526	9.08	133074	12.04	64650	16.35
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT SDG No.: DSY-24

Lab File ID (Standard): G3278 Date Analyzed: 10/14/11

Instrument ID: GCMS-G Time Analyzed: 0848

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64726	20.09	32119	26.71	23689	30.04
UPPER LIMIT		129452	20.63	64238	27.25	47378	30.58
LOWER LIMIT		32363	19.55	16060	26.17	11845	29.50
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01		SSTD1.00G1021	82206	19.96	35503	26.58	25525	29.91
02	WG99504-BLANK	WG99504-1	91776	19.98	50072	26.60	39396	29.91
03	WG99504-LCS	WG99504-2	93863	19.96	54533	26.58	38223	29.91
04	WG99504-LCSD	WG99504-3	94277	19.96	65239*	26.58	48680*	29.91
05								
06								
07								
08								
09								
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16								
17								
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19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.54 minutes of internal standard RT
RT LOWER LIMIT = - 0.54 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101399-3
Lab File ID : G4018.D

SDG: DSY-24
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std.	47822		8.34		158215		11.29		80066		15.58	
	Upper Limit	95644		8.84		316430		11.79		160132		16.08	
	Lower Limit	23911		7.84		79107.5		10.79		40033		15.08	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101756-1	44485		8.22		153139		11.17		75932		15.45	
Method Blank Sample	WG99860-1	40341		8.22		138535		11.18		76838		15.46	
Laboratory Control S	WG99860-2	40382		8.22		135211		11.17		70959		15.45	
DSY-SD-RB14-101311	SE6841-25	34164		8.24		115519		11.19		56579		15.46	
DSY-SD-DUP35-1013	SE6841-21	38351		8.22		138284		11.17		73873		15.45	
Continuing Calibrati	WG102033-1	36033		8.21		128814		11.16		74001		15.43	
DSY-SD-AA09-0012	SE6841-1	38137		8.21		127059		11.16		63196		15.43	
DSY-SD-AA09-1224	SE6841-2	35551		8.21		129605		11.16		66972		15.43	
DSY-SD-AA09-2448	SE6841-3	43842		8.21		142568		11.16		89545		15.43	
DSY-SD-AA13-0012	SE6841-4	40402		8.21		144677		11.16		73741		15.43	
DSY-SD-AA13-1224	SE6841-5	41544		8.21		136617		11.16		71680		15.43	
DSY-SD-AA13-2448	SE6841-6	41992		8.21		148866		11.16		76361		15.43	
DSY-SD-AA17-0012	SE6841-7	42493		8.21		154063		11.16		80826		15.43	
DSY-SD-AA17-1224	SE6841-8	41563		8.21		147770		11.16		77794		15.43	
DSY-SD-AA21-0012	SE6841-10	45716		8.21		159704		11.16		81894		15.43	
DSY-SD-AA21-1224	SE6841-11	43399		8.21		145363		11.16		73156		15.43	
DSY-SD-AA21-2448	SE6841-12	42724		8.21		146593		11.16		77629		15.43	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61 :
Lab ID :WG101399-3
Lab File ID :G4018.D

SDG: DSY-24
Analytical Date: 11/19/11 11:47
Instrument ID: GCMS-G

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	118014		19.19		75564		25.77		53419		29.09	
	Upper Limit	236028		19.69		151128		26.27		106838		29.59	
	Lower Limit	59007		18.69		37782		25.27		26709.5		28.59	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG101756-1	111184		19.05		64533		25.62		43078		28.94	
Method Blank Sample	WG99860-1	102077		19.07		54715		25.63		32032		28.95	
Laboratory Control S	WG99860-2	109366		19.05		68343		25.62		40142		28.94	
DSY-SD-RB14-101311	SE6841-25	79504		19.08		38193		25.67		23159	*	28.99	
DSY-SD-DUP35-1013	SE6841-21	101805		19.05		67727		25.63		49361		28.95	
Continuing Calibrati	WG102033-1	96887		19.03		66110		25.60		52806		28.91	
DSY-SD-AA09-0012	SE6841-1	95737		19.02		55373		25.59		41659		28.89	
DSY-SD-AA09-1224	SE6841-2	106777		19.02		60370		25.59		45655		28.89	
DSY-SD-AA09-2448	SE6841-3	114345		19.03		91824		25.62		64149		28.91	
DSY-SD-AA13-0012	SE6841-4	119506		19.02		59404		25.60		44530		28.89	
DSY-SD-AA13-1224	SE6841-5	117895		19.02		65448		25.59		50658		28.89	
DSY-SD-AA13-2448	SE6841-6	125167		19.02		75455		25.60		56967		28.90	
DSY-SD-AA17-0012	SE6841-7	141769		19.02		78230		25.60		62818		28.89	
DSY-SD-AA17-1224	SE6841-8	131611		19.02		68994		25.60		50944		28.89	
DSY-SD-AA21-0012	SE6841-10	137168		19.02		75345		25.60		57272		28.89	
DSY-SD-AA21-1224	SE6841-11	121879		19.02		66254		25.60		51550		28.90	
DSY-SD-AA21-2448	SE6841-12	124377		19.03		78214		25.60		48580		28.91	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project :NAVSTA Newport CTO WE61
Lab ID :WG101670-3
Lab File ID :G4149.D

SDG: DSY-24
Analytical Date: 11/28/11 12:15
Instrument ID: GCMS-G

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	42499		8.16		143688		11.10		67591		15.38	
	Upper Limit	84998		8.66		287376		11.60		135182		15.88	
	Lower Limit	21249.5		7.66		71844		10.60		33795.5		14.88	
Client Sample ID	Lab Sample ID												
Method Blank Sample	WG101687-1	39108		8.16		133690		11.11		65843		15.38	
DSY-SD-AA17-2448	SE6841-9DL	38066		8.16		124893		11.11		58461		15.38	
DSY-SD-AA26-1224	SE6841-18DL	41602		8.16		139604		11.11		75824		15.39	
DSY-SD-DUP34-1013	SE6841-13	40298		8.16		143738		11.10		69718		15.37	
DSY-SD-AA24-0012	SE6841-14	38951		8.16		128694		11.11		65007		15.38	
DSY-SD-AA24-1224	SE6841-15	44987		8.16		143448		11.11		70241		15.38	
DSY-SD-AA24-2448	SE6841-16	42204		8.16		147422		11.10		84214		15.38	
DSY-SD-AA26-0012	SE6841-17	39278		8.16		140300		11.11		69397		15.38	
DSY-SD-AA26-2448	SE6841-19	42878		8.16		142928		11.12		55783		15.42	
Continuing Calibrati	WG101899-1	44755		8.11		152537		11.05		74463		15.33	
DSY-SD-AA28-0016	SE6841-20	50038		8.11		162899		11.06		83742		15.33	
DSY-SD-AA30-0012	SE6841-22	50203		8.11		172853		11.06		93586		15.33	
DSY-SD-AA30-1224	SE6841-23	50840		8.11		174182		11.06		91386		15.33	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : NAVSTA Newport CTO WE61
Lab ID : WG101670-3
Lab File ID : G4149.D

SDG: DSY-24
Analytical Date: 11/28/11 12:15
Instrument ID: GCMS-G

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area	# RT #	Area	# RT #	Area	# RT #
	Std .	99082	18.96	51427	25.53	35086	28.84
	Upper Limit	198164	19.46	102854	26.03	70172	29.34
	Lower Limit	49541	18.46	25713.5	25.03	17543	28.34
Client Sample ID	Lab Sample ID						
Method Blank Sample	WG101687-1	95103	18.98	56004	25.54	38264	28.83
DSY-SD-AA17-2448	SE6841-9DL	84966	18.96	45074	25.52	33963	28.83
DSY-SD-AA26-1224	SE6841-18DL	104659	18.99	53850	25.56	50375	28.86
DSY-SD-DUP34-1013	SE6841-13	100058	18.96	53299	25.53	40705	28.83
DSY-SD-AA24-0012	SE6841-14	100244	18.96	52701	25.52	33837	28.83
DSY-SD-AA24-1224	SE6841-15	104726	18.96	53921	25.52	37902	28.83
DSY-SD-AA24-2448	SE6841-16	108464	18.98	78163	25.56	40032	28.85
DSY-SD-AA26-0012	SE6841-17	111167	18.96	58613	25.53	43491	28.83
DSY-SD-AA26-2448	SE6841-19	108056	19.03	58718	25.62	52759	28.91
Continuing Calibrati	WG101899-1	110843	18.90	60266	25.47	40404	28.77
DSY-SD-AA28-0016	SE6841-20	110942	18.92	69021	25.49	44374	28.79
DSY-SD-AA30-0012	SE6841-22	126302	18.93	65577	25.51	45632	28.82
DSY-SD-AA30-1224	SE6841-23	147791	18.93	75716	25.52	60262	28.83

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99856-BLANK	WG99856-1	92	91	95	88			0
02	WG99856-LCS	WG99856-2	47*	46*	80	74			2
03	~~WG99856-LCSD~~	WG99856-3	95	92	98	88			0
04	DSY-SD-AA28-0016	SE6841-20	54*	70	45*	70			2
05	DSY-SD-DUP35-101311	SE6841-21	55*	73	45*	68			2
06	DSY-SD-AA30-0012	SE6841-22	54*	72	47*	104			2
07	DSY-SD-AA30-1224	SE6841-23	50*	68	44*	70			2
08	DSY-SD-G30-0018	SE6841-24	54*	71	39*	77			2
09	WG99756-BLANK	WG99756-1	82	85	87	83			0
10	WG99756-LCS	WG99756-2	85	87	90	86			0
11	WG99756-LCSD	WG99756-3	66	68	88	83			0
12	DSY-SD-AA13-2448MS	WG99756-4	63	81	66	83			0
13	DSY-SD-AA13-2448MSD	WG99756-5	54*	67	52*	65			2
14	DSY-SD-AA09-0012	SE6841-1	58	64	60	61			0
15	DSY-SD-AA09-1224	SE6841-2	61	69	63	71			0
16	DSY-SD-AA09-2448	SE6841-3	58	80	63	86			0
17	DSY-SD-AA13-0012	SE6841-4	77	83	104	85			0
18	DSY-SD-AA13-1224	SE6841-5	78	83	97	82			0
19	DSY-SD-AA13-2448	SE6841-6	68	83	89	87			0
20	DSY-SD-AA17-0012	SE6841-7	87	96	106	99			0
21	DSY-SD-AA17-1224	SE6841-8	59	64	72	65			0
22	DSY-SD-AA17-2448	SE6841-9	56	71	73	77			0
23	DSY-SD-AA21-0012	SE6841-10	82	84	105	84			0
24	DSY-SD-AA21-1224	SE6841-11	83	98	104	102			0
25	DSY-SD-AA21-2448	SE6841-12	57	76	60	72			0
26	DSY-SD-DUP34-101311	SE6841-13	63	85	54*	67			1
27	DSY-SD-AA24-0012	SE6841-14	70	82	39*	41*			2
28	DSY-SD-AA24-2448	SE6841-16	66	87	71	86			0

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
SOIL PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	DSY-SD-AA26-0012	SE6841-17	71	89	66	76			0
02	DSY-SD-AA26-2448	SE6841-19	47*	72	48*	82			2
03	WG100719-BLANK	WG100719-1	121*	106	133*	98			2
04	WG100719-LCS	WG100719-2	116*	103	138*	102			2
05	DSY-SD-AA24-1224	SE6841-15	79	87	65	72			0
06	DSY-SD-AA26-1224	SE6841-18	58	78	58*	87			1
07									
08									
09									
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28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (56-115)
S2 (DCB) = Decachlorobiphenyl (59-124)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000158

FORM 2
WATER PCB SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column(1): RTX-CLPESTICIDESID: 0.53 (mm)GC Column(2): RTX-CLPESTICIDES2ID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	DCB1 REC#	DCB2 REC#	OTHR (1)	OTHR (2)	TOT OUT
01	WG99509-BLANK	WG99509-1	0*	0*	49	44			2
02	WG99509-LCS	WG99509-2	70	77	93	80			0
03	WG99509-LCSD	WG99509-3	79	90	92	78			0
04	DSY-SD-RB14-101311	SE6841-25	65	74	23*	20*			2
05									
06									
07									
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28									

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (62-111)
S2 (DCB) = Decachlorobiphenyl (44-135)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Katahdin Analytical Services A0000159

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.45 TCX: 3.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	13.45	3.86
02		AR1660 0.05	09/22/11	1304	13.46	3.86
03		AR1660 0.1	09/22/11	1330	13.46	3.87
04		AR1660 0.25	09/22/11	1357	13.46	3.87
05		AR1660 2.5	09/22/11	1423	13.45	3.87
06		AR1660 10	09/22/11	1449	13.45	3.87
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000236

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.29 TCX: 3.81

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/24/11	1526	13.29	3.82
02	WG99509-BLANK	WG99509-1	10/24/11	1711	13.30	
03	WG99509-LCS	WG99509-2	10/24/11	1737	13.29	3.81
04	WG99509-LCSD	WG99509-3	10/24/11	1803	13.29	3.81
05	DSY-SD-RB14-101311	SE6841-25	10/24/11	1829	13.29	3.81
06		AR1660 0.25	10/24/11	2156	13.29	3.81
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QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	13.23	3.80
02	WG99856-BLANK	WG99856-1	11/03/11	1300	13.24	3.80
03	WG99856-LCS	WG99856-2	11/03/11	1326	13.24	3.80
04	WG99856-LCSD	WG99856-3	11/03/11	1352	13.24	3.80
05		AR1660 1.0	11/03/11	1536	13.24	3.80
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-AA28-0016	SE6841-20	11/03/11	1956	13.24	3.81
08	DSY-SD-DUP35-101311	SE6841-21	11/03/11	2021	13.24	3.81
09	DSY-SD-AA30-0012	SE6841-22	11/03/11	2047	13.24	3.80
10	DSY-SD-AA30-1224	SE6841-23	11/03/11	2113	13.24	3.81
11		AR1660 0.25	11/03/11	2205	13.24	3.80
12		AR1254 1.0	11/03/11	2322		
13	DSY-SD-G30-0018	SE6841-24	11/03/11	2347	13.24	3.81
14		AR1660 1.0	11/04/11	0429	13.24	3.80
15		AR1254 1.0	11/04/11	0547		
16		AR1660 1.0	11/06/11	1159	13.22	3.80
17	WG99756-BLANK	WG99756-1	11/06/11	1501	13.24	3.81
18	WG99756-LCS	WG99756-2	11/06/11	1527	13.23	3.81
19	WG99756-LCSD	WG99756-3	11/06/11	1553	13.23	3.81
20	DSY-SD-AA13-2448MS	WG99756-4	11/06/11	1619	13.22	3.80

QC LIMITS
DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000240

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA21-1224	SE6841-11	11/07/11	1918	13.20	3.79
02	DSY-SD-AA21-2448	SE6841-12	11/07/11	1944	13.20	3.79
03	DSY-SD-DUP34-101311	SE6841-13	11/07/11	2010	13.20	3.79
04	DSY-SD-AA24-0012	SE6841-14	11/07/11	2036	13.20	3.79
05	DSY-SD-AA24-2448	SE6841-16	11/07/11	2128	13.20	3.79
06	DSY-SD-AA26-0012	SE6841-17	11/07/11	2154	13.20	3.79
07	DSY-SD-AA26-2448	SE6841-19	11/07/11	2246	13.23	3.80
08		AR1660 1.0	11/07/11	2338	13.21	3.79
09		AR1254 1.0	11/08/11	0055		
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QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000242

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA13-2448MSD	WG99756-5	11/06/11	1645	16.94	4.29
02		AR1660 0.25	11/06/11	1829	16.95	4.29
03		AR1660 1.0	11/07/11	0059	16.94	4.29
04		AR1254 1.0	11/07/11	0217		
05	DSY-SD-AA09-0012	SE6841-1	11/07/11	0545	16.94	4.29
06	DSY-SD-AA09-1224	SE6841-2	11/07/11	0611	16.94	4.29
07	DSY-SD-AA09-2448	SE6841-3	11/07/11	0636	16.94	4.29
08		AR1660 0.25	11/07/11	0729	16.94	4.29
09		AR1254 1.0	11/07/11	0847		
10		AR1660 1.0	11/07/11	1013	16.94	4.28
11		AR1254 1.0	11/07/11	1131		
12	DSY-SD-AA13-0012	SE6841-4	11/07/11	1406	16.94	4.28
13	DSY-SD-AA13-1224	SE6841-5	11/07/11	1432	16.94	4.28
14	DSY-SD-AA13-2448	SE6841-6	11/07/11	1458	16.93	4.28
15	DSY-SD-AA17-0012	SE6841-7	11/07/11	1524	16.94	4.28
16	DSY-SD-AA17-1224	SE6841-8	11/07/11	1550	16.94	4.28
17	DSY-SD-AA17-2448	SE6841-9	11/07/11	1616	16.93	4.28
18		AR1660 0.25	11/07/11	1708	16.95	4.28
19		AR1254 1.0	11/07/11	1826		
20	DSY-SD-AA21-0012	SE6841-10	11/07/11	1852	16.93	4.28

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000244

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.17 TCX: 3.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	13.15	3.75
02	WG100719-BLANK	WG100719-1	11/11/11	1823	13.15	3.76
03	WG100719-LCS	WG100719-2	11/11/11	1848	13.15	3.76
04		AR1660 0.25	11/11/11	2031	13.17	3.77
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-AA24-1224	SE6841-15	11/11/11	2355	13.13	3.75
07	DSY-SD-AA26-1224	SE6841-18	11/12/11	0021	13.14	3.75
08		AR1660 1.0	11/12/11	0254	13.13	3.75
09		AR1254 1.0	11/12/11	0410		
10						
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QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000246

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	1596100	3119400	7402000	3e+007	8e+007	3e+008	2ORDR	9.234e-003	3.052e-008	1.471e-017	0.99999	0.99000
(2)	900400	1761400	4556000	2e+007	5e+007	2e+008	2ORDR	1.067e-002	5.192e-008	4.565e-017	0.99998	0.99000
(3)	1600100	3441600	9101400	5e+007	1e+008	6e+008	2ORDR	3.589e-002	1.979e-008	-4.49e-018	0.99994	0.99000
(4)	929710	2405400	6485700	3e+007	8e+007	3e+008	2ORDR	2.254e-002	3.319e-008	-2.77e-018	0.99998	0.99000
(5)	1040700	2001900	5527200	2e+007	7e+007	3.e+008	2ORDR	2.902e-002	3.704e-008	-1.28e-017	0.99993	0.99000
Aroclor-1221	303260	625760	1516200	5168100	1e+007	4e+007	2ORDR	-2.79e-002	2.029e-007	5.719e-016	0.99995	0.99000
(2)	138200	294480	676050	2393600	5521000	2e+007	2ORDR	-3.29e-003	3.761e-007	1.432e-014	0.99999	0.99000
(3)	375140	780460	4707800	8036200	2e+007	9e+007	2ORDR	-4.9e-002	1.213e-007	-1.e-016	0.99889	0.99000
(4)	1331400	1925800	4707800	2.e+007	5e+007	2.e+008	2ORDR	1.155e-002	4.649e-008	1.858e-017	0.99997	0.99000
Aroclor-1232	689350	1693200	4081100	2e+007	5e+007	2e+008	2ORDR	1.294e-002	5.46e-008	7.51e-018	0.99999	0.99000
(2)	679440	1375300	3440900	1e+007	3e+007	1e+008	2ORDR	2.631e-004	7.311e-008	8.35e-019	1.00000	0.99000
(3)	547720	1432000	3696400	2e+007	5e+007	2e+008	2ORDR	3.395e-002	5.46e-008	-5.6e-017	0.99990	0.99000
(4)	258900	990460	2551000	1e+007	3.e+007	1e+008	2ORDR	2.285e-002	8.628e-008	-9.85e-017	0.99998	0.99000
(5)	336730	732150	1919000	8203900	2e+007	1e+008	2ORDR	1.543e-002	1.189e-007	-2.76e-016	0.99998	0.99000
Aroclor-1242	1400500	2664000	6376500	3e+007	6e+007	2e+008	2ORDR	2.566e-003	3.762e-008	1.52e-017	1.00000	0.99000
(2)	765060	1514800	3652200	2e+007	4.e+007	1e+008	2ORDR	1.36e-002	6.079e-008	4.141e-017	0.99998	0.99000
(3)	1407700	2862600	7325800	4e+007	1.e+008	5e+008	2ORDR	3.941e-002	2.496e-008	-7.68e-018	0.99987	0.99000
(4)	981340	1981700	5113300	2e+007	6e+007	3e+008	2ORDR	2.476e-002	4.027e-008	-5.8e-018	0.99995	0.99000
(5)	892060	1641100	4184200	2.e+007	6e+007	3e+008	2ORDR	3.476e-002	4.546e-008	-2.41e-017	0.99988	0.99000
Aroclor-1248	920910	1732400	4469300	2e+007	5e+007	3e+008	2ORDR	1.959e-002	4.971e-008	-4.08e-017	0.99995	0.99000
(2)	1331500	2577700	6563500	3.e+007	8e+007	4e+008	2ORDR	2.416e-002	3.131e-008	-8.49e-018	0.99995	0.99000
(3)	1428900	2813500	7413600	4e+007	1e+008	4e+008	2ORDR	3.108e-002	2.618e-008	-5.73e-018	0.99993	0.99000
(4)	940100	1868100	4919800	2e+007	6e+007	3e+008	2ORDR	2.871e-002	4.098e-008	-2.19e-017	0.99994	0.99000
(5)	382810	861040	2833400	1e+007	4e+007	2e+008	2ORDR	5.273e-002	6.172e-008	-7.28e-017	0.99980	0.99000
Aroclor-1254	1619800	3202500	8072200	4e+007	1e+008	5e+008	2ORDR	3.55e-002	2.377e-008	-5.29e-018	0.99987	0.99000
(2)	1809500	3538800	9032200	4e+007	1e+008	6e+008	2ORDR	4.547e-002	1.933e-008	-5.67e-018	0.99981	0.99000
(3)	985900	2088200	5682200	3e+007	9e+007	4e+008	2ORDR	5.043e-002	2.947e-008	-1.37e-017	0.99980	0.99000
(4)	1138400	2515400	7003200	3e+007	9e+007	4e+008	2ORDR	3.708e-002	2.718e-008	-7.35e-018	0.99991	0.99000
(5)	901510	2028600	5977400	3e+007	1.e+008	5e+008	2ORDR	5.995e-002	2.618e-008	-1.35e-017	0.99973	0.99000
Aroclor-1260	1796400	3816300	9887400	5e+007	1e+008	6e+008	2ORDR	3.411e-002	1.94e-008	-5.23e-018	0.99991	0.99000
(2)	1965800	4237900	1e+007	6e+007	2e+008	6e+008	2ORDR	5.14e-002	1.446e-008	1.889e-018	0.99977	0.99000
(3)	1529100	3191300	8614700	4e+007	1e+008	6e+008	2ORDR	4.165e-002	2.057e-008	-7.72e-018	0.99989	0.99000
(4)	1684900	3573400	9312400	4e+007	1e+008	6e+008	2ORDR	3.344e-002	2.068e-008	-6.5e-018	0.99992	0.99000
(5)	1547400	3143200	7377600	3e+007	8e+007	4e+008	2ORDR	1.354e-002	3.244e-008	-2.18e-017	0.99992	0.99000
Tetrachloro-m-xylene	1079300	2142700	5463200	2e+007	6.e+007	3e+008	2ORDR	2.093e-004	8.618e-010	-4.42e-019	0.99999	0.99000
Decachlorobiphenyl	491150	1063400	2543700	1e+007	3e+007	2e+008	2ORDR	4.13e-004	1.662e-009	-2.43e-018	0.99996	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0042000	1.0000000	32100000	0.001	0.42	20.00	2RDR
(2)	1.0288000	1.0000000	19280000	0.001	2.88	20.00	2RDR
(3)	0.9307300	1.0000000	45680000	0.001	-6.93	20.00	2RDR
(4)	0.9793400	1.0000000	28902000	0.001	-2.07	20.00	2RDR
(5)	0.8937700	1.0000000	23536000	0.001	-10.62	20.00	2RDR
Average %D: -3.260							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1260	0.9175500	1.0000000	46120000	0.001	-8.24	20.00	2RDR	
(2)	0.8934900	1.0000000	57810000	0.001	-10.65	20.00	2RDR	
(3)	0.9541800	1.0000000	45138000	0.001	-4.58	20.00	2RDR	
(4)	0.7944400	1.0000000	37243000	0.001	-20.56	20.00	2RDR	<-
(5)	0.8790100	1.0000000	27176000	0.001	-12.10	20.00	2RDR	
Average %D: -11.23								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 1526

Lab File ID: 7EJ796 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.9841200	1.0000000	31462000	0.001	-1.59	20.00	2RDR	
(2)	0.9608400	1.0000000	18014000	0.001	-3.92	20.00	2RDR	
(3)	0.9094400	1.0000000	44582000	0.001	-9.06	20.00	2RDR	
(4)	0.8885100	1.0000000	26152000	0.001	-11.15	20.00	2RDR	
(5)	0.8008900	1.0000000	20989000	0.001	-19.91	20.00	2RDR	
Average %D: -9.120								
Aroclor-1260	0.8059900	1.0000000	40232000	0.001	-19.40	20.00	2RDR	
(2)	0.8026200	1.0000000	51613000	0.001	-19.74	20.00	2RDR	
(3)	0.8648600	1.0000000	40650000	0.001	-13.51	20.00	2RDR	
(4)	0.7937200	1.0000000	37208000	0.001	-20.63	20.00	2RDR	<-
(5)	0.7538400	1.0000000	23182000	0.001	-24.62	20.00	2RDR	<-
Average %D: -19.58								
Decachlorobiphenyl	1.64e-002	2.e-002	488540000	0.001	-18.00	20.00	2RDR	
Tetrachloro-m-xylene	1.89e-002	2.e-002	1.1e+009	0.001	-5.50	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 2156

Lab File ID: 7EJ811 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2672600	0.2500000	33677000	0.001	6.90	20.00	2RDR
(2)	0.2707000	0.2500000	19945000	0.001	8.28	20.00	2RDR
(3)	0.2364100	0.2500000	40614000	0.001	-5.44	20.00	2RDR
(4)	0.2576000	0.2500000	28350000	0.001	3.04	20.00	2RDR
(5)	0.2610000	0.2500000	25103000	0.001	4.40	20.00	2RDR
Average %D: 3.4400							
Aroclor-1260	0.2476500	0.2500000	44169000	0.001	-0.94	20.00	2RDR
(2)	0.2468900	0.2500000	53991000	0.001	-1.24	20.00	2RDR
(3)	0.2456100	0.2500000	39820000	0.001	-1.76	20.00	2RDR
(4)	0.2438200	0.2500000	40833000	0.001	-2.47	20.00	2RDR
(5)	0.2578300	0.2500000	30276000	0.001	3.13	20.00	2RDR
Average %D: -0.640							
Decachlorobiphenyl	5.13e-003	5.e-003	570060000	0.001	2.60	20.00	2RDR
Tetrachloro-m-xylene	5.36e-003	5.e-003	1.2e+009	0.001	7.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2836100	0.2500000	35801000	0.001	13.44	20.00	2RDR
(2)	0.2823200	0.2500000	20832000	0.001	12.93	20.00	2RDR
(3)	0.2545600	0.2500000	44301000	0.001	1.82	20.00	2RDR
(4)	0.2627600	0.2500000	28973000	0.001	5.10	20.00	2RDR
(5)	0.2365100	0.2500000	22448000	0.001	-5.40	20.00	2RDR
Average %D: 5.6000							
Aroclor-1260	0.2354700	0.2500000	41642000	0.001	-5.81	20.00	2RDR
(2)	0.2437800	0.2500000	53135000	0.001	-2.49	20.00	2RDR
(3)	0.2556900	0.2500000	41796000	0.001	2.28	20.00	2RDR
(4)	0.2356400	0.2500000	39239000	0.001	-5.74	20.00	2RDR
(5)	0.2470600	0.2500000	28935000	0.001	-1.18	20.00	2RDR
Average %D: -2.600							
Decachlorobiphenyl	4.64e-003	5.e-003	510940000	0.001	-7.20	20.00	2RDR
Tetrachloro-m-xylene	5.92e-003	5.e-003	1.33e+009	0.001	18.40	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2494000	1.0000000	39862000	0.001	24.94	20.00	2RDR	<-
(2)	1.2631000	1.0000000	23630000	0.001	26.31	20.00	2RDR	<-
(3)	1.1014000	1.0000000	54505000	0.001	10.14	20.00	2RDR	
(4)	1.1811000	1.0000000	35015000	0.001	18.11	20.00	2RDR	
(5)	1.1185000	1.0000000	29717000	0.001	11.85	20.00	2RDR	
Average %D: 18.270								
Aroclor-1260	1.0442000	1.0000000	52828000	0.001	4.42	20.00	2RDR	
(2)	1.0360000	1.0000000	67507000	0.001	3.60	20.00	2RDR	
(3)	1.0815000	1.0000000	51560000	0.001	8.15	20.00	2RDR	
(4)	1.0432000	1.0000000	49615000	0.001	4.32	20.00	2RDR	
(5)	1.1366000	1.0000000	35466000	0.001	13.66	20.00	2RDR	
Average %D: 6.8300								
Decachlorobiphenyl	2.09e-002	2.e-002	627930000	0.001	4.50	20.00	2RDR	
Tetrachloro-m-xylene	2.47e-002	2.e-002	1.44e+009	0.001	23.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1078000	1.0000000	45581000	0.001	10.78	20.00	2RDR
(2)	1.0818000	1.0000000	54483000	0.001	8.18	20.00	2RDR
(3)	1.0835000	1.0000000	35641000	0.001	8.35	20.00	2RDR
(4)	1.0912000	1.0000000	39193000	0.001	9.12	20.00	2RDR
(5)	1.1308000	1.0000000	41809000	0.001	13.08	20.00	2RDR
Average %D: 9.9000							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2360800	0.2500000	29622000	0.001	-5.57	20.00	2RDR	
(2)	0.2372200	0.2500000	17387000	0.001	-5.11	20.00	2RDR	
(3)	0.2305400	0.2500000	39423000	0.001	-7.78	20.00	2RDR	
(4)	0.2147500	0.2500000	23179000	0.001	-14.10	20.00	2RDR	
(5)	0.1813300	0.2500000	16469000	0.001	-27.47	20.00	2RDR	<-
Average %D: -12.00								
Aroclor-1260	0.1785000	0.2500000	29837000	0.001	-28.60	20.00	2RDR	<-
(2)	0.1957500	0.2500000	39887000	0.001	-21.70	20.00	2RDR	<-
(3)	0.2060400	0.2500000	32071000	0.001	-17.58	20.00	2RDR	
(4)	0.1810600	0.2500000	28623000	0.001	-27.58	20.00	2RDR	<-
(5)	0.1896100	0.2500000	21790000	0.001	-24.16	20.00	2RDR	<-
Average %D: -23.92								
Decachlorobiphenyl	3.38e-003	5.e-003	357550000	0.001	-32.40	20.00	2RDR	<-
Tetrachloro-m-xylene	5.01e-003	5.e-003	1.12e+009	0.001	0.20	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8584600	1.0000000	34898000	0.001	-14.15	20.00	2RDR
(2)	0.8799400	1.0000000	43730000	0.001	-12.01	20.00	2RDR
(3)	0.8480600	1.0000000	27413000	0.001	-15.19	20.00	2RDR
(4)	0.8432800	1.0000000	29899000	0.001	-15.67	20.00	2RDR
(5)	0.9351200	1.0000000	34029000	0.001	-6.49	20.00	2RDR
Average %D: -12.70							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1814000	1.0000000	37718000	0.001	18.14	20.00	2RDR	
(2)	1.1421000	1.0000000	21389000	0.001	14.21	20.00	2RDR	
(3)	1.0620000	1.0000000	52465000	0.001	6.20	20.00	2RDR	
(4)	1.0295000	1.0000000	30420000	0.001	2.95	20.00	2RDR	
(5)	0.8983900	1.0000000	23663000	0.001	-10.16	20.00	2RDR	
Average %D: 6.2700								
Aroclor-1260	0.8317500	1.0000000	41590000	0.001	-16.82	20.00	2RDR	
(2)	0.8579100	1.0000000	55385000	0.001	-14.21	20.00	2RDR	
(3)	0.9233700	1.0000000	43588000	0.001	-7.66	20.00	2RDR	
(4)	0.8385000	1.0000000	39427000	0.001	-16.15	20.00	2RDR	
(5)	0.9340200	1.0000000	28938000	0.001	-6.60	20.00	2RDR	
Average %D: -12.29								
Decachlorobiphenyl	1.59e-002	2.e-002	471100000	0.001	-20.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.49e-002	2.e-002	1.46e+009	0.001	24.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9869400	1.0000000	40396000	0.001	-1.31	20.00	2RDR
(2)	1.0166000	1.0000000	51003000	0.001	1.66	20.00	2RDR
(3)	1.0154000	1.0000000	33256000	0.001	1.54	20.00	2RDR
(4)	1.0011000	1.0000000	35809000	0.001	0.11	20.00	2RDR
(5)	1.0734000	1.0000000	39521000	0.001	7.34	20.00	2RDR
Average %D: 1.8700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.0354000	1.0000000	33092000	0.001	3.54	20.00	2RDR	
(2)	1.0432000	1.0000000	19550000	0.001	4.32	20.00	2RDR	
(3)	0.9290900	1.0000000	45595000	0.001	-7.09	20.00	2RDR	
(4)	0.9547000	1.0000000	28156000	0.001	-4.53	20.00	2RDR	
(5)	0.8877900	1.0000000	23372000	0.001	-11.22	20.00	2RDR	
Average %D: -2.990								
Aroclor-1260	0.8184000	1.0000000	40886000	0.001	-18.16	20.00	2RDR	
(2)	0.8199300	1.0000000	52794000	0.001	-18.01	20.00	2RDR	
(3)	0.8748700	1.0000000	41152000	0.001	-12.51	20.00	2RDR	
(4)	0.8318700	1.0000000	39098000	0.001	-16.81	20.00	2RDR	
(5)	0.9753000	1.0000000	30264000	0.001	-2.47	20.00	2RDR	
Average %D: -13.59								
Decachlorobiphenyl	1.57e-002	2.e-002	467440000	0.001	-21.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.19e-002	2.e-002	1.27e+009	0.001	9.50	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2553400	0.2500000	32128000	0.001	2.14	20.00	2RDR
(2)	0.2572600	0.2500000	18918000	0.001	2.90	20.00	2RDR
(3)	0.2035000	0.2500000	33935000	0.001	-18.60	20.00	2RDR
(4)	0.2250200	0.2500000	24418000	0.001	-9.99	20.00	2RDR
(5)	0.2081800	0.2500000	19378000	0.001	-16.73	20.00	2RDR
Average %D: -8.040							
Aroclor-1260	0.2191100	0.2500000	38250000	0.001	-12.36	20.00	2RDR
(2)	0.2256200	0.2500000	48127000	0.001	-9.75	20.00	2RDR
(3)	0.2402400	0.2500000	38767000	0.001	-3.90	20.00	2RDR
(4)	0.2365400	0.2500000	39416000	0.001	-5.38	20.00	2RDR
(5)	0.2912900	0.2500000	34447000	0.001	16.52	20.00	2RDR
Average %D: -2.960							
Decachlorobiphenyl	4.8e-003	5.e-003	530280000	0.001	-4.00	20.00	2RDR
Tetrachloro-m-xylene	5.75e-003	5.e-003	1.29e+009	0.001	15.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1834000	1.0000000	37779000	0.001	18.34	20.00	2RDR	
(2)	1.2166000	1.0000000	22771000	0.001	21.66	20.00	2RDR	<-
(3)	0.9476600	1.0000000	46554000	0.001	-5.23	20.00	2RDR	
(4)	1.0305000	1.0000000	30451000	0.001	3.05	20.00	2RDR	
(5)	0.9079000	1.0000000	23924000	0.001	-9.21	20.00	2RDR	
Average %D: 5.7200								
Aroclor-1260	0.9049300	1.0000000	45453000	0.001	-9.51	20.00	2RDR	
(2)	0.9056200	1.0000000	58637000	0.001	-9.44	20.00	2RDR	
(3)	0.9914700	1.0000000	47016000	0.001	-0.85	20.00	2RDR	
(4)	0.9776300	1.0000000	46343000	0.001	-2.24	20.00	2RDR	
(5)	1.2360000	1.0000000	38692000	0.001	23.60	20.00	2RDR	<-
Average %D: 0.3100								
Decachlorobiphenyl	1.87e-002	2.e-002	559820000	0.001	-6.50	20.00	2RDR	
Tetrachloro-m-xylene	2.46e-002	2.e-002	1.44e+009	0.001	23.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9845000	1.0000000	40292000	0.001	-1.55	20.00	2RDR
(2)	0.9932300	1.0000000	49756000	0.001	-0.68	20.00	2RDR
(3)	0.9689900	1.0000000	31632000	0.001	-3.10	20.00	2RDR
(4)	1.0158000	1.0000000	36363000	0.001	1.58	20.00	2RDR
(5)	0.9865000	1.0000000	36066000	0.001	-1.35	20.00	2RDR
Average %D: -1.020							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2694100	0.2500000	33957000	0.001	7.76	20.00	2RDR	
(2)	0.2791000	0.2500000	20586000	0.001	11.64	20.00	2RDR	
(3)	0.2135800	0.2500000	35982000	0.001	-14.57	20.00	2RDR	
(4)	0.2340200	0.2500000	25504000	0.001	-6.39	20.00	2RDR	
(5)	0.2020200	0.2500000	18710000	0.001	-19.19	20.00	2RDR	
Average %D: -4.160								
Aroclor-1260	0.2341000	0.2500000	41358000	0.001	-6.36	20.00	2RDR	
(2)	0.2413600	0.2500000	52467000	0.001	-3.46	20.00	2RDR	
(3)	0.2603000	0.2500000	42700000	0.001	4.12	20.00	2RDR	
(4)	0.2562700	0.2500000	43256000	0.001	2.51	20.00	2RDR	
(5)	0.3166500	0.2500000	37613000	0.001	26.66	20.00	2RDR	<-
Average %D: 4.6800								
Decachlorobiphenyl	4.8e-003	5.e-003	529890000	0.001	-4.00	20.00	2RDR	
Tetrachloro-m-xylene	5.85e-003	5.e-003	1.31e+009	0.001	17.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0847

Lab File ID: 7EK236 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1086000	1.0000000	45613000	0.001	10.86	20.00	2RDR	
(2)	1.1281000	1.0000000	56958000	0.001	12.81	20.00	2RDR	
(3)	1.1426000	1.0000000	37719000	0.001	14.26	20.00	2RDR	
(4)	1.2427000	1.0000000	44896000	0.001	24.27	20.00	2RDR	<-
(5)	1.2098000	1.0000000	44967000	0.001	20.98	20.00	2RDR	<-
Average %D: 16.640								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1013

Lab File ID: 7EK238 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.2171000	1.0000000	38845000	0.001	21.71	20.00	2RDR	<-
(2)	1.2256000	1.0000000	22937000	0.001	22.56	20.00	2RDR	<-
(3)	1.1698000	1.0000000	58051000	0.001	16.98	20.00	2RDR	
(4)	1.1974000	1.0000000	35508000	0.001	19.74	20.00	2RDR	
(5)	1.0493000	1.0000000	27812000	0.001	4.93	20.00	2RDR	
Average %D: 17.190								
Aroclor-1260	1.0829000	1.0000000	54886000	0.001	8.29	20.00	2RDR	
(2)	1.0769000	1.0000000	70291000	0.001	7.69	20.00	2RDR	
(3)	1.1404000	1.0000000	54547000	0.001	14.04	20.00	2RDR	
(4)	1.1306000	1.0000000	53985000	0.001	13.06	20.00	2RDR	
(5)	1.2768000	1.0000000	40021000	0.001	27.68	20.00	2RDR	<-
Average %D: 14.160								
Decachlorobiphenyl	2.32e-002	2.e-002	699090000	0.001	16.00	20.00	2RDR	
Tetrachloro-m-xylene	2.38e-002	2.e-002	1.39e+009	0.001	19.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1131

Lab File ID: 7EK241 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2074000	1.0000000	49861000	0.001	20.74	20.00	2RDR	<-
(2)	1.1789000	1.0000000	59681000	0.001	17.89	20.00	2RDR	
(3)	1.1908000	1.0000000	39416000	0.001	19.08	20.00	2RDR	
(4)	1.2847000	1.0000000	46478000	0.001	28.47	20.00	2RDR	<-
(5)	1.2352000	1.0000000	45987000	0.001	23.52	20.00	2RDR	<-
Average %D: 21.940								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1708

Lab File ID: 7EK253 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3180800	0.2500000	40278000	0.001	27.23	20.00	2RDR	<-
(2)	0.3263000	0.2500000	24187000	0.001	30.52	20.00	2RDR	<-
(3)	0.2738000	0.2500000	48208000	0.001	9.52	20.00	2RDR	
(4)	0.3068700	0.2500000	34296000	0.001	22.75	20.00	2RDR	<-
(5)	0.2751800	0.2500000	26642000	0.001	10.07	20.00	2RDR	
Average %D: 20.000								
Aroclor-1260	0.2836700	0.2500000	51646000	0.001	13.47	20.00	2RDR	
(2)	0.2740200	0.2500000	61469000	0.001	9.61	20.00	2RDR	
(3)	0.2738900	0.2500000	45366000	0.001	9.56	20.00	2RDR	
(4)	0.2876300	0.2500000	49370000	0.001	15.05	20.00	2RDR	
(5)	0.3384300	0.2500000	40334000	0.001	35.37	20.00	2RDR	<-
Average %D: 16.600								
Decachlorobiphenyl	6.06e-003	5.e-003	683540000	0.001	21.20	20.00	2RDR	<-
Tetrachloro-m-xylene	6.79e-003	5.e-003	1.53e+009	0.001	35.80	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1826

Lab File ID: 7EK256 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.2436000	1.0000000	51421000	0.001	24.36	20.00	2RDR	<-
(2)	1.1875000	1.0000000	60143000	0.001	18.75	20.00	2RDR	
(3)	1.2028000	1.0000000	39839000	0.001	20.28	20.00	2RDR	<-
(4)	1.3126000	1.0000000	47533000	0.001	31.26	20.00	2RDR	<-
(5)	1.1998000	1.0000000	44566000	0.001	19.98	20.00	2RDR	
Average %D: 22.930								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.9730600	1.0000000	31110000	0.001	-2.69	20.00	2RDR	
(2)	0.9539500	1.0000000	17886000	0.001	-4.60	20.00	2RDR	
(3)	0.8515000	1.0000000	41596000	0.001	-14.85	20.00	2RDR	
(4)	0.8151500	1.0000000	23932000	0.001	-18.48	20.00	2RDR	
(5)	0.6372600	1.0000000	16514000	0.001	-36.27	20.00	2RDR	<-
Average %D: -15.38								
Aroclor-1260	0.6550900	1.0000000	32297000	0.001	-34.49	20.00	2RDR	<-
(2)	0.6635600	1.0000000	42111000	0.001	-33.64	20.00	2RDR	<-
(3)	0.7133100	1.0000000	33071000	0.001	-28.67	20.00	2RDR	<-
(4)	0.6829200	1.0000000	31730000	0.001	-31.71	20.00	2RDR	<-
(5)	0.7095500	1.0000000	21774000	0.001	-29.04	20.00	2RDR	<-
Average %D: -31.51								
Decachlorobiphenyl	1.35e-002	2.e-002	399930000	0.001	-32.50	20.00	2RDR	<-
Tetrachloro-m-xylene	2.12e-002	2.e-002	1.23e+009	0.001	6.00	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0380000	1.0000000	42584000	0.001	3.80	20.00	2RDR
(2)	1.0008000	1.0000000	50158000	0.001	0.08	20.00	2RDR
(3)	0.9512400	1.0000000	31012000	0.001	-4.88	20.00	2RDR
(4)	0.9639200	1.0000000	34416000	0.001	-3.61	20.00	2RDR
(5)	0.9811400	1.0000000	35853000	0.001	-1.89	20.00	2RDR
Average %D: -1.300							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.5517000	1.0000000	49360000	0.001	55.17	20.00	2RDR	<-
(2)	1.5851000	1.0000000	29555000	0.001	58.51	20.00	2RDR	<-
(3)	1.4896000	1.0000000	74704000	0.001	48.96	20.00	2RDR	<-
(4)	1.5058000	1.0000000	44865000	0.001	50.58	20.00	2RDR	<-
(5)	1.3620000	1.0000000	36444000	0.001	36.20	20.00	2RDR	<-
Average %D: 49.880								
Aroclor-1260	1.2826000	1.0000000	65524000	0.001	28.26	20.00	2RDR	<-
(2)	1.2802000	1.0000000	84072000	0.001	28.02	20.00	2RDR	<-
(3)	1.3299000	1.0000000	64192000	0.001	32.99	20.00	2RDR	<-
(4)	1.3209000	1.0000000	63539000	0.001	32.09	20.00	2RDR	<-
(5)	1.4493000	1.0000000	45662000	0.001	44.93	20.00	2RDR	<-
Average %D: 33.260								
Decachlorobiphenyl	2.58e-002	2.e-002	780660000	0.001	29.00	20.00	2RDR	<-
Tetrachloro-m-xylene	3.11e-002	2.e-002	1.83e+009	0.001	55.50	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.3139400	0.2500000	39740000	0.001	25.58	20.00	2RDR	<-
(2)	0.3551000	0.2500000	26382000	0.001	42.04	20.00	2RDR	<-
(3)	0.2376400	0.2500000	40864000	0.001	-4.94	20.00	2RDR	
(4)	0.2696500	0.2500000	29804000	0.001	7.86	20.00	2RDR	
(5)	0.2838600	0.2500000	27583000	0.001	13.54	20.00	2RDR	
Average %D: 16.800								
Aroclor-1260	0.2822600	0.2500000	51352000	0.001	12.90	20.00	2RDR	
(2)	0.2914600	0.2500000	66274000	0.001	16.58	20.00	2RDR	
(3)	0.3270600	0.2500000	55807000	0.001	30.82	20.00	2RDR	<-
(4)	0.2236100	0.2500000	36899000	0.001	-10.56	20.00	2RDR	
(5)	0.3294600	0.2500000	39213000	0.001	31.78	20.00	2RDR	<-
Average %D: 16.320								
Decachlorobiphenyl	6.48e-003	5.e-003	734810000	0.001	29.60	20.00	2RDR	<-
Tetrachloro-m-xylene	7.02e-003	5.e-003	1.59e+009	0.001	40.40	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1713000	1.0000000	48308000	0.001	17.13	20.00	2RDR	
(2)	1.1134000	1.0000000	56175000	0.001	11.34	20.00	2RDR	
(3)	1.1024000	1.0000000	36306000	0.001	10.24	20.00	2RDR	
(4)	1.2162000	1.0000000	43898000	0.001	21.62	20.00	2RDR	<-
(5)	0.9822200	1.0000000	35896000	0.001	-1.78	20.00	2RDR	
Average %D: 11.710								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.4120000	1.0000000	44980000	0.001	41.20	20.00	2RDR	<-
(2)	1.3645000	1.0000000	25502000	0.001	36.45	20.00	2RDR	<-
(3)	1.2210000	1.0000000	60704000	0.001	22.10	20.00	2RDR	<-
(4)	1.2806000	1.0000000	38032000	0.001	28.06	20.00	2RDR	<-
(5)	1.1449000	1.0000000	30446000	0.001	14.49	20.00	2RDR	
Average %D: 28.460								
Aroclor-1260	1.0309000	1.0000000	52124000	0.001	3.09	20.00	2RDR	
(2)	1.0313000	1.0000000	67188000	0.001	3.13	20.00	2RDR	
(3)	1.0861000	1.0000000	51795000	0.001	8.61	20.00	2RDR	
(4)	1.1032000	1.0000000	52613000	0.001	10.32	20.00	2RDR	
(5)	1.1370000	1.0000000	35479000	0.001	13.70	20.00	2RDR	
Average %D: 7.7700								
Decachlorobiphenyl	2.31e-002	2.e-002	696700000	0.001	15.50	20.00	2RDR	
Tetrachloro-m-xylene	3.15e-002	2.e-002	1.85e+009	0.001	57.50	20.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.3426000	1.0000000	55686000	0.001	34.26	20.00	2RDR	<-
(2)	1.2788000	1.0000000	65043000	0.001	27.88	20.00	2RDR	<-
(3)	1.2672000	1.0000000	42109000	0.001	26.72	20.00	2RDR	<-
(4)	1.2697000	1.0000000	45915000	0.001	26.97	20.00	2RDR	<-
(5)	1.3228000	1.0000000	49508000	0.001	32.28	20.00	2RDR	<-
Average %D: 29.620								

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.26 TCX: 4.37

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	09/22/11	1238	17.25	4.37
02		AR1660 0.05	09/22/11	1304	17.26	4.37
03		AR1660 0.1	09/22/11	1330	17.26	4.37
04		AR1660 0.25	09/22/11	1357	17.26	4.37
05		AR1660 2.5	09/22/11	1423	17.25	4.37
06		AR1660 10	09/22/11	1449	17.26	4.37
07		AR1016 1.0	09/22/11	1515		
08		AR1260 1.0	09/22/11	1541		
09		AR1242 1.0	09/22/11	1607		
10		AR1248 1.0	09/22/11	1843		
11		AR1254 1.0	09/22/11	2118		
12		AR1254 0.05	09/22/11	2143		
13		AR1254 0.1	09/22/11	2209		
14		AR1254 0.25	09/22/11	2234		
15		AR1254 2.5	09/22/11	2300		
16		AR1254 10	09/22/11	2326		
17		AR1221 1.0	09/22/11	2352		
18		AR1232 1.0	09/23/11	0226		
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000237

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 17.03 TCX: 4.31

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	10/24/11	1526	17.04	4.31
02	WG99509-BLANK	WG99509-1	10/24/11	1711	17.04	
03	WG99509-LCS	WG99509-2	10/24/11	1737	17.04	4.31
04	WG99509-LCSD	WG99509-3	10/24/11	1803	17.03	4.31
05	DSY-SD-RB14-101311	SE6841-25	10/24/11	1829	17.03	4.31
06		AR1660 0.25	10/24/11	2156	17.03	4.31
07						
08						
09						
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16						
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20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000239

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 13.23 TCX: 3.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA13-2448MSD	WG99756-5	11/06/11	1645	13.22	3.80
02		AR1660 0.25	11/06/11	1829	13.23	3.81
03		AR1660 1.0	11/07/11	0059	13.22	3.80
04		AR1254 1.0	11/07/11	0217		
05	DSY-SD-AA09-0012	SE6841-1	11/07/11	0545	13.23	3.81
06	DSY-SD-AA09-1224	SE6841-2	11/07/11	0611	13.22	3.81
07	DSY-SD-AA09-2448	SE6841-3	11/07/11	0636	13.22	3.80
08		AR1660 0.25	11/07/11	0729	13.23	3.81
09		AR1254 1.0	11/07/11	0847		
10		AR1660 1.0	11/07/11	1013	13.22	3.79
11		AR1254 1.0	11/07/11	1131		
12	DSY-SD-AA13-0012	SE6841-4	11/07/11	1406	13.21	3.80
13	DSY-SD-AA13-1224	SE6841-5	11/07/11	1432	13.21	3.79
14	DSY-SD-AA13-2448	SE6841-6	11/07/11	1458	13.21	3.79
15	DSY-SD-AA17-0012	SE6841-7	11/07/11	1524	13.21	3.79
16	DSY-SD-AA17-1224	SE6841-8	11/07/11	1550	13.21	3.79
17	DSY-SD-AA17-2448	SE6841-9	11/07/11	1616	13.20	3.79
18		AR1660 0.25	11/07/11	1708	13.23	3.79
19		AR1254 1.0	11/07/11	1826		
20	DSY-SD-AA21-0012	SE6841-10	11/07/11	1852	13.21	3.79

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000241

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 0.25	11/03/11	0552	16.95	4.29
02	WG99856-BLANK	WG99856-1	11/03/11	1300	16.96	4.29
03	WG99856-LCS	WG99856-2	11/03/11	1326	16.96	4.29
04	WG99856-LCSD	WG99856-3	11/03/11	1352	16.96	4.29
05		AR1660 1.0	11/03/11	1536	16.96	4.29
06		AR1254 1.0	11/03/11	1654		
07	DSY-SD-AA28-0016	SE6841-20	11/03/11	1956	16.96	4.30
08	DSY-SD-DUP35-101311	SE6841-21	11/03/11	2021	16.96	4.30
09	DSY-SD-AA30-0012	SE6841-22	11/03/11	2047	16.96	4.30
10	DSY-SD-AA30-1224	SE6841-23	11/03/11	2113	16.96	4.30
11		AR1660 0.25	11/03/11	2205	16.97	4.30
12		AR1254 1.0	11/03/11	2322		
13	DSY-SD-G30-0018	SE6841-24	11/03/11	2347	16.96	4.30
14		AR1660 1.0	11/04/11	0429	16.96	4.29
15		AR1254 1.0	11/04/11	0547		
16		AR1660 1.0	11/06/11	1159	16.94	4.29
17	WG99756-BLANK	WG99756-1	11/06/11	1501	16.95	4.30
18	WG99756-LCS	WG99756-2	11/06/11	1527	16.95	4.30
19	WG99756-LCSD	WG99756-3	11/06/11	1553	16.95	4.30
20	DSY-SD-AA13-2448MS	WG99756-4	11/06/11	1619	16.94	4.29

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000243

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.95 TCX: 4.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01	DSY-SD-AA21-1224	SE6841-11	11/07/11	1918	16.93	4.28
02	DSY-SD-AA21-2448	SE6841-12	11/07/11	1944	16.93	4.28
03	DSY-SD-DUP34-101311	SE6841-13	11/07/11	2010	16.93	4.28
04	DSY-SD-AA24-0012	SE6841-14	11/07/11	2036	16.93	4.28
05	DSY-SD-AA24-2448	SE6841-16	11/07/11	2128	16.93	4.28
06	DSY-SD-AA26-0012	SE6841-17	11/07/11	2154	16.93	4.28
07	DSY-SD-AA26-2448	SE6841-19	11/07/11	2246	16.95	4.29
08		AR1660 1.0	11/07/11	2338	16.93	4.28
09		AR1254 1.0	11/08/11	0055		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Katahdin Analytical Services A0000245

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Init. Calib. Date(s): 09/22/11 09/23/11

Instrument ID: GC07

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
DCB: 16.83 TCX: 4.24

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DCB RT #	TCX RT #
01		AR1660 1.0	11/11/11	1353	16.85	4.24
02	WG100719-BLANK	WG100719-1	11/11/11	1823	16.86	4.25
03	WG100719-LCS	WG100719-2	11/11/11	1848	16.85	4.25
04		AR1660 0.25	11/11/11	2031	16.86	4.25
05		AR1254 1.0	11/11/11	2147		
06	DSY-SD-AA24-1224	SE6841-15	11/11/11	2355	16.84	4.24
07	DSY-SD-AA26-1224	SE6841-18	11/12/11	0021	16.84	4.24
08		AR1660 1.0	11/12/11	0254	16.84	4.24
09		AR1254 1.0	11/12/11	0410		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

QC LIMITS

DCB = Decachlorobiphenyl (+/- 0.07 MINUTES)
TCX = Tetrachloro-m-xylene (+/- 0.07 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Katahdin Analytical Services A0000247

FORM 6
PCB INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date(s): 09/22/11 09/23/11

Column: RTX-CLPESTICIDES2 ID: 0.53 (mm) Calibration Time(s): 1238 0945

LAB FILE ID: RF0.05: 7EI553 RF0.1: 7EI554 RF0.25: 7EI555
RF1: 7EI552 RF2.5: 7EI556 RF10: 7EI557

COMPOUND	RF0.05	RF0.1	RF0.25	RF1	RF2.5	RF10	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Aroclor-1016	182430	361490	862780	3530000	8622100	3e+007	2ORDR	-2.23e-003	2.856e-007	4.709e-016	1.00000	0.99000
(2)	316950	604040	1429300	5749600	1e+007	5e+007	2ORDR	-2.26e-003	1.731e-007	2.861e-016	1.00000	0.99000
(3)	504160	984950	2384500	1.e+007	3e+007	1e+008	2ORDR	8.977e-003	9.496e-008	6.651e-017	0.99999	0.99000
(4)	257280	520710	1249300	5477900	1e+007	6e+007	2ORDR	8.944e-003	1.8e-007	1.93e-017	0.99999	0.99000
(5)	253140	488960	1165000	4919700	1e+007	5e+007	2ORDR	2.778e-003	2.03e-007	-7.97e-018	1.00000	0.99000
Aroclor-1221	82050	157380	377230	1344500	3165200	1e+007	2ORDR	-2.15e-002	7.693e-007	7.03e-015	0.99998	0.99000
(2)	116890	228120	537170	2086000	5209100	2.e+007	2ORDR	-4.05e-003	4.761e-007	9.87e-016	1.00000	0.99000
(3)	76273	148770	357900	1366300	3425800	1e+007	2ORDR	-3.4e-003	7.213e-007	3.167e-015	1.00000	0.99000
(4)	259570	510430	1214200	4676000	1e+007	4e+007	2ORDR	-2.71e-003	2.101e-007	4.149e-016	1.00000	0.99000
Aroclor-1232	221620	451990	1100400	4223200	1.e+007	4e+007	2ORDR	-7.04e-003	2.389e-007	3.841e-016	1.00000	0.99000
(2)	144820	294030	715300	2768000	6726600	3e+007	2ORDR	-7.49e-003	3.666e-007	7.555e-016	1.00000	0.99000
(3)	214840	440670	1119600	4486100	1e+007	5e+007	2ORDR	4.119e-003	2.196e-007	-3.68e-017	1.00000	0.99000
(4)	101630	231290	582500	2379400	6029200	2e+007	2ORDR	5.432e-003	4.165e-007	-3.82e-016	1.00000	0.99000
(5)	104450	210080	504470	1975500	4897500	2.e+007	2ORDR	-5.02e-003	5.107e-007	6.e-017	1.00000	0.99000
Aroclor-1242	154520	317880	759700	2968100	7271900	3e+007	2ORDR	-5.46e-003	3.392e-007	6.544e-016	1.00000	0.99000
(2)	271150	523630	1248700	4815100	1e+007	4e+007	2ORDR	-6.41e-003	2.076e-007	4.044e-016	1.00000	0.99000
(3)	425610	850980	2073900	8479400	2e+007	8e+007	2ORDR	5.709e-003	1.148e-007	8.179e-017	1.00000	0.99000
(4)	212750	444370	1091700	4488600	1e+007	5e+007	2ORDR	6.023e-003	2.185e-007	4.728e-017	1.00000	0.99000
(5)	218280	427280	1031500	4124900	1.e+007	4e+007	2ORDR	-9.31e-004	2.419e-007	-8.7e-018	1.00000	0.99000
Aroclor-1248	239020	464880	1118800	4586000	1e+007	5e+007	2ORDR	4.32e-003	2.112e-007	5.727e-019	1.00000	0.99000
(2)	292930	556710	1302000	5450900	1e+007	5e+007	2ORDR	-1.25e-004	1.842e-007	6.676e-017	1.00000	0.99000
(3)	365140	688320	1662500	6934500	2e+007	7e+007	2ORDR	8.424e-004	1.445e-007	5.771e-017	1.00000	0.99000
(4)	287990	543670	1347000	5663400	1e+007	6e+007	2ORDR	4.981e-003	1.749e-007	3.436e-017	1.00000	0.99000
(5)	248720	470740	1284800	6136100	2e+007	7e+007	2ORDR	2.287e-002	1.574e-007	-1.23e-016	0.99998	0.99000
Aroclor-1254	207970	408280	996830	3995100	1.e+007	4.e+007	2ORDR	2.675e-003	2.458e-007	1.147e-016	1.00000	0.99000
(2)	325460	646610	1623300	6437900	2e+007	6e+007	2ORDR	6.098e-003	1.499e-007	1.004e-016	0.99999	0.99000
(3)	339200	675920	1762400	7244400	2e+007	7e+007	2ORDR	1.329e-002	1.312e-007	6.84e-017	0.99998	0.99000
(4)	373320	749760	2064900	8989100	2e+007	9e+007	2ORDR	2.412e-002	1.031e-007	3.612e-017	0.99996	0.99000
(5)	206260	414720	1129200	5360000	1e+007	6e+007	2ORDR	3.098e-002	1.721e-007	-3.29e-017	0.99994	0.99000
Aroclor-1260	344640	669790	1654400	6988200	2e+007	7.e+007	2ORDR	6.095e-003	1.414e-007	1.439e-017	1.00000	0.99000
(2)	362360	731270	1871400	8448900	2e+007	9e+007	2ORDR	1.431e-002	1.161e-007	-1.03e-017	0.99999	0.99000
(3)	240450	476640	1313200	5887200	2e+007	6e+007	2ORDR	1.672e-002	1.659e-007	-8.14e-017	0.99999	0.99000
(4)	262220	521300	1307000	5646800	1e+007	6e+007	2ORDR	1.051e-002	1.735e-007	-2.25e-017	0.99999	0.99000
(5)	238300	492810	1203500	5611700	1e+007	6e+007	2ORDR	1.764e-002	1.735e-007	-1.82e-016	0.99998	0.99000
Tetrachloro-m-xylene	218900	432200	1035000	4318500	1e+007	4e+007	2ORDR	7.887e-005	4.592e-009	-2.04e-018	1.00000	0.99000
Decachlorobiphenyl	92959	180820	446040	1934400	4828600	2.e+007	2ORDR	1.128e-004	1.036e-008	-6.35e-018	1.00000	0.99000

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1515

Lab File ID: 7EI514 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9739200	1.0000000	3399000.0	0.001	-2.61	20.00	2RDR
(2)	1.0187000	1.0000000	5842700.0	0.001	1.87	20.00	2RDR
(3)	0.9888600	1.0000000	10245000	0.001	-1.11	20.00	2RDR
(4)	0.9722200	1.0000000	5347400.0	0.001	-2.78	20.00	2RDR
(5)	0.9672200	1.0000000	4751700.0	0.001	-3.28	20.00	2RDR
Average %D: -1.580							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 09/22/11 Time: 1541

Lab File ID: 7EI515 Init. Calib. Date(s): 09/22/11 09/23/11

Init. Calib. Times: 1238 0945

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1260	0.9758800	1.0000000	6853900.0	0.001	-2.41	20.00	2RDR
(2)	0.9612200	1.0000000	8164500.0	0.001	-3.88	20.00	2RDR
(3)	1.0694000	1.0000000	6365500.0	0.001	6.94	20.00	2RDR
(4)	0.8728600	1.0000000	4974600.0	0.001	-12.71	20.00	2RDR
(5)	0.9020100	1.0000000	5124100.0	0.001	-9.80	20.00	2RDR
Average %D: -4.370							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 1526

Lab File ID: 7EJ796 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9176600	1.0000000	3204400.0	0.001	-8.23	20.00	2RDR
(2)	0.9311500	1.0000000	5346000.0	0.001	-6.88	20.00	2RDR
(3)	0.8931500	1.0000000	9251000.0	0.001	-10.68	20.00	2RDR
(4)	0.8698900	1.0000000	4779700.0	0.001	-13.01	20.00	2RDR
(5)	0.8965200	1.0000000	4403300.0	0.001	-10.35	20.00	2RDR
Average %D: -9.830							
Aroclor-1260	0.8597100	1.0000000	6033400.0	0.001	-14.03	20.00	2RDR
(2)	0.8733100	1.0000000	7406100.0	0.001	-12.67	20.00	2RDR
(3)	0.8897000	1.0000000	5275800.0	0.001	-11.03	20.00	2RDR
(4)	0.8724100	1.0000000	4972000.0	0.001	-12.76	20.00	2RDR
(5)	0.8547700	1.0000000	4849000.0	0.001	-14.52	20.00	2RDR
Average %D: -13.00							
Decachlorobiphenyl	1.7e-002	2.e-002	81386000	0.001	-15.00	20.00	2RDR
Tetrachloro-m-xylene	1.81e-002	2.e-002	196250000	0.001	-9.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 10/24/11 Time: 2156

Lab File ID: 7EJ811 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2632600	0.2500000	3713200.0	0.001	5.30	20.00	2RDR
(2)	0.2504200	0.2500000	5825800.0	0.001	0.17	20.00	2RDR
(3)	0.2390300	0.2500000	9674000.0	0.001	-4.39	20.00	2RDR
(4)	0.2387100	0.2500000	5104300.0	0.001	-4.52	20.00	2RDR
(5)	0.2517600	0.2500000	4906200.0	0.001	0.70	20.00	2RDR
Average %D: -0.560							
Aroclor-1260	0.2453500	0.2500000	6767300.0	0.001	-1.86	20.00	2RDR
(2)	0.2381800	0.2500000	7716800.0	0.001	-4.73	20.00	2RDR
(3)	0.2448200	0.2500000	5503400.0	0.001	-2.07	20.00	2RDR
(4)	0.2474700	0.2500000	5465300.0	0.001	-1.01	20.00	2RDR
(5)	0.2378000	0.2500000	5081900.0	0.001	-4.88	20.00	2RDR
Average %D: -2.920							
Decachlorobiphenyl	4.82e-003	5.e-003	90979000	0.001	-3.60	20.00	2RDR
Tetrachloro-m-xylene	5.16e-003	5.e-003	221260000	0.001	3.20	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 0552

Lab File ID: 7EK091 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2765400	0.2500000	3898700.0	0.001	10.62	20.00	2RDR
(2)	0.2684000	0.2500000	6239200.0	0.001	7.36	20.00	2RDR
(3)	0.2450700	0.2500000	9927900.0	0.001	-1.97	20.00	2RDR
(4)	0.2371100	0.2500000	5068700.0	0.001	-5.16	20.00	2RDR
(5)	0.2503700	0.2500000	4878900.0	0.001	0.15	20.00	2RDR
Average %D: 2.2000							
Aroclor-1260	0.2413500	0.2500000	6654100.0	0.001	-3.46	20.00	2RDR
(2)	0.2471100	0.2500000	8024800.0	0.001	-1.16	20.00	2RDR
(3)	0.2527000	0.2500000	5693700.0	0.001	1.08	20.00	2RDR
(4)	0.2524400	0.2500000	5579900.0	0.001	0.98	20.00	2RDR
(5)	0.2513300	0.2500000	5394700.0	0.001	0.53	20.00	2RDR
Average %D: -0.400							
Decachlorobiphenyl	4.72e-003	5.e-003	88981000	0.001	-5.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240130000	0.001	11.80	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1536

Lab File ID: 7EK107 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0126000	1.0000000	3533100.0	0.001	1.26	20.00	2RDR
(2)	1.0170000	1.0000000	5832800.0	0.001	1.70	20.00	2RDR
(3)	0.9498100	1.0000000	9839900.0	0.001	-5.02	20.00	2RDR
(4)	0.9208100	1.0000000	5062200.0	0.001	-7.92	20.00	2RDR
(5)	0.9423600	1.0000000	4629200.0	0.001	-5.76	20.00	2RDR
Average %D: -3.150							
Aroclor-1260	0.9328100	1.0000000	6549800.0	0.001	-6.72	20.00	2RDR
(2)	0.9263000	1.0000000	7863200.0	0.001	-7.37	20.00	2RDR
(3)	0.9411500	1.0000000	5587600.0	0.001	-5.88	20.00	2RDR
(4)	0.9666900	1.0000000	5516300.0	0.001	-3.33	20.00	2RDR
(5)	0.9296100	1.0000000	5284900.0	0.001	-7.04	20.00	2RDR
Average %D: -6.070							
Decachlorobiphenyl	1.83e-002	2.e-002	88118000	0.001	-8.50	20.00	2RDR
Tetrachloro-m-xylene	2.08e-002	2.e-002	226400000	0.001	4.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 1654

Lab File ID: 7EK110 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9548400	1.0000000	3866700.0	0.001	-4.52	20.00	2RDR
(2)	0.9774800	1.0000000	6452100.0	0.001	-2.25	20.00	2RDR
(3)	0.9225000	1.0000000	6905100.0	0.001	-7.75	20.00	2RDR
(4)	0.9029400	1.0000000	8501300.0	0.001	-9.71	20.00	2RDR
(5)	0.9607500	1.0000000	5407000.0	0.001	-3.92	20.00	2RDR
Average %D: -5.630							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2205

Lab File ID: 7EK122 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2304000	0.2500000	3254200.0	0.001	-7.84	20.00	2RDR	
(2)	0.2191900	0.2500000	5107200.0	0.001	-12.32	20.00	2RDR	
(3)	0.2083200	0.2500000	8384600.0	0.001	-16.67	20.00	2RDR	
(4)	0.2008400	0.2500000	4263000.0	0.001	-19.66	20.00	2RDR	
(5)	0.2052900	0.2500000	3990400.0	0.001	-17.88	20.00	2RDR	
Average %D: -14.88								
Aroclor-1260	0.2085400	0.2500000	5726200.0	0.001	-16.58	20.00	2RDR	
(2)	0.2132700	0.2500000	6858200.0	0.001	-14.69	20.00	2RDR	
(3)	0.2220000	0.2500000	4952500.0	0.001	-11.20	20.00	2RDR	
(4)	0.2105200	0.2500000	4612800.0	0.001	-15.79	20.00	2RDR	
(5)	0.2200200	0.2500000	4671100.0	0.001	-11.99	20.00	2RDR	
Average %D: -14.04								
Decachlorobiphenyl	3.8e-003	5.e-003	71218000	0.001	-24.00	20.00	2RDR	<-
Tetrachloro-m-xylene	4.55e-003	5.e-003	194740000	0.001	-9.00	20.00	2RDR	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/03/11 Time: 2322

Lab File ID: 7EK125 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.8628200	1.0000000	3493600.0	0.001	-13.72	20.00	2RDR
(2)	0.8810900	1.0000000	5814300.0	0.001	-11.89	20.00	2RDR
(3)	0.8485400	1.0000000	6345400.0	0.001	-15.15	20.00	2RDR
(4)	0.8666500	1.0000000	8151300.0	0.001	-13.34	20.00	2RDR
(5)	0.9313800	1.0000000	5236000.0	0.001	-6.86	20.00	2RDR
Average %D: -12.19							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0429

Lab File ID: 7EK137 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9845100	1.0000000	3436000.0	0.001	-1.55	20.00	2RDR
(2)	0.9754400	1.0000000	5597300.0	0.001	-2.46	20.00	2RDR
(3)	0.9170500	1.0000000	9499500.0	0.001	-8.30	20.00	2RDR
(4)	0.8745500	1.0000000	4805500.0	0.001	-12.54	20.00	2RDR
(5)	0.8678600	1.0000000	4262100.0	0.001	-13.21	20.00	2RDR
Average %D: -7.610							
Aroclor-1260	0.8651300	1.0000000	6071700.0	0.001	-13.49	20.00	2RDR
(2)	0.8918100	1.0000000	7565700.0	0.001	-10.82	20.00	2RDR
(3)	0.9141600	1.0000000	5424000.0	0.001	-8.58	20.00	2RDR
(4)	0.8998600	1.0000000	5130400.0	0.001	-10.01	20.00	2RDR
(5)	0.8968900	1.0000000	5094300.0	0.001	-10.31	20.00	2RDR
Average %D: -10.64							
Decachlorobiphenyl	1.64e-002	2.e-002	78910000	0.001	-18.00	20.00	2RDR
Tetrachloro-m-xylene	1.87e-002	2.e-002	202830000	0.001	-6.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/04/11 Time: 0547

Lab File ID: 7EK140 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	0.9415000	1.0000000	3812600.0	0.001	-5.85	20.00	2RDR
(2)	0.9712900	1.0000000	6411100.0	0.001	-2.87	20.00	2RDR
(3)	0.9187100	1.0000000	6876500.0	0.001	-8.13	20.00	2RDR
(4)	0.9223700	1.0000000	8688800.0	0.001	-7.76	20.00	2RDR
(5)	0.9870000	1.0000000	5559800.0	0.001	-1.30	20.00	2RDR
Average %D: -5.180							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1159

Lab File ID: 7EK188 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9993200	1.0000000	3487300.0	0.001	-0.07	20.00	2RDR
(2)	1.0016000	1.0000000	5746000.0	0.001	0.16	20.00	2RDR
(3)	0.9110200	1.0000000	9436800.0	0.001	-8.90	20.00	2RDR
(4)	0.8513900	1.0000000	4677000.0	0.001	-14.86	20.00	2RDR
(5)	0.8709500	1.0000000	4277300.0	0.001	-12.90	20.00	2RDR
Average %D: -7.310							
Aroclor-1260	0.9267600	1.0000000	6507000.0	0.001	-7.32	20.00	2RDR
(2)	0.8864300	1.0000000	7519200.0	0.001	-11.36	20.00	2RDR
(3)	0.9336300	1.0000000	5542000.0	0.001	-6.64	20.00	2RDR
(4)	0.9238300	1.0000000	5268800.0	0.001	-7.62	20.00	2RDR
(5)	0.8850600	1.0000000	5025400.0	0.001	-11.49	20.00	2RDR
Average %D: -8.890							
Decachlorobiphenyl	1.63e-002	2.e-002	78335000	0.001	-18.50	20.00	2RDR
Tetrachloro-m-xylene	2.09e-002	2.e-002	226620000	0.001	4.50	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/06/11 Time: 1829

Lab File ID: 7EK203 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2518400	0.2500000	3553600.0	0.001	0.74	20.00	2RDR
(2)	0.2567200	0.2500000	5970600.0	0.001	2.69	20.00	2RDR
(3)	0.2144800	0.2500000	8643400.0	0.001	-14.21	20.00	2RDR
(4)	0.2089300	0.2500000	4442800.0	0.001	-16.43	20.00	2RDR
(5)	0.2170900	0.2500000	4223000.0	0.001	-13.16	20.00	2RDR
Average %D: -8.080							
Aroclor-1260	0.2362700	0.2500000	6510400.0	0.001	-5.49	20.00	2RDR
(2)	0.2226800	0.2500000	7182700.0	0.001	-10.93	20.00	2RDR
(3)	0.2410600	0.2500000	5412800.0	0.001	-3.58	20.00	2RDR
(4)	0.2470100	0.2500000	5454600.0	0.001	-1.20	20.00	2RDR
(5)	0.2304000	0.2500000	4910800.0	0.001	-7.84	20.00	2RDR
Average %D: -5.800							
Decachlorobiphenyl	4.59e-003	5.e-003	86522000	0.001	-8.20	20.00	2RDR
Tetrachloro-m-xylene	5.35e-003	5.e-003	229490000	0.001	7.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0059

Lab File ID: 7EK218 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1025000	1.0000000	3844400.0	0.001	10.25	20.00	2RDR
(2)	1.1388000	1.0000000	6522900.0	0.001	13.88	20.00	2RDR
(3)	1.0060000	1.0000000	10424000	0.001	0.60	20.00	2RDR
(4)	0.9407000	1.0000000	5172600.0	0.001	-5.93	20.00	2RDR
(5)	0.9737300	1.0000000	4783800.0	0.001	-2.63	20.00	2RDR
Average %D: 3.2400							
Aroclor-1260	1.0351000	1.0000000	7272100.0	0.001	3.51	20.00	2RDR
(2)	1.0021000	1.0000000	8517000.0	0.001	0.21	20.00	2RDR
(3)	1.0417000	1.0000000	6197000.0	0.001	4.17	20.00	2RDR
(4)	1.0757000	1.0000000	6145900.0	0.001	7.57	20.00	2RDR
(5)	1.0088000	1.0000000	5746400.0	0.001	0.88	20.00	2RDR
Average %D: 3.2700							
Decachlorobiphenyl	2.03e-002	2.e-002	97807000	0.001	1.50	20.00	2RDR
Tetrachloro-m-xylene	2.38e-002	2.e-002	259060000	0.001	19.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0217

Lab File ID: 7EK221 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0176000	1.0000000	4121200.0	0.001	1.76	20.00	2RDR
(2)	1.1115000	1.0000000	7338000.0	0.001	11.15	20.00	2RDR
(3)	0.9565400	1.0000000	7162800.0	0.001	-4.35	20.00	2RDR
(4)	0.9304800	1.0000000	8767000.0	0.001	-6.95	20.00	2RDR
(5)	0.9868100	1.0000000	5558700.0	0.001	-1.32	20.00	2RDR
Average %D: 0.0600							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0729

Lab File ID: 7EK233 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2544100	0.2500000	3589600.0	0.001	1.76	20.00	2RDR
(2)	0.2760800	0.2500000	6415800.0	0.001	10.43	20.00	2RDR
(3)	0.2297800	0.2500000	9286000.0	0.001	-8.09	20.00	2RDR
(4)	0.2173500	0.2500000	4629700.0	0.001	-13.06	20.00	2RDR
(5)	0.2262100	0.2500000	4402700.0	0.001	-9.52	20.00	2RDR
Average %D: -3.680							
Aroclor-1260	0.2510200	0.2500000	6927700.0	0.001	0.41	20.00	2RDR
(2)	0.2424300	0.2500000	7863300.0	0.001	-3.03	20.00	2RDR
(3)	0.2599300	0.2500000	5868300.0	0.001	3.97	20.00	2RDR
(4)	0.2698500	0.2500000	5981500.0	0.001	7.94	20.00	2RDR
(5)	0.2513600	0.2500000	5395400.0	0.001	0.54	20.00	2RDR
Average %D: 1.9600							
Decachlorobiphenyl	5.18e-003	5.e-003	97920000	0.001	3.60	20.00	2RDR
Tetrachloro-m-xylene	5.59e-003	5.e-003	240360000	0.001	11.80	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 0847

Lab File ID: 7EK236 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.1025000	1.0000000	4465100.0	0.001	10.25	20.00	2RDR	
(2)	1.2547000	1.0000000	8283200.0	0.001	25.47	20.00	2RDR	<-
(3)	1.0669000	1.0000000	7997200.0	0.001	6.69	20.00	2RDR	
(4)	1.0329000	1.0000000	9754100.0	0.001	3.29	20.00	2RDR	
(5)	1.1050000	1.0000000	6246800.0	0.001	10.50	20.00	2RDR	
Average %D: 11.240								

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1013

Lab File ID: 7EK238 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.0995000	1.0000000	3833900.0	0.001	9.95	20.00	2RDR
(2)	1.1047000	1.0000000	6329800.0	0.001	10.47	20.00	2RDR
(3)	1.0800000	1.0000000	11191000	0.001	8.00	20.00	2RDR
(4)	1.0606000	1.0000000	5837800.0	0.001	6.06	20.00	2RDR
(5)	1.0848000	1.0000000	5331000.0	0.001	8.48	20.00	2RDR
Average %D: 8.5900							
Aroclor-1260	1.0736000	1.0000000	7544000.0	0.001	7.36	20.00	2RDR
(2)	1.0943000	1.0000000	9313100.0	0.001	9.43	20.00	2RDR
(3)	1.0540000	1.0000000	6271700.0	0.001	5.40	20.00	2RDR
(4)	1.0568000	1.0000000	6036500.0	0.001	5.68	20.00	2RDR
(5)	0.9935900	1.0000000	5657900.0	0.001	-0.64	20.00	2RDR
Average %D: 5.4500							
Decachlorobiphenyl	2.13e-002	2.e-002	102550000	0.001	6.50	20.00	2RDR
Tetrachloro-m-xylene	2.2e-002	2.e-002	239420000	0.001	10.00	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1131

Lab File ID: 7EK241 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0478000	1.0000000	4243500.0	0.001	4.78	20.00	2RDR
(2)	1.0904000	1.0000000	7198600.0	0.001	9.04	20.00	2RDR
(3)	1.0569000	1.0000000	7922100.0	0.001	5.69	20.00	2RDR
(4)	1.0231000	1.0000000	9659400.0	0.001	2.31	20.00	2RDR
(5)	1.0337000	1.0000000	5831800.0	0.001	3.37	20.00	2RDR
Average %D: 5.0400							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1708

Lab File ID: 7EK253 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.2912000	0.2500000	4103300.0	0.001	16.48	20.00	2RDR
(2)	0.2906900	0.2500000	6751600.0	0.001	16.28	20.00	2RDR
(3)	0.2694200	0.2500000	10950000	0.001	7.77	20.00	2RDR
(4)	0.2597000	0.2500000	5570400.0	0.001	3.88	20.00	2RDR
(5)	0.2824000	0.2500000	5509900.0	0.001	12.96	20.00	2RDR
Average %D: 11.480							
Aroclor-1260	0.2727300	0.2500000	7541600.0	0.001	9.09	20.00	2RDR
(2)	0.2552900	0.2500000	8306800.0	0.001	2.12	20.00	2RDR
(3)	0.2571400	0.2500000	5801100.0	0.001	2.86	20.00	2RDR
(4)	0.2689800	0.2500000	5961400.0	0.001	7.59	20.00	2RDR
(5)	0.2378100	0.2500000	5082100.0	0.001	-4.88	20.00	2RDR
Average %D: 3.3600							
Decachlorobiphenyl	5.4e-003	5.e-003	102180000	0.001	8.00	20.00	2RDR
Tetrachloro-m-xylene	5.83e-003	5.e-003	250790000	0.001	16.60	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 1826

Lab File ID: 7EK256 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0724000	1.0000000	4343000.0	0.001	7.24	20.00	2RDR
(2)	1.1270000	1.0000000	7440100.0	0.001	12.70	20.00	2RDR
(3)	1.0642000	1.0000000	7976600.0	0.001	6.42	20.00	2RDR
(4)	1.0309000	1.0000000	9734900.0	0.001	3.09	20.00	2RDR
(5)	1.0175000	1.0000000	5737700.0	0.001	1.75	20.00	2RDR
Average %D: 6.2400							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/07/11 Time: 2338

Lab File ID: 7EK268 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	0.9058400	1.0000000	3163500.0	0.001	-9.42	20.00	2RDR
(2)	0.9615300	1.0000000	5518400.0	0.001	-3.85	20.00	2RDR
(3)	0.9165100	1.0000000	9493900.0	0.001	-8.35	20.00	2RDR
(4)	0.8846600	1.0000000	4861600.0	0.001	-11.53	20.00	2RDR
(5)	0.8891400	1.0000000	4367000.0	0.001	-11.09	20.00	2RDR
Average %D: -8.850							
Aroclor-1260	0.8749500	1.0000000	6141100.0	0.001	-12.50	20.00	2RDR
(2)	0.8751100	1.0000000	7421600.0	0.001	-12.49	20.00	2RDR
(3)	0.8894400	1.0000000	5274200.0	0.001	-11.06	20.00	2RDR
(4)	0.8509100	1.0000000	4847900.0	0.001	-14.91	20.00	2RDR
(5)	0.8255200	1.0000000	4678700.0	0.001	-17.45	20.00	2RDR
Average %D: -13.68							
Decachlorobiphenyl	1.67e-002	2.e-002	80222000	0.001	-16.50	20.00	2RDR
Tetrachloro-m-xylene	2.04e-002	2.e-002	221250000	0.001	2.00	20.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/08/11 Time: 0055

Lab File ID: 7EK271 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.0083000	1.0000000	4083600.0	0.001	0.83	20.00	2RDR
(2)	1.0245000	1.0000000	6763100.0	0.001	2.45	20.00	2RDR
(3)	1.0096000	1.0000000	7563900.0	0.001	0.96	20.00	2RDR
(4)	0.9815300	1.0000000	9259100.0	0.001	-1.85	20.00	2RDR
(5)	0.9994900	1.0000000	5632500.0	0.001	-0.05	20.00	2RDR
Average %D: 0.4700							

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 1353

Lab File ID: 7EK434 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	1.1706000	1.0000000	4079800.0	0.001	17.06	20.00	2RDR
(2)	1.1369000	1.0000000	6512100.0	0.001	13.69	20.00	2RDR
(3)	1.1138000	1.0000000	11541000	0.001	11.38	20.00	2RDR
(4)	1.0938000	1.0000000	6022100.0	0.001	9.38	20.00	2RDR
(5)	1.1141000	1.0000000	5475500.0	0.001	11.41	20.00	2RDR
Average %D: 12.590							
Aroclor-1260	1.0916000	1.0000000	7671100.0	0.001	9.16	20.00	2RDR
(2)	1.1020000	1.0000000	9379200.0	0.001	10.20	20.00	2RDR
(3)	1.0642000	1.0000000	6333800.0	0.001	6.42	20.00	2RDR
(4)	1.0908000	1.0000000	6232900.0	0.001	9.08	20.00	2RDR
(5)	0.9916600	1.0000000	5646700.0	0.001	-0.83	20.00	2RDR
Average %D: 6.8100							
Decachlorobiphenyl	2.12e-002	2.e-002	101710000	0.001	6.00	20.00	2RDR
Tetrachloro-m-xylene	2.35e-002	2.e-002	256000000	0.001	17.50	20.00	2RDR

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2031

Lab File ID: 7EK449 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.2500 or AMOUNT	CCAL RRF0.2500	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	0.2707800	0.2500000	3818200.0	0.001	8.31	20.00	2RDR	
(2)	0.2801300	0.2500000	6509000.0	0.001	12.05	20.00	2RDR	
(3)	0.2409300	0.2500000	9753800.0	0.001	-3.63	20.00	2RDR	
(4)	0.2331300	0.2500000	4980200.0	0.001	-6.75	20.00	2RDR	
(5)	0.2566300	0.2500000	5002200.0	0.001	2.65	20.00	2RDR	
Average %D: 2.5200								
Aroclor-1260	0.2464700	0.2500000	6799000.0	0.001	-1.41	20.00	2RDR	
(2)	0.2129700	0.2500000	6847800.0	0.001	-14.81	20.00	2RDR	
(3)	0.2242100	0.2500000	5006000.0	0.001	-10.32	20.00	2RDR	
(4)	0.2426500	0.2500000	5354100.0	0.001	-2.94	20.00	2RDR	
(5)	0.1820400	0.2500000	3793600.0	0.001	-27.18	20.00	2RDR	<-
Average %D: -11.32								
Decachlorobiphenyl	5.14e-003	5.e-003	97202000	0.001	2.80	20.00	2RDR	
Tetrachloro-m-xylene	5.93e-003	5.e-003	255140000	0.001	18.60	20.00	2RDR	

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/11/11 Time: 2147

Lab File ID: 7EK452 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1254	1.0127000	1.0000000	4101100.0	0.001	1.27	20.00	2RDR	
(2)	1.1213000	1.0000000	7402900.0	0.001	12.13	20.00	2RDR	
(3)	0.9739600	1.0000000	7294500.0	0.001	-2.60	20.00	2RDR	
(4)	0.8702900	1.0000000	8186400.0	0.001	-12.97	20.00	2RDR	
(5)	0.7957600	1.0000000	4446700.0	0.001	-20.42	20.00	2RDR	<-
Average %D: -4.520								

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0254

Lab File ID: 7EK464 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 1238 1449

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	1.1701000	1.0000000	4077900.0	0.001	17.01	20.00	2RDR	
(2)	1.0974000	1.0000000	6288500.0	0.001	9.74	20.00	2RDR	
(3)	1.0342000	1.0000000	10716000	0.001	3.42	20.00	2RDR	
(4)	1.0089000	1.0000000	5550800.0	0.001	0.89	20.00	2RDR	
(5)	1.0223000	1.0000000	5023300.0	0.001	2.23	20.00	2RDR	
Average %D: 6.6600								
Aroclor-1260	1.0078000	1.0000000	7079200.0	0.001	0.78	20.00	2RDR	
(2)	1.0114000	1.0000000	8597600.0	0.001	1.14	20.00	2RDR	
(3)	1.1320000	1.0000000	6744800.0	0.001	13.20	20.00	2RDR	
(4)	1.3145000	1.0000000	7524800.0	0.001	31.45	20.00	2RDR	<-
(5)	0.9417800	1.0000000	5355900.0	0.001	-5.82	20.00	2RDR	
Average %D: 8.1500								
Decachlorobiphenyl	1.94e-002	2.e-002	93143000	0.001	-3.00	20.00	2RDR	
Tetrachloro-m-xylene	2.5e-002	2.e-002	271830000	0.001	25.00	20.00	2RDR	<-

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Instrument ID: GC07 Calibration Date: 11/12/11 Time: 0410

Lab File ID: 7EK467 Init. Calib. Date(s): 09/22/11 09/22/11

Init. Calib. Times: 2118 2326

GC Column: RTX-CLPESTICIDES2 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1254	1.1228000	1.0000000	4547300.0	0.001	12.28	20.00	2RDR
(2)	1.0991000	1.0000000	7256000.0	0.001	9.91	20.00	2RDR
(3)	1.0687000	1.0000000	8011100.0	0.001	6.87	20.00	2RDR
(4)	1.0489000	1.0000000	9908600.0	0.001	4.89	20.00	2RDR
(5)	1.1383000	1.0000000	6440700.0	0.001	13.83	20.00	2RDR
Average %D: 9.5600							

FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99509-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99509-1 Lab File ID: 7EJ800

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SW846 3510

Sulfur Cleanup: (Y/N) N Date Extracted: 10/20/11

Date Analyzed (1): 10/24/11 Date Analyzed (2): 10/24/11

Time Analyzed (1): 1711 Time Analyzed (2): 1711

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99509-LCS	WG99509-2	7EJ801	10/24/11	10/24/11
02	WG99509-LCSD	WG99509-3	7EJ802	10/24/11	10/24/11
03	DSY-SD-RB14-101311	SE6841-25	7EJ803	10/24/11	10/24/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99509-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EJ800.D

Sample Date:
Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.050	ug/L	1	.5	0.10	0.030	0.050
Aroclor-1221	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1232	U	0.050	ug/L	1	.5	0.10	0.018	0.050
Aroclor-1242	U	0.050	ug/L	1	.5	0.10	0.036	0.050
Aroclor-1248	U	0.050	ug/L	1	.5	0.10	0.040	0.050
Aroclor-1254	U	0.050	ug/L	1	.5	0.10	0.016	0.050
Aroclor-1260	U	0.050	ug/L	1	.5	0.10	0.034	0.050
Tetrachloro-M-Xylene	*	0.00	%					
Decachlorobiphenyl		49.0	%					

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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99509-2
LCSD ID: WG99509-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 20-OCT-11
Extract Date: 20-OCT-11
Extracted By: KD
Extraction Method: SW846 3510
Lab Prep Batch: WG99509

Analysis Date: 24-OCT-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	5.00	4.17	83.4	4.42	88.4	ug/L	6	30	65-112
Aroclor-1260	5.00	4.20	84.0	4.20	84.0	ug/L	7	30	62-104
Tetrachloro-M-Xylene			77.5		90.3				62-111
Decachlorobiphenyl			92.8		91.5				44-135

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99756-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99756-1 Lab File ID: 7EK195

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/25/11

Date Analyzed (1): 11/06/11 Date Analyzed (2): 11/06/11

Time Analyzed (1): 1501 Time Analyzed (2): 1501

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99756-LCS	WG99756-2	7EK196	11/06/11	11/06/11
02	WG99756-LCSD	WG99756-3	7EK197	11/06/11	11/06/11
03	DSY-SD-AA13-2448MS	WG99756-4	7EK198	11/06/11	11/06/11
04	DSY-SD-AA13-2448MSD	WG99756-5	7EK199	11/06/11	11/06/11
05	DSY-SD-AA09-0012	SE6841-1	7EK229	11/07/11	11/07/11
06	DSY-SD-AA09-1224	SE6841-2	7EK230	11/07/11	11/07/11
07	DSY-SD-AA09-2448	SE6841-3	7EK231	11/07/11	11/07/11
08	DSY-SD-AA13-0012	SE6841-4	7EK246	11/07/11	11/07/11
09	DSY-SD-AA13-1224	SE6841-5	7EK247	11/07/11	11/07/11
10	DSY-SD-AA13-2448	SE6841-6	7EK248	11/07/11	11/07/11
11	DSY-SD-AA17-0012	SE6841-7	7EK249	11/07/11	11/07/11
12	DSY-SD-AA17-1224	SE6841-8	7EK250	11/07/11	11/07/11
13	DSY-SD-AA17-2448	SE6841-9	7EK251	11/07/11	11/07/11
14	DSY-SD-AA21-0012	SE6841-10	7EK257	11/07/11	11/07/11
15	DSY-SD-AA21-1224	SE6841-11	7EK258	11/07/11	11/07/11
16	DSY-SD-AA21-2448	SE6841-12	7EK259	11/07/11	11/07/11
17	DSY-SD-DUP34-101311	SE6841-13	7EK260	11/07/11	11/07/11
18	DSY-SD-AA24-0012	SE6841-14	7EK261	11/07/11	11/07/11
19	DSY-SD-AA24-2448	SE6841-16	7EK263	11/07/11	11/07/11
20	DSY-SD-AA26-0012	SE6841-17	7EK264	11/07/11	11/07/11
21	DSY-SD-AA26-2448	SE6841-19	7EK266	11/07/11	11/07/11
22					
23					
24					

COMMENTS: _____

FORM IVPCB

Katahdin Analytical Services A0000175

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99756-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK195.D

Sample Date:
Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		84.7	%					
Decachlorobiphenyl		87.1	%					

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Katahdin
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Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99756-2
LCSD ID: WG99756-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 25-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	135.	80.8	119.	71.2	ug/Kgdrywt	12	50	53-123
Aroclor-1260	167.	146.	87.4	137.	82.0	ug/Kgdrywt	6	50	58-120
Tetrachloro-M-Xylene			87.1		67.9				56-115
Decachlorobiphenyl			90.7		87.7				59-124

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Cert No E87604

MS/MSD Recovery Report

MS ID: WG99756-4
MSD ID: WG99756-5
Sample ID: SE6841-6
Client ID: DSY-SD-AA13-2448
Project:
SDG: DSY-24

Received Date: 17-OCT-11
Extract Date: 25-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99756
Report Date: 06-DEC-11

Analysis Date: 06-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: 34.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Aroclor-1016	485.	478.	ug/Kgdrywt	U24.	390	310	80.2	63.9	24	30	53-123
Aroclor-1260	485.	478.	ug/Kgdrywt	U24.	460	340	94.7	71.9	29	30	58-120
Tetrachloro-M-Xylene							81.4	67.2			56-115
Decachlorobiphenyl							83.4	64.9			59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG99856-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG99856-1 Lab File ID: 7EK101

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 10/26/11

Date Analyzed (1): 11/03/11 Date Analyzed (2): 11/03/11

Time Analyzed (1): 1300 Time Analyzed (2): 1300

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG99856-LCS	WG99856-2	7EK102	11/03/11	11/03/11
02	WG99856-LCSD	WG99856-3	7EK103	11/03/11	11/03/11
03	DSY-SD-AA28-0016	SE6841-20	7EK117	11/03/11	11/03/11
04	DSY-SD-DUP35-101311	SE6841-21	7EK118	11/03/11	11/03/11
05	DSY-SD-AA30-0012	SE6841-22	7EK119	11/03/11	11/03/11
06	DSY-SD-AA30-1224	SE6841-23	7EK120	11/03/11	11/03/11
07	DSY-SD-G30-0018	SE6841-24	7EK126	11/03/11	11/03/11
08					
09					
10					
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24					

COMMENTS: _____

FORM IVPCB

Katahdin Analytical Services A0000176

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG99856-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK101.D

Sample Date:
Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		91.6	%					
Decachlorobiphenyl		95.5	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG99856-2
LCSD ID: WG99856-3
Project:
SDG: DSY-24
Report Date: 06-DEC-11

Received Date: 26-OCT-11
Extract Date: 26-OCT-11
Extracted By: CT
Extraction Method: SW846 3540
Lab Prep Batch: WG99856

Analysis Date: 03-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Aroclor-1016	167.	84.4	50.5*	155.	92.8	ug/Kgdrywt	59*	50	53-123
Aroclor-1260	167.	105.	62.9	151.	90.4	ug/Kgdrywt	36	50	58-120
Tetrachloro-M-Xylene			46.8*		95.2				56-115
Decachlorobiphenyl			79.9		98.5				59-124

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FORM 4
PESTICIDE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG100719-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: NAVSTA NEWPORT CTO WE61 DERECKTOR SDG No.: DSY-24

Lab Sample ID: WG100719-1 Lab File ID: 7EK444

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SW846 3540

Sulfur Cleanup: (Y/N) Y Date Extracted: 11/09/11

Date Analyzed (1): 11/11/11 Date Analyzed (2): 11/11/11

Time Analyzed (1): 1823 Time Analyzed (2): 1823

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column (1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column (2): RTX-CLPESTICIDES2 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	WG100719-LCS	WG100719-2	7EK445	11/11/11	11/11/11
02	DSY-SD-AA24-1224	SE6841-15	7EK457	11/11/11	11/11/11
03	DSY-SD-AA26-1224	SE6841-18	7EK458	11/12/11	11/12/11
04					
05					
06					
07					
08					
09					
10					
11					
12					
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15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

COMMENTS:

FORM IVPCB

Katahdin Analytical Services A0000177

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG100719-1
Client ID: Method Blank Sample
Project:
SDG: DSY-24
Lab File ID: 7EK444.D

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene	*	122.	%					
Decachlorobiphenyl	*	133.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG100719-2
Client ID: LCS
Project:
SDG: DSY-24

Sample Date:
Received Date: 09-NOV-11
Extract Date: 09-NOV-11
Extracted By: KD
Extraction Method: SW846 3540
Lab Prep Batch: WG100719

Analysis Date: 11-NOV-11
Analyst: CB
Analysis Method: SW846 8082A
Matrix: SL
% Solids: NA
Report Date: 06-DEC-11

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Aroclor-1016	106.	167.	177.	ug/Kgdrywt	53-123
Aroclor-1260	112.	167.	188.	ug/Kgdrywt	58-120
Tetrachloro-M-Xylene	* 116.				56-115
Decachlorobiphenyl	* 138.				59-124

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-19 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	336		
Aroclor-1254	2	6.46	6.40	6.54	514		
	3	6.83	6.76	6.90	1030		
COLUMN 1	4	7.70	7.60	7.74	972		
	5	8.12	8.06	8.20	786	728	
	1	6.36	6.29	6.43	519		
	2	7.32	7.25	7.39	610		
	3	7.61	7.53	7.67	775		
COLUMN 2	4	8.42	8.35	8.49	741		
	5	10.12	10.05	10.19	1010	732	0.5
	1	7.24	7.17	7.31	654		
Aroclor-1260	2	7.70	7.60	7.74	548		
	3	8.12	8.08	8.22	618		
COLUMN 1	4	8.31	8.24	8.38	184		
	5	10.22	10.13	10.27	180	437	
	1	8.79	8.73	8.87	495		
	2	9.23	9.18	9.32	549		
	3	10.12	10.06	10.20	966		
COLUMN 2	4	11.14	11.08	11.22	290		
	5	12.97	12.94	13.08	375	535	20.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A28-0016

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-20 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	190		
Aroclor-1254	2	6.47	6.41	6.55	294		
	3	6.83	6.77	6.91	379		
COLUMN 1	4	7.67	7.61	7.75	346		
	5	8.13	8.08	8.22	376	317	
	1	6.37	6.30	6.44	263		
	2	7.33	7.26	7.40	305		
	3	7.62	7.55	7.69	343		
COLUMN 2	4	8.43	8.37	8.51	406		
	5	10.13	10.07	10.21	434	350 ✓	9.9
	1	7.25	7.18	7.32	202		
Aroclor-1260	2	7.67	7.61	7.75	202		
	3	8.13	8.08	8.22	293		
COLUMN 1	4	8.32	8.26	8.40	85.6		
	5	10.15	10.10	10.24	95.4	176	
	1	8.80	8.74	8.88	258		
	2	9.24	9.18	9.32	238		
	3	10.13	10.07	10.21	410		
COLUMN 2	4	11.15	11.09	11.23	175		
	5	12.98	12.93	13.07	123	241 ✓	31.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID
DSY-SD-A
A30-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-22 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	687		
Aroclor-1254	2	6.47	6.41	6.55	836		
	3	6.83	6.77	6.91	838		
COLUMN 1	4	7.67	7.61	7.75	824		
	5	8.13	8.08	8.22	952	828	
	1	6.37	6.30	6.44	1030		
	2	7.33	7.26	7.40	1130		
	3	7.61	7.55	7.69	1110		
COLUMN 2	4	8.43	8.37	8.51	1160		
	5	10.13	10.07	10.21	1190	1120	30.0
	1	7.25	7.18	7.32	391		
Aroclor-1260	2	7.67	7.61	7.75	464		
	3	8.13	8.08	8.22	756		
COLUMN 1	4	8.33	8.26	8.40	13.3	~~437~~	
	5	10.17	10.10	10.24	5.39	~~326~~	
	1	8.80	8.74	8.88	614		
	2	9.24	9.18	9.32	564		
	3	10.13	10.07	10.21	1130		
COLUMN 2	4	11.11	11.09	11.23	814	~~780~~	56.4
	5	13.00	12.93	13.07	7.03	~~626~~	~~63.~~0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID

DSY-SD-A
A09-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-3 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	775		
Aroclor-1254	2	6.47	6.41	6.55	1050		
	3	6.83	6.78	6.92	754		
COLUMN 1	4	7.67	7.61	7.75	981		
	5	8.14	8.09	8.23	1140	941	
	1	6.36	6.30	6.44	1230		
	2	7.33	7.26	7.40	1340		
	3	7.61	7.55	7.69	1340		
COLUMN 2	4	8.43	8.37	8.51	1320		
	5	10.12	10.07	10.21	1440	1330	34.2
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A17-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-7 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	96.7		
Aroclor-1254	2	6.47	6.40	6.54	117		
	3	6.83	6.76	6.90	144		
COLUMN 1	4	7.67	7.60	7.74	442		
	5	8.14	8.06	8.20	401	240	
	1	6.36	6.29	6.43	121		
	2	7.32	7.25	7.39	95.4		
	3	7.61	7.53	7.67	104		
COLUMN 2	4	8.43	8.35	8.49	73.3		
	5	10.12	10.05	10.19	342	147	48.1
	1	7.24	7.17	7.31	231		
Aroclor-1260	2	7.67	7.60	7.74	266		
	3	8.14	8.08	8.22	310		
COLUMN 1	4	8.32	8.24	8.38	300		
	5	10.20	10.13	10.27	367	295	
	1	8.80	8.73	8.87	244		
	2	9.24	9.18	9.32	288		
	3	10.12	10.06	10.20	318		
COLUMN 2	4	11.14	11.08	11.22	331		
	5	12.98	12.94	13.08	449	326	10.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A21-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-12 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.13	6.07	6.21	107		
Aroclor-1254	2	6.46	6.40	6.54	180		
	3	6.82	6.76	6.90	298		
COLUMN 1	4	7.65	7.60	7.74	232		
	5	8.13	8.06	8.20	268	217	
	1	6.36	6.29	6.43	131		
	2	7.32	7.25	7.39	156		
	3	7.60	7.53	7.67	144		
COLUMN 2	4	8.42	8.35	8.49	156		
	5	10.10	10.05	10.19	340	185	15.9
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A
A24-2448

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-16 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	32.5		
Aroclor-1254	2	6.46	6.40	6.54	138		
	3	6.82	6.76	6.90	213	186	
COLUMN 1	4	7.65	7.60	7.74	186	~~186.2~~	
	5	8.12	8.06	8.20	208	~~156~~	
	1	6.36	6.29	6.43	101		
	2	7.32	7.25	7.39	122		
	3	7.60	7.53	7.67	123		
COLUMN 2	4	8.42	8.35	8.49	125		31.8
	5	10.11	10.05	10.19	203	135	~~14.4~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-0012

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-17 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	80.1		
Aroclor-1254	2	6.47	6.40	6.54	102		
	3	6.82	6.76	6.90	97.6		
COLUMN 1	4	7.66	7.60	7.74	91.5		
	5	8.12	8.06	8.20	114	97.1	
	1	6.36	6.29	6.43	57.2		
	2	7.32	7.25	7.39	72.9		
	3	7.60	7.53	7.67	64.2		
COLUMN 2	4	8.42	8.35	8.49	68.5		
	5	10.11	10.05	10.19	92.2	71.0	31.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A26-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-18 Date(s) Analyzed: 11/12/11 11/12/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.10	6.03	6.17	364		
Aroclor-1254	2	6.42	6.36	6.50	516		
	3	6.78	6.72	6.86	728		
COLUMN 1	4	7.61	7.55	7.69	633		
	5	8.10	8.01	8.15	1610	771	
	1	6.32	6.25	6.39	558		
	2	7.27	7.21	7.35	611		
	3	7.55	7.50	7.64	702		
COLUMN 2	4	8.36	8.32	8.46	698		
	5	10.03	10.01	10.15	2220	958	21.6
	1	7.19	7.15	7.29	402		
Aroclor-1260	2	7.65	7.61	7.75	492		
	3	8.25	8.23	8.37	109		
COLUMN 1	4	8.81	8.70	8.84	49.2		
	5	10.24	10.13	10.27	64.0	223	
	1	8.73	8.66	8.80	412		
	2	9.16	9.10	9.24	436		
	3	10.04	9.97	10.11	11.3		
COLUMN 2	4	11.05	10.99	11.13	264	322	36.3
	5	12.89	12.82	12.96	177	~~260~~	~~15.3~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-A A30-1224

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-23 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	85.4		
Aroclor-1254	2	6.47	6.41	6.55	138		
	3	6.83	6.77	6.91	178		
COLUMN 1	4	7.67	7.61	7.75	169		
	5	8.13	8.08	8.22	177	149	
	1	6.37	6.30	6.44	110		
	2	7.33	7.26	7.40	136		
	3	7.62	7.55	7.69	164		
COLUMN 2	4	8.43	8.37	8.51	193		
	5	10.13	10.07	10.21	200	161	7.7
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-G30-0018

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-24 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	146		
Aroclor-1254	2	6.48	6.41	6.55	246		
	3	6.83	6.77	6.91	322		
COLUMN 1	4	7.67	7.61	7.75	296		
	5	8.13	8.08	8.22	298	262	
	1	6.37	6.30	6.44	188		
	2	7.33	7.26	7.40	248		
	3	7.62	7.55	7.69	261		
COLUMN 2	4	8.44	8.37	8.51	259		
	5	10.13	10.07	10.21	343	260	0.8
	1	7.25	7.18	7.32	214		
Aroclor-1260	2	7.67	7.61	7.75	179		
	3	8.13	8.08	8.22	231		
COLUMN 1	4	8.32	8.26	8.40	97.8		
	5	10.14	10.10	10.24	111	166	
	1	8.81	8.74	8.88	179		
	2	9.24	9.18	9.32	220		
	3	10.13	10.07	10.21	322		
COLUMN 2	4	11.16	11.09	11.23	7.08	~~222~~	28.9
	5	12.98	12.93	13.07	168	~~179~~	~~7.5~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P34-101311

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-13 Date(s) Analyzed: 11/07/11 11/07/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.14	6.07	6.21	115		
Aroclor-1254	2	6.46	6.40	6.54	188		
	3	6.82	6.76	6.90	290		
COLUMN 1	4	7.66	7.60	7.74	230		
	5	8.12	8.06	8.20	270	219	
	1	6.36	6.29	6.43	163		
	2	7.32	7.25	7.39	185		
	3	7.60	7.53	7.67	185		
COLUMN 2	4	8.42	8.35	8.49	180		
	5	10.11	10.05	10.19	276	198	10.1
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

CLIENT SAMPLE ID: DSY-SD-DU P35-101311

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: NAVSTA NEWPORT

Lab Code: KAS PO No.: SDG No.: DSY-24

Lab Sample ID: SE6841-21 Date(s) Analyzed: 11/03/11 11/03/11

Instrument ID (1): GC07 Instrument ID (2): GC07

GC Column(1): RTX-CLPESTICIDES ID: 0.53(mm) GC Column(2): RTX-CLPESTICIDES2 ID: 0.53(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	6.15	6.08	6.22	250		
Aroclor-1254	2	6.47	6.41	6.55	371		
	3	6.83	6.77	6.91	424		
COLUMN 1	4	7.67	7.61	7.75	405		
	5	8.14	8.08	8.22	493	389	
	1	6.37	6.30	6.44	353		
	2	7.33	7.26	7.40	399		
	3	7.62	7.55	7.69	446		
COLUMN 2	4	8.43	8.37	8.51	456		
	5	10.12	10.07	10.21	699	470	18.8
	1	7.25	7.18	7.32	211		
Aroclor-1260	2	7.67	7.61	7.75	234		
	3	8.14	8.08	8.22	386		
COLUMN 1	4	8.32	8.26	8.40	81.1		
	5	10.15	10.10	10.24	97.3	202	
	1	8.80	8.74	8.88	285		
	2	9.24	9.18	9.32	282		
	3	10.14	10.07	10.21	8.96		
COLUMN 2	4	11.14	11.09	11.23	153	210	3.98
	5	12.99	12.93	13.07	122	~~170~~	~~17.2~~
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK01A Nov 01, 2011 11:54

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9602.00	96.0
CALCIUM	10000.0	9512.00	95.1
IRON	10000.0	9685.00	96.9
LEAD	400.0	392.40	98.1
MAGNESIUM	10000.0	9694.00	96.9
ZINC	400.0	389.40	97.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 12:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12210.00	97.7
CALCIUM	12500.0	12210.00	97.7
IRON	12500.0	12250.00	98.0
LEAD	500.0	479.20	95.8
MAGNESIUM	12500.0	12180.00	97.4
ZINC	500.0	478.20	95.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 13:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12570.00	100.6
CALCIUM	12500.0	12590.00	100.7
IRON	12500.0	12660.00	101.3
LEAD	500.0	495.30	99.1
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	493.30	98.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 14:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12080.00	96.6
CALCIUM	12500.0	12140.00	97.1
IRON	12500.0	12200.00	97.6
LEAD	500.0	481.30	96.3
MAGNESIUM	12500.0	12250.00	98.0
ZINC	500.0	475.80	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12820.00	102.6
CALCIUM	12500.0	12840.00	102.7
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.90	100.8
MAGNESIUM	12500.0	12850.00	102.8
ZINC	500.0	499.70	99.9

SAMPLE: CCV

File: IBK01A Nov 01, 2011 15:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12880.00	103.0
IRON	12500.0	12930.00	103.4
LEAD	500.0	503.60	100.7
MAGNESIUM	12500.0	12790.00	102.3
ZINC	500.0	501.20	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 16:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	12780.00	102.2
LEAD	500.0	503.30	100.7
MAGNESIUM	12500.0	12840.00	102.7
ZINC	500.0	498.50	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 17:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
CALCIUM	12500.0	12760.00	102.1
IRON	12500.0	12970.00	103.8
LEAD	500.0	509.20	101.8
MAGNESIUM	12500.0	13000.00	104.0
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 18:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
CALCIUM	12500.0	12630.00	101.0
IRON	12500.0	12800.00	102.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12940.00	103.5
ZINC	500.0	498.30	99.7

SAMPLE: CCV

File: IBK01A Nov 01, 2011 19:30

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12760.00	102.1
CALCIUM	12500.0	12660.00	101.3
IRON	12500.0	12920.00	103.4
LEAD	500.0	505.00	101.0
MAGNESIUM	12500.0	12960.00	103.7
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 20:24

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12340.00	98.7
CALCIUM	12500.0	12160.00	97.3
IRON	12500.0	12550.00	100.4
LEAD	500.0	487.00	97.4
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	476.70	95.3

SAMPLE: CCV

File: IBK01A Nov 01, 2011 21:18

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13000.00	104.0
CALCIUM	12500.0	12810.00	102.5
IRON	12500.0	13260.00	106.1
LEAD	500.0	510.20	102.0
MAGNESIUM	12500.0	13080.00	104.6
ZINC	500.0	500.40	100.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 01, 2011 22:13

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12380.00	99.0
CALCIUM	12500.0	12240.00	97.9
IRON	12500.0	12620.00	101.0
LEAD	500.0	492.20	98.4
MAGNESIUM	12500.0	12630.00	101.0
ZINC	500.0	482.00	96.4

SAMPLE: CCV

File: IBK01A Nov 01, 2011 23:07

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12970.00	103.8
CALCIUM	12500.0	12710.00	101.7
IRON	12500.0	13240.00	105.9
LEAD	500.0	510.10	102.0
MAGNESIUM	12500.0	13090.00	104.7
ZINC	500.0	500.20	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 02, 2011 0:01

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12850.00	102.8
CALCIUM	12500.0	12670.00	101.4
IRON	12500.0	13130.00	105.0
LEAD	500.0	491.20	98.2
MAGNESIUM	12500.0	12550.00	100.4
ZINC	500.0	480.90	96.2

SAMPLE: CCV

File: IBK01A Nov 02, 2011 0:55

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12430.00	99.4
CALCIUM	12500.0	12270.00	98.2
IRON	12500.0	12700.00	101.6
LEAD	500.0	490.90	98.2
MAGNESIUM	12500.0	12590.00	100.7
ZINC	500.0	480.40	96.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK01A Nov 02, 2011 1:50

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12430.00	99.4
CALCIUM	12500.0	12390.00	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	489.80	98.0
MAGNESIUM	12500.0	12580.00	100.6
ZINC	500.0	479.20	95.8

SAMPLE: CCV

File: IBK01A Nov 02, 2011 2:45

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12620.00	101.0
CALCIUM	12500.0	12520.00	100.2
IRON	12500.0	12900.00	103.2
LEAD	500.0	493.10	98.6
MAGNESIUM	12500.0	12650.00	101.2
ZINC	500.0	483.60	96.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK02A Nov 02, 2011 15:33

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9867.00	98.7
CALCIUM	10000.0	9826.00	98.3
COPPER	400.0	396.20	99.0
IRON	10000.0	9940.00	99.4
LEAD	400.0	408.50	102.1
MAGNESIUM	10000.0	10100.00	101.0
ZINC	400.0	406.70	101.7

SAMPLE: CCV

File: IBK02A Nov 02, 2011 15:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12750.00	102.0
CALCIUM	12500.0	12760.00	102.1
COPPER	500.0	497.00	99.4
IRON	12500.0	12790.00	102.3
LEAD	500.0	506.30	101.3
MAGNESIUM	12500.0	12870.00	103.0
ZINC	500.0	503.80	100.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 16:49

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12740.00	101.9
CALCIUM	12500.0	12740.00	101.9
COPPER	500.0	495.60	99.1
IRON	12500.0	12820.00	102.6
LEAD	500.0	508.50	101.7
MAGNESIUM	12500.0	12890.00	103.1
ZINC	500.0	501.90	100.4

SAMPLE: CCV

File: IBK02A Nov 02, 2011 17:44

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12620.00	101.0
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	499.10	99.8
IRON	12500.0	12710.00	101.7
LEAD	500.0	495.00	99.0
MAGNESIUM	12500.0	12550.00	100.4
ZINC	500.0	494.70	98.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 18:38

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12560.00	100.5
CALCIUM	12500.0	12640.00	101.1
COPPER	500.0	495.30	99.1
IRON	12500.0	12660.00	101.3
LEAD	500.0	500.10	100.0
MAGNESIUM	12500.0	12730.00	101.8
ZINC	500.0	497.40	99.5

SAMPLE: CCV

File: IBK02A Nov 02, 2011 19:31

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13070.00	104.6
CALCIUM	12500.0	13010.00	104.1
COPPER	500.0	498.10	99.6
IRON	12500.0	13250.00	106.0
LEAD	500.0	499.40	99.9
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	495.90	99.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 20:25

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12520.00	100.2
CALCIUM	12500.0	12530.00	100.2
COPPER	500.0	494.20	98.8
IRON	12500.0	12600.00	100.8
LEAD	500.0	501.80	100.4
MAGNESIUM	12500.0	12760.00	102.1
ZINC	500.0	496.50	99.3

SAMPLE: CCV

File: IBK02A Nov 02, 2011 21:20

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12670.00	101.4
CALCIUM	12500.0	12650.00	101.2
COPPER	500.0	496.30	99.3
IRON	12500.0	12850.00	102.8
LEAD	500.0	505.50	101.1
MAGNESIUM	12500.0	12800.00	102.4
ZINC	500.0	498.80	99.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 02, 2011 22:14

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12770.00	102.2
CALCIUM	12500.0	12850.00	102.8
COPPER	500.0	501.70	100.3
IRON	12500.0	12920.00	103.4
LEAD	500.0	504.80	101.0
MAGNESIUM	12500.0	12780.00	102.2
ZINC	500.0	502.80	100.6

SAMPLE: CCV

File: IBK02A Nov 02, 2011 23:08

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12710.00	101.7
CALCIUM	12500.0	12790.00	102.3
COPPER	500.0	500.00	100.0
IRON	12500.0	12820.00	102.6
LEAD	500.0	499.30	99.9
MAGNESIUM	12500.0	12620.00	101.0
ZINC	500.0	497.60	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK02A Nov 03, 2011 0:03

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12820.00	102.6
COPPER	500.0	491.80	98.4
IRON	12500.0	12710.00	101.7
LEAD	500.0	500.80	100.2
MAGNESIUM	12500.0	12650.00	101.2
ZINC	500.0	499.40	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICV

File: IBK03B Nov 03, 2011 18:00

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9825.00	98.3
CALCIUM	10000.0	9745.00	97.5
COPPER	400.0	397.40	99.3
IRON	10000.0	9862.00	98.6
MAGNESIUM	10000.0	10100.00	101.0

SAMPLE: CCV

File: IBK03B Nov 03, 2011 18:23

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12480.00	99.8
CALCIUM	12500.0	12570.00	100.6
COPPER	500.0	495.10	99.0
IRON	12500.0	12390.00	99.1
MAGNESIUM	12500.0	12820.00	102.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 19:17

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12540.00	100.3
CALCIUM	12500.0	12540.00	100.3
COPPER	500.0	492.50	98.5
IRON	12500.0	12370.00	99.0
MAGNESIUM	12500.0	12890.00	103.1

SAMPLE: CCV

File: IBK03B Nov 03, 2011 20:11

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12640.00	101.1
CALCIUM	12500.0	12640.00	101.1
COPPER	500.0	494.90	99.0
IRON	12500.0	12450.00	99.6
MAGNESIUM	12500.0	12970.00	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 21:05

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12580.00	100.6
COPPER	500.0	492.10	98.4
IRON	12500.0	12450.00	99.6
MAGNESIUM	12500.0	12910.00	103.3

SAMPLE: CCV

File: IBK03B Nov 03, 2011 21:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12560.00	100.5
CALCIUM	12500.0	12610.00	100.9
COPPER	500.0	496.80	99.4
IRON	12500.0	12360.00	98.9
MAGNESIUM	12500.0	12960.00	103.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCV

File: IBK03B Nov 03, 2011 22:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12640.00	101.1
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	493.20	98.6
IRON	12500.0	12490.00	99.9
MAGNESIUM	12500.0	13010.00	104.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK01A Nov 01, 2011 12:03

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	301.90	100.6
CALCIUM	100.0	101.10	101.1
IRON	100.0	98.83	98.8
LEAD	5.0	5.41	108.2
MAGNESIUM	100.0	104.10	104.1
ZINC	20.0	20.26	101.3

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK02A Nov 02, 2011 15:42

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	310.60	103.5
CALCIUM	100.0	106.30	106.3
COPPER	25.0	26.92	107.7
IRON	100.0	103.20	103.2
LEAD	5.0	5.43	108.6
MAGNESIUM	100.0	110.20	110.2
ZINC	20.0	21.12	105.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: PQL

File: IBK03B Nov 03, 2011 18:09

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	310.10	103.4
CALCIUM	100.0	116.50	116.5
COPPER	25.0	26.51	106.0
IRON	100.0	103.10	103.1
MAGNESIUM	100.0	116.60	116.6

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK01A Nov 01, 2011 11:59

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.241	J

SAMPLE: CCB

File: IBK01A Nov 01, 2011 12:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.030	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK01A Nov 01, 2011 13:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 14:10

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	6.041	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 15:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 16:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 17:47

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.925	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 18:41

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 19:34

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 20:29

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.137	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 21:23

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 01, 2011 22:17

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.147	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 01, 2011 23:11

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.881	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 0:05

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK01A Nov 02, 2011 1:00

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.082	J
LEAD	1.330	U
MAGNESIUM	6.335	J
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 1:55

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.869	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK01A Nov 02, 2011 2:49

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK02A Nov 02, 2011 15:37

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 02, 2011 16:00

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 02, 2011 16:54

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK02A Nov 02, 2011 17:48

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 18:42

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 19:35

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK02A Nov 02, 2011 20:30

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 21:24

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBK02A Nov 02, 2011 22:18

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB

File: IBK02A Nov 02, 2011 23:12

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.372	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBK02A Nov 03, 2011 0:07

Analyte	Result	C
ALUMINUM	-17.850	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICB

File: IBK03B Nov 03, 2011 18:04

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	-0.869	J
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBK03B Nov 03, 2011 18:27

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB

File: IBK03B Nov 03, 2011 19:21

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB
File: IBK03B Nov 03, 2011 20:15

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB
File: IBK03B Nov 03, 2011 21:09

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

SAMPLE: CCB
File: IBK03B Nov 03, 2011 22:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: CCB

File: IBK03B Nov 03, 2011 22:57

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
MAGNESIUM	5.500	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK01ICS2

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services

Sample ID: PBWBK01ICW2

Matrix: WATER

SDG Name: DSY-24

QC Batch ID: BK01ICW2

Concentration Units : ug/L

Analyte	RESULT	C
LEAD	4.0	U
ZINC	1.775	J

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK02ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	1.0	U
LEAD	0.40	U
ZINC	1.0	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBK03ICW3

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK03ICW3

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	10	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK01A Nov 01, 2011 12:08

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465400	93.1
CALCIUM	500000	436100	87.2
IRON	200000	177400	88.7
LEAD	0	-1	
MAGNESIUM	500000	432700	86.5
ZINC	0	2	

SAMPLE: ICSAB

File: IBK01A Nov 01, 2011 12:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479000	95.8
CALCIUM	500000	435000	87.0
IRON	200000	171700	85.9
LEAD	50	45	90.0
MAGNESIUM	500000	429400	85.9
ZINC	1000	916	91.6

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK02A Nov 02, 2011 15:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	478400	95.7
CALCIUM	500000	439800	88.0
COPPER	0	2	
IRON	200000	178500	89.3
LEAD	0	-2	
MAGNESIUM	500000	438000	87.6
ZINC	0	2	

SAMPLE: ICSAB

File: IBK02A Nov 02, 2011 15:51

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	464800	93.0
CALCIUM	500000	444700	88.9
COPPER	500	512	102.4
IRON	200000	178300	89.1
LEAD	50	42	84.0
MAGNESIUM	500000	434700	86.9
ZINC	1000	922	92.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Concentration Units: ug/L

SAMPLE: ICSA

File: IBK03B Nov 03, 2011 18:13

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	480600	96.1
CALCIUM	500000	446300	89.3
COPPER	0	-1	
IRON	200000	179900	90.0
MAGNESIUM	500000	430300	86.1

SAMPLE: ICSAB

File: IBK03B Nov 03, 2011 18:18

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479300	95.9
CALCIUM	500000	427600	85.5
COPPER	500	515	103.0
IRON	200000	178900	89.5
MAGNESIUM	500000	438100	87.6

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Client Field ID: DSY-SD-AA13-2448S

Matrix: SOIL

SDG Name: DSY-24

Percent Solids: 34.1

Lab Sample ID: SE6841-006S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	181.1738		126.4915		58.18	94.0		80	120	P
LEAD, TOTAL	142.6119		114.9862		23.27	118.7		80	120	P
ZINC, TOTAL	449.1529		289.4241		116.36	137.3	N	80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448S

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
COPPER, TOTAL	1016.0000		565.1000		500	90.2		75	125	P
LEAD, TOTAL	950.8000		513.7000		500	87.4		75	125	P
ZINC, TOTAL	1714.0000		1293.0000		500	84.2		75	125	P

Comments:

DUPLICATES

Lab Name: Katahdin Analytical Services
Client Field ID: DSY-SD-AA13-2448D

Matrix: SOIL
SDG Name: DSY-24

Percent Solids: 34.1
Lab Sample ID: SE6841-006D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
COPPER, TOTAL		126.4915		147.1802		15.1		P
LEAD, TOTAL		114.9862		118.2343		2.8		P
ZINC, TOTAL		289.4241		312.0798		7.5		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK01ICS2

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	25.58	102.3	80	120
LEAD	10.00	9.99	99.9	80	120
ZINC	50.00	51.48	103.0	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

QC Batch ID: BK02ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	24.23	96.9	80	120
LEAD	10.00	9.55	95.5	80	120
ZINC	50.00	48.35	96.7	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBK01ICW2

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK01ICW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
LEAD	100.00	106.30	106.3	80	120
ZINC	500.00	599.60	119.9	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBK03ICW3

Matrix: WATER **SDG Name:** DSY-24

QC Batch ID: BK03ICW3

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250.00	264.50	105.8	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services
Matrix: SOIL

Client Field ID: DSY-SD-AA13-2448L
SDG Name: DSY-24
Lab Sample ID: SE6841-006L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
COPPER, TOTAL	565.10		575.00		1.8		P
LEAD, TOTAL	513.70		543.40		5.8		P
ZINC, TOTAL	1293.00		1353.00		4.6		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name: DSY-24**

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Katahdin Analytical Services A0000328

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code: I**

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK01ICS2

Matrix: SOIL **SDG Name:** DSY-24

Method: P **Prep Date:** 11/01/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBK01ICS2	LCSOBK01ICS2	1	0.1	
PBSBK01ICS2	PBSBK01ICS2	1	0.1	
DSY-SD-AA09-0012	SE6841-001	1.32	0.1	C
DSY-SD-AA09-1224	SE6841-002	1.4	0.1	B
DSY-SD-AA09-2448	SE6841-003	2.06	0.1	B
DSY-SD-AA13-0012	SE6841-004	1.04	0.1	C
DSY-SD-AA13-1224	SE6841-005	1.85	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK01ICW2

Matrix: WATER **SDG Name:** DSY-24

Method: P **Prep Date:** 11/01/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBK01ICW2	LCSWBK01ICW2	0.05	0.05	
PBWBK01ICW2	PBWBK01ICW2	0.05	0.05	
DSY-SD-RB14-101311	SE6841-025	0.05	0.05	A

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK02ICS1

Matrix: SOIL **SDG Name:** DSY-24

Method: P **Prep Date:** 11/02/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBK02ICS1	LCSOBK02ICS1	1	0.1	
PBSBK02ICS1	PBSBK02ICS1	1	0.1	
DSY-SD-AA13-2448	SE6841-006	1.31	0.1	B
DSY-SD-AA13-2448D	SE6841-006D	1.4	0.1	B
DSY-SD-AA13-2448S	SE6841-006S	1.26	0.1	B
DSY-SD-AA17-0012	SE6841-007	1.08	0.1	A
DSY-SD-AA17-1224	SE6841-008	1.34	0.1	A
DSY-SD-AA17-2448	SE6841-009	1.25	0.1	A
DSY-SD-AA21-0012	SE6841-010	1.31	0.1	C
DSY-SD-AA21-1224	SE6841-011	1.3	0.1	B
DSY-SD-AA21-2448	SE6841-012	1.01	0.1	B
DSY-SD-DUP34-101311	SE6841-013	1.02	0.1	B
DSY-SD-AA24-0012	SE6841-014	1.63	0.1	C
DSY-SD-AA24-1224	SE6841-015	1.23	0.1	A
DSY-SD-AA24-2448	SE6841-016	1.55	0.1	B
DSY-SD-AA26-0012	SE6841-017	1.36	0.1	A
DSY-SD-AA26-1224	SE6841-018	1.35	0.1	A
DSY-SD-AA26-2448	SE6841-019	1.67	0.1	A
DSY-SD-AA28-0016	SE6841-020	1.94	0.1	B
DSY-SD-DUP35-101311	SE6841-021	1.7	0.1	A
DSY-SD-AA30-0012	SE6841-022	1.47	0.1	C
DSY-SD-AA30-1224	SE6841-023	2.25	0.1	A
DSY-SD-G30-0018	SE6841-024	1.7	0.1	B

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BK03ICW3

Matrix: WATER **SDG Name:** DSY-24

Method: P **Prep Date:** 11/03/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBK03ICW3	LCSWBK03ICW3	0.05	0.05	
PBWBK03ICW3	PBWBK03ICW3	0.05	0.05	
DSY-SD-RB14-101311	SE6841-025R	0.05	0.05	F

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	11:45 AL	CA	FE PB MG	ZN
Std 1		1	11:50 AL	CA	FE PB MG	ZN
ICV		1	11:54 AL	CA	FE PB MG	ZN
ICB		1	11:59 AL	CA	FE PB MG	ZN
PQL		1	12:03 AL	CA	FE PB MG	ZN
ICSA		1	12:08 AL	CA	FE PB MG	ZN
ICSAB		1	12:12 AL	CA	FE PB MG	ZN
CCV		1	12:17 AL	CA	FE PB MG	ZN
CCB		1	12:21 AL	CA	FE PB MG	ZN
ZZZZZZ		50	12:26			
ZZZZZZ		1	12:30			
ZZZZZZ		1	12:35			
ZZZZZZ		5	12:39			
ZZZZZZ		5	12:44			
ZZZZZZ		1	12:48			
ZZZZZZ		1	12:53			
ZZZZZZ		1	12:57			
ZZZZZZ		1	13:02			
ZZZZZZ		1	13:06			
CCV		1	13:11 AL	CA	FE PB MG	ZN
CCB		1	13:15 AL	CA	FE PB MG	ZN
ZZZZZZ		5	13:20			
ZZZZZZ		25	13:24			
ZZZZZZ		5	13:29			
ZZZZZZ		5	13:33			
ZZZZZZ		50	13:38			
ZZZZZZ		250	13:42			
ZZZZZZ		50	13:47			
ZZZZZZ		50	13:52			
ZZZZZZ		5	13:56			
ZZZZZZ		50	14:01			
CCV		1	14:05 AL	CA	FE PB MG	ZN
CCB		1	14:10 AL	CA	FE PB MG	ZN
ZZZZZZ		1	14:15			
ZZZZZZ		1	14:19			
ZZZZZZ		1	14:24			
ZZZZZZ		2	14:28			
ZZZZZZ		1	14:33			
ZZZZZZ		5	14:38			
ZZZZZZ		1	14:42			
ZZZZZZ		1	14:47			
ZZZZZZ		1	14:51			
ZZZZZZ		1	14:56			
CCV		1	15:00 AL	CA	FE PB MG	ZN
CCB		1	15:04 AL	CA	FE PB MG	ZN
ZZZZZZ		1	15:09			
ZZZZZZ		1	15:14			
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		10	15:32				
ZZZZZZ		10	15:36				
ZZZZZZ		10	15:41				
ZZZZZZ		10	15:45				
ZZZZZZ		5	15:50				
CCV		1	15:54 AL	CA	FE PB MG		ZN
CCB		1	15:58 AL	CA	FE PB MG		ZN
ZZZZZZ		1	16:03				
ZZZZZZ		1	16:07				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:17				
ZZZZZZ		1	16:21				
ZZZZZZ		1	16:26				
ZZZZZZ		1	16:30				
ZZZZZZ		1	16:35				
ZZZZZZ		1	16:39				
ZZZZZZ		1	16:44				
CCV		1	16:48 AL	CA	FE PB MG		ZN
CCB		1	16:52 AL	CA	FE PB MG		ZN
ZZZZZZ		1	16:57				
ZZZZZZ		1	17:02				
ZZZZZZ		1	17:06				
ZZZZZZ		1	17:11				
ZZZZZZ		1	17:15				
ZZZZZZ		1	17:20				
ZZZZZZ		1	17:24				
ZZZZZZ		1	17:29				
ZZZZZZ		1	17:33				
ZZZZZZ		1	17:38				
CCV		1	17:42 AL	CA	FE PB MG		ZN
CCB		1	17:47 AL	CA	FE PB MG		ZN
ZZZZZZ		1	17:51				
ZZZZZZ		1	17:56				
ZZZZZZ		1	18:00				
ZZZZZZ		1	18:05				
ZZZZZZ		5	18:10				
ZZZZZZ		1	18:14				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:23				
ZZZZZZ		1	18:27				
ZZZZZZ		1	18:32				
CCV		1	18:36 AL	CA	FE PB MG		ZN
CCB		1	18:41 AL	CA	FE PB MG		ZN
ZZZZZZ		1	18:45				
ZZZZZZ		1	18:50				
ZZZZZZ		1	18:54				
ZZZZZZ		5	18:59				
ZZZZZZ		1	19:03				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:12				
ZZZZZZ		1	19:17				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
ZZZZZZ		1	19:21			
ZZZZZZ		1	19:26			
CCV		1	19:30 AL	CA	FE PB MG	ZN
CCB		1	19:34 AL	CA	FE PB MG	ZN
ZZZZZZ		1	19:39			
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:06			
ZZZZZZ		1	20:11			
ZZZZZZ		5	20:15			
ZZZZZZ		1	20:20			
CCV		1	20:24 AL	CA	FE PB MG	ZN
CCB		1	20:29 AL	CA	FE PB MG	ZN
ZZZZZZ		1	20:33			
ZZZZZZ		1	20:38			
ZZZZZZ		1	20:42			
ZZZZZZ		1	20:47			
ZZZZZZ		1	20:51			
ZZZZZZ		1	20:56			
ZZZZZZ		1	21:00			
ZZZZZZ		1	21:05			
ZZZZZZ		1	21:09			
ZZZZZZ		1	21:14			
CCV		1	21:18 AL	CA	FE PB MG	ZN
CCB		1	21:23 AL	CA	FE PB MG	ZN
ZZZZZZ		1	21:27			
ZZZZZZ		1	21:32			
ZZZZZZ		1	21:36			
ZZZZZZ		1	21:41			
ZZZZZZ		1	21:46			
ZZZZZZ		1	21:50			
ZZZZZZ		1	21:54			
ZZZZZZ		1	21:59			
ZZZZZZ		1	22:04			
ZZZZZZ		1	22:08			
CCV		1	22:13 AL	CA	FE PB MG	ZN
CCB		1	22:17 AL	CA	FE PB MG	ZN
ZZZZZZ		1	22:22			
ZZZZZZ		1	22:26			
ZZZZZZ		1	22:31			
ZZZZZZ		1	22:35			
ZZZZZZ		5	22:40			
ZZZZZZ		1	22:44			
ZZZZZZ		1	22:49			
ZZZZZZ		1	22:53			
ZZZZZZ		1	22:58			
ZZZZZZ		1	23:02			
CCV		1	23:07 AL	CA	FE PB MG	ZN

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK01A

Date: 11/1/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
CCB		1	23:11 AL	CA	FE PB MG	ZN
ZZZZZZ		1	23:16			
ZZZZZZ		1	23:20			
ZZZZZZ		1	23:25			
ZZZZZZ		1	23:29			
ZZZZZZ		1	23:34			
ZZZZZZ		1	23:38			
ZZZZZZ		1	23:43			
ZZZZZZ		1	23:48			
ZZZZZZ		1	23:52			
ZZZZZZ		5	23:57			
CCV		1	0:01 AL	CA	FE PB MG	ZN
CCB		1	0:05 AL	CA	FE PB MG	ZN
ZZZZZZ		1	0:10			
ZZZZZZ		1	0:14			
ZZZZZZ		1	0:19			
ZZZZZZ		1	0:23			
ZZZZZZ		1	0:28			
ZZZZZZ		1	0:33			
ZZZZZZ		1	0:37			
ZZZZZZ		1	0:42			
ZZZZZZ		1	0:46			
ZZZZZZ		1	0:51			
CCV		1	0:55 AL	CA	FE PB MG	ZN
CCB		1	1:00 AL	CA	FE PB MG	ZN
ZZZZZZ		1	1:04			
ZZZZZZ		1	1:09			
ZZZZZZ		1	1:14			
ZZZZZZ		1	1:18			
ZZZZZZ		1	1:23			
ZZZZZZ		1	1:27			
ZZZZZZ		1	1:32			
ZZZZZZ		1	1:37			
ZZZZZZ		1	1:41			
ZZZZZZ		1	1:46			
CCV		1	1:50 AL	CA	FE PB MG	ZN
CCB		1	1:55 AL	CA	FE PB MG	ZN
PBWBK01ICW2		1	1:59		PB	ZN
LCSWBK01ICW2		1	2:04		PB	ZN
ZZZZZZ		1	2:08			
SE6841-025	DSY-SD-RB14-101311	1	2:13		PB	ZN
ZZZZZZ		1	2:18			
ZZZZZZ		5	2:22			
ZZZZZZ		1	2:27			
ZZZZZZ		1	2:31			
ZZZZZZ		1	2:36			
ZZZZZZ		1	2:40			
CCV		1	2:45 AL	CA	FE PB MG	ZN
CCB		1	2:49 AL	CA	FE PB MG	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	15:24 AL	CA	CU FE PB MG	ZN
Std 1		1	15:28 AL	CA	CU FE PB MG	ZN
ICV		1	15:33 AL	CA	CU FE PB MG	ZN
ICB		1	15:37 AL	CA	CU FE PB MG	ZN
PQL		1	15:42 AL	CA	CU FE PB MG	ZN
ICSA		1	15:46 AL	CA	CU FE PB MG	ZN
ICSAB		1	15:51 AL	CA	CU FE PB MG	ZN
CCV		1	15:56 AL	CA	CU FE PB MG	ZN
CCB		1	16:00 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:04			
ZZZZZZ		2	16:09			
ZZZZZZ		1	16:14			
ZZZZZZ		1	16:18			
ZZZZZZ		1	16:23			
ZZZZZZ		5	16:27			
ZZZZZZ		100	16:31			
ZZZZZZ		500	16:36			
ZZZZZZ		100	16:41			
ZZZZZZ		100	16:45			
CCV		1	16:49 AL	CA	CU FE PB MG	ZN
CCB		1	16:54 AL	CA	CU FE PB MG	ZN
ZZZZZZ		100	16:58			
ZZZZZZ		1	17:03			
ZZZZZZ		1	17:07			
ZZZZZZ		5	17:12			
ZZZZZZ		100	17:16			
ZZZZZZ		5	17:21			
ZZZZZZ		5	17:26			
ZZZZZZ		1	17:30			
ZZZZZZ		1	17:35			
ZZZZZZ		3	17:39			
CCV		1	17:44 AL	CA	CU FE PB MG	ZN
CCB		1	17:48 AL	CA	CU FE PB MG	ZN
ZZZZZZ		3	17:52			
ZZZZZZ		1	17:57			
PBSBK01ICS2		1	18:02		CU PB	ZN
LCSOBK01ICS2		1	18:06		CU PB	ZN
ZZZZZZ		1	18:11			
ZZZZZZ		1	18:15			
ZZZZZZ		1	18:19			
ZZZZZZ		1	18:24			
ZZZZZZ		1	18:29			
ZZZZZZ		1	18:33			
CCV		1	18:38 AL	CA	CU FE PB MG	ZN
CCB		1	18:42 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:46			
ZZZZZZ		1	18:51			
ZZZZZZ		1	18:55			
ZZZZZZ		1	19:00			
ZZZZZZ		5	19:04			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		1	19:09			
ZZZZZZ		1	19:13			
ZZZZZZ		1	19:18			
SE6841-001	DSY-SD-AA09-0012	1	19:22		CU PB	ZN
SE6841-002	DSY-SD-AA09-1224	1	19:27		CU PB	ZN
CCV		1	19:31 AL	CA	CU FE PB MG	ZN
CCB		1	19:35 AL	CA	CU FE PB MG	ZN
SE6841-003	DSY-SD-AA09-2448	1	19:40		CU PB	ZN
SE6841-004	DSY-SD-AA13-0012	1	19:45		CU PB	ZN
SE6841-005	DSY-SD-AA13-1224	1	19:49		CU PB	ZN
ZZZZZZ		1	19:54			
ZZZZZZ		1	19:58			
ZZZZZZ		1	20:03			
ZZZZZZ		1	20:07			
ZZZZZZ		1	20:12			
ZZZZZZ		1	20:16			
ZZZZZZ		1	20:21			
CCV		1	20:25 AL	CA	CU FE PB MG	ZN
CCB		1	20:30 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	20:34			
ZZZZZZ		1	20:39			
ZZZZZZ		1	20:43			
ZZZZZZ		1	20:48			
ZZZZZZ		5	20:53			
ZZZZZZ		1	20:57			
ZZZZZZ		1	21:02			
ZZZZZZ		1	21:06			
ZZZZZZ		1	21:11			
ZZZZZZ		1	21:15			
CCV		1	21:20 AL	CA	CU FE PB MG	ZN
CCB		1	21:24 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	21:29			
ZZZZZZ		1	21:33			
ZZZZZZ		1	21:38			
ZZZZZZ		1	21:42			
ZZZZZZ		1	21:47			
PBSBK02ICS1		1	21:51		CU PB	ZN
LCSOBK02ICS1		1	21:56		CU PB	ZN
SE6841-006	DSY-SD-AA13-2448	1	22:00		CU PB	ZN
SE6841-006L	DSY-SD-AA13-2448L	5	22:05		CU PB	ZN
SE6841-006A	DSY-SD-AA13-2448A	1	22:09		CU PB	ZN
CCV		1	22:14 AL	CA	CU FE PB MG	ZN
CCB		1	22:18 AL	CA	CU FE PB MG	ZN
SE6841-006D	DSY-SD-AA13-2448D	1	22:23		CU PB	ZN
SE6841-006S	DSY-SD-AA13-2448S	1	22:27		CU PB	ZN
SE6841-007	DSY-SD-AA17-0012	1	22:32		CU PB	ZN
SE6841-008	DSY-SD-AA17-1224	1	22:36		CU PB	ZN
SE6841-009	DSY-SD-AA17-2448	1	22:41		CU PB	ZN
SE6841-010	DSY-SD-AA21-0012	1	22:46		CU PB	ZN
SE6841-011	DSY-SD-AA21-1224	1	22:50		CU PB	ZN
SE6841-012	DSY-SD-AA21-2448	1	22:55		CU PB	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK02A

Date: 11/2/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
SE6841-013	DSY-SD-DUP34-101311	1	22:59		CU PB	ZN
SE6841-014	DSY-SD-AA24-0012	1	23:03		CU PB	ZN
CCV		1	23:08 AL	CA	CU FE PB MG	ZN
CCB		1	23:12 AL	CA	CU FE PB MG	ZN
SE6841-015	DSY-SD-AA24-1224	1	23:17		CU PB	ZN
SE6841-016	DSY-SD-AA24-2448	1	23:22		CU PB	ZN
SE6841-017	DSY-SD-AA26-0012	1	23:26		CU PB	ZN
SE6841-018	DSY-SD-AA26-1224	1	23:31		CU PB	ZN
SE6841-019	DSY-SD-AA26-2448	1	23:36		CU PB	ZN
SE6841-020	DSY-SD-AA28-0016	1	23:40		CU PB	ZN
SE6841-021	DSY-SD-DUP35-101311	1	23:45		CU PB	ZN
SE6841-022	DSY-SD-AA30-0012	1	23:49		CU PB	ZN
SE6841-023	DSY-SD-AA30-1224	1	23:54		CU PB	ZN
SE6841-024	DSY-SD-G30-0018	1	23:59		CU PB	ZN
CCV		1	0:03 AL	CA	CU FE PB MG	ZN
CCB		1	0:07 AL	CA	CU FE PB MG	ZN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK03B

Date: 11/3/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	17:51 AL	CA	CU FE	MG
Std 1		1	17:56 AL	CA	CU FE	MG
ICV		1	18:00 AL	CA	CU FE	MG
ICB		1	18:04 AL	CA	CU FE	MG
PQL		1	18:09 AL	CA	CU FE	MG
ICSA		1	18:13 AL	CA	CU FE	MG
ICSAB		1	18:18 AL	CA	CU FE	MG
CCV		1	18:23 AL	CA	CU FE	MG
CCB		1	18:27 AL	CA	CU FE	MG
ZZZZZZ		1	18:32			
ZZZZZZ		1	18:36			
ZZZZZZ		1	18:41			
ZZZZZZ		1	18:45			
ZZZZZZ		1	18:50			
ZZZZZZ		2	18:54			
ZZZZZZ		5	18:59			
ZZZZZZ		1	19:03			
ZZZZZZ		1	19:08			
ZZZZZZ		1	19:12			
CCV		1	19:17 AL	CA	CU FE	MG
CCB		1	19:21 AL	CA	CU FE	MG
ZZZZZZ		1	19:26			
ZZZZZZ		1	19:30			
ZZZZZZ		1	19:35			
ZZZZZZ		1	19:39			
ZZZZZZ		1	19:44			
ZZZZZZ		1	19:48			
ZZZZZZ		1	19:53			
ZZZZZZ		1	19:57			
ZZZZZZ		1	20:02			
ZZZZZZ		1	20:07			
CCV		1	20:11 AL	CA	CU FE	MG
CCB		1	20:15 AL	CA	CU FE	MG
ZZZZZZ		5	20:20			
ZZZZZZ		1	20:25			
ZZZZZZ		1	20:29			
ZZZZZZ		1	20:33			
ZZZZZZ		1	20:38			
ZZZZZZ		1	20:42			
ZZZZZZ		1	20:47			
ZZZZZZ		1	20:51			
ZZZZZZ		1	20:56			
ZZZZZZ		1	21:00			
CCV		1	21:05 AL	CA	CU FE	MG
CCB		1	21:09 AL	CA	CU FE	MG
ZZZZZZ		1	21:14			
ZZZZZZ		1	21:18			
PBWBK03ICW3		1	21:23		CU	
LCSWBK03ICW3		1	21:27		CU	
ZZZZZZ		1	21:32			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-24

Instrument ID: THERMO ICAP 6500 **File Name:** IBK03B

Date: 11/3/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	21:36				
ZZZZZZ		5	21:41				
ZZZZZZ		1	21:45				
ZZZZZZ		1	21:50				
ZZZZZZ		1	21:54				
CCV		1	21:59 AL	CA	CU FE	MG	
CCB		1	22:03 AL	CA	CU FE	MG	
ZZZZZZ		1	22:08				
ZZZZZZ		1	22:12				
ZZZZZZ		1	22:17				
ZZZZZZ		1	22:21				
ZZZZZZ		1	22:26				
ZZZZZZ		1	22:30				
SE6841-025R	DSY-SD-RB14-101311R	1	22:35		CU		
ZZZZZZ		1	22:39				
ZZZZZZ		1	22:44				
ZZZZZZ		1	22:48				
CCV		1	22:53 AL	CA	CU FE	MG	
CCB		1	22:57 AL	CA	CU FE	MG	

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99551	Lloyd Kahn	20-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG99551	Lloyd Kahn	20-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG100043	ASTM D2216	31-OCT-11	28-OCT-11	U 1 %	1 %	N/A
MBLANK	WG100067	ASTM D2216	31-OCT-11	29-OCT-11	U 1 %	1 %	N/A
MBLANK	WG100087	ASTM D2216	02-NOV-11	01-NOV-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99551-2	LCS	WG99551	20-OCT-11	N/A	ug/gdrywt	400000.000	420000	105	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG99551-2	LCS	WG99551	20-OCT-11	N/A	ug/gdrywt	400000.000	420000	105	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG100043-2	LCS	WG100043	31-OCT-11	28-OCT-11	%	90	92.	102	80-120	
WG100067-2	LCS	WG100067	31-OCT-11	29-OCT-11	%	90	91.	101	80-120	
WG100087-2	LCS	WG100087	02-NOV-11	01-NOV-11	%	90	96.	107	80-120	

Quality Control Report

Duplicate Sample Summary Report

Toc In Soil(1)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99551-3	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	55000	49000	11	30

Toc In Soil(2)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99551-3	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	50000	63000	22	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG100067-3	SE6841-7	WG100067	31-OCT-11	%	33.	33.	0	20
WG100067-4	SE6841-21	WG100067	31-OCT-11	%	58.	61.	4	20
WG100043-4	SE6841-6	WG100043	31-OCT-11	%	34.	34.	1	20
WG100087-3	SE6841-22	WG100087	02-NOV-11	%	74.	76.	2	20

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99551-4	MS	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	53191.67	55000	110000	109	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99551-4	MS	SE6841-1	WG99551	20-OCT-11	ug/gdrywt	53191.67	50000	110000	118	75 - 125

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 9, 2011

Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
jObrin@katahdinlab.com

Re: **Narrative 041128162 Modified Draft ASTM Sieve Method with Qualitative TEM analysis**

Dear Jennifer:

The following set of samples was received October 20th 2011 via FedEx. These samples were received under chain of custody from Katahdin Analytical Services, Scarborough, ME for asbestos content analysis. All samples are associated with the project SE6768/SE6841. The samples submitted were saturated with moisture and required additional time to dry. Most of the samples were received in good condition, except for the following samples below:

EMSL Sample Number	*Client Sample Number*	*Condition at Time of Receipt*
041128162-0015	DSY-SD-AA17-0012	Jar broken
041128162-0019	DSY-SD-AA21-1224	Jar broken
041128162-0028	DSY-SD-AA28-0016	Jar labeled DSY-SD-AA28-0012
041128162-0031	DSY-SD-AA30-1224	Jar broken

The samples were logged in following normal lab procedures. All analyses were performed in the Cinnaminson, NJ laboratory.

Modified Draft ASTM Sieve method

The samples were first dried prior to being fractioned into 3 sieved components, Coarse (<19 mm), Medium (>2 mm) and Fine (<2 mm). The sieved samples were then analyzed via polarized light microscopy (PLM) using the procedures from the EPA 600/R-93/116 method. Any asbestos found in the fine fraction was analyzed via a 400 point count analysis. All data was reported on a percent asbestos basis. The limit of quantification for this method is <1%.

Samples that did not have asbestos detected were analyzed via Qualitative Transmission Electron Microscopy (TEM). Due to the amount of organic material and calcium fibers in these samples, an aliquot of the sample was treated with dilute hydrochloric acid prior to analysis.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

QC Performed

QC guidelines were not specified by the client. EMSL performed QC in compliance with our Quality Assurance Manual (QAM) and pertinent SOPs. For this analysis, two inter-analyst and four intra-analyst samples were analyzed. Six laboratory blanks were also analyzed. All QC was found to be in concordance.

Stephen Siegel, CIH
Asbestos Lab Manager,
EMSL Westmont, NJ

Robyn Denton
Asbestos Quality Assurance Manager
EMSL Westmont, NJ

2. Tabulated Sample Results

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA01-0012 *041128162-0001*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-1224 *041128162-0002*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-2448 *041128162-0003*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-DUP33-101211 *041128162-0004*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA05-0012 *041128162-0005*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-1224 *041128162-0006*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-2448 *041128162-0007*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-0012 *041128162-0008*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-1224 *041128162-0009*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA09-2448 *041128162-0010*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA13-0012 *041128162-0011*	Chrysotile Amosite	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-1224 *041128162-0012*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448 *041128162-0013*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448DUP *041128162-0014*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA17-0013 *041128162-0015*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA17-1224 *041128162-0016*	Amosite	None Detected	<1	None Detected	<1	Not Analyzed	

This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Project: SE6768

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA17-2448 *041128162-0017*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA21-0012 *041128162-0018*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA21-1224 *041128162-0019*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA21-2448 *041128162-0020*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-DUP34-101311 *041128162-0021*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-0012 *041128162-0022*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-1224 *041128162-0023*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA24-2448 *041128162-0024*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-0012 *041128162-0025*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-1224 *041128162-0026*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA26-2448 *041128162-0027*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA28-0016 *041128162-0028*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	Jar labeled as DSY-SD-AA28-0012
DSY-SD-DUP35-101311 *041128162-0029*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA30-0012 *041128162-0030*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA30-1224 *041128162-0031*	Chrysotile Amosite	None Detected	<1	None Detected	<1	Not Analyzed	Jar received Broken

Note: Revised report issued 11-10-11 for data entry errors on EMSL samples 041128162-0016,041128162-0018, 041128162-0031

Analysts

Garret Vliet *David Poitras*
Melissa Klinedinst *Robyn Denton*
Leslie McCluskey

Robyn Denton
Approved Lab Signatory

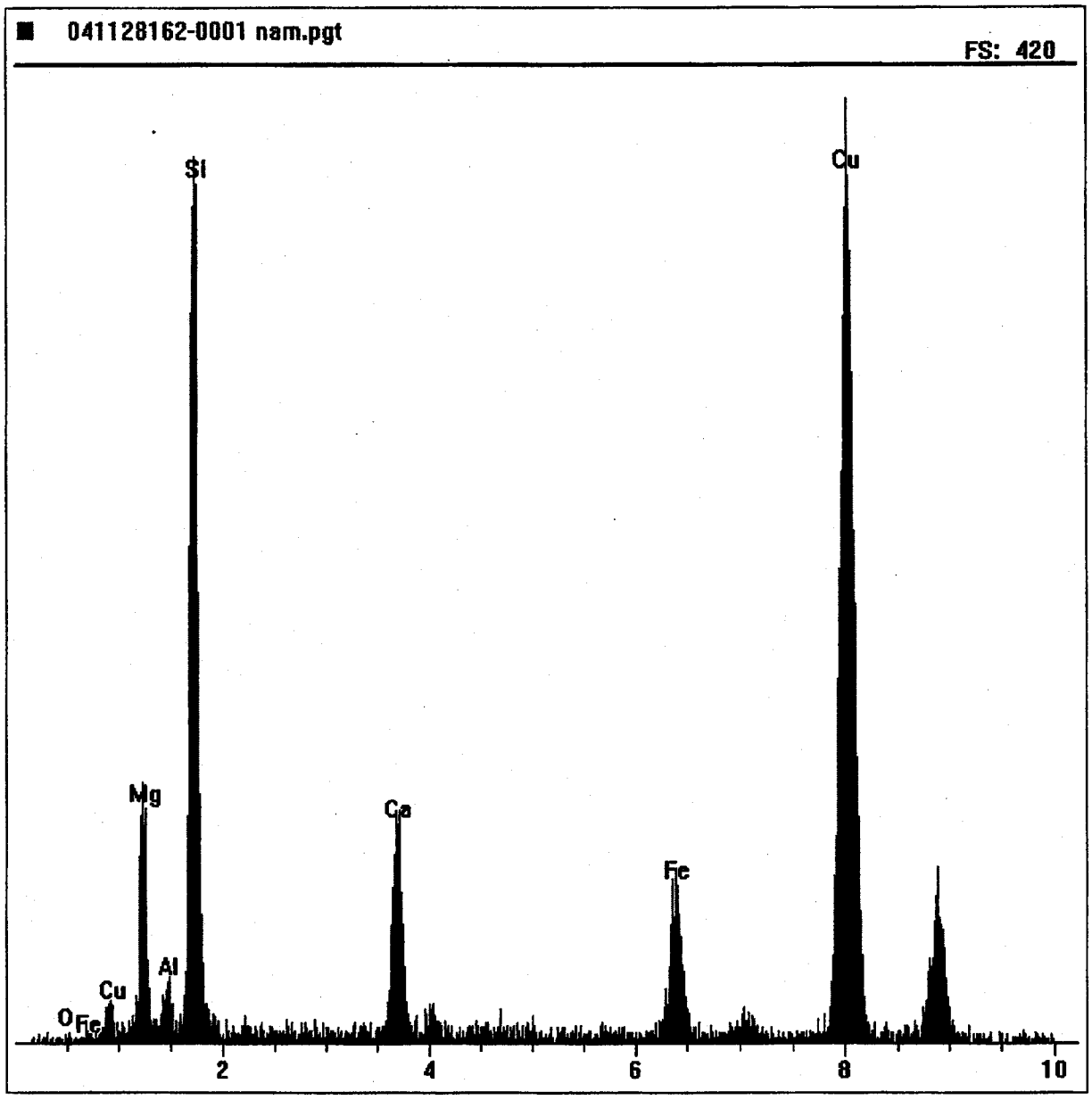
This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

EMSL ANALYTICAL, INC.

Energy Dispersive X-Ray Analysis
Qualitative Spectrum

File: C:\Program Files\PGT\Data\041128162-0001 nam.pgt
Collected: November 08, 2011 12:41:16

Live Time:	35.49	Count Rate:	974	Dead Time:	19.08 %
Beam Voltage:	20.00	Beam Current:	2.00	Takeoff Angle:	31.00



3. Worksheets/Benchsheets

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: | Logged: | TAT:

Address: | Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties: Morphology (O): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon Like, 5. Tapered Ends, 6. Equant, 7. Mixed, 8. Modulin, 9. Modulin Shapes, 10. Other; Sign of Elongation (E): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low 0.010, 2. Mod 0.010-0.035, 3. High >0.050, 4. None 0.00 or Isotropic; Fiber Color (FC): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undefined

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-01 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C), (T), (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G. Viet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quarts, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon/Lath, 5 Tapered/Rods, 6 Fibril, 7 Fibrils, 8 Metallic, 9 Basic Shapes, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low 0.010, 2 Med 0.010-0.030, 3 High >0.030, 4 Above 0.09 or Isotropic

Dispersion Color (DC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Dispersion (D): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char.	Optical Properties	
-04 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-04 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-04 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-05 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		1	<1			20	99		1.551, 1.680 ⊥ R.I.	1.557, 1.692 ∥ R.I.
				2	<1						1,2 M	1 S
											2 P, 1,2 B, (BC) 6, 1 E	LM
-05 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		1	<1			20	99		1.550, 1.6[illegible] ⊥ R.I.	1.555, 1.696 ∥ R.I.
				2	<1						1, 2 M	1 S
											2 P, 1,2 B, (BC) 6, 1 E	LM
-05 FINE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
-06 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		2	<1			20	98		1.683 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2 P, 2 B, (BC) 6, 1 E	MK
-06 MEDIUM	(C) 2, (T) 2, (H) 2	1/2/3		2	<1			20	98		1.680 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2 P, 2 B, (BC) 6, 1 E	MK
-06 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	GV
	(C), (T), (H)							20			⊥ R.I.	∥ R.I.
											M	S
											P, B, (BC), E	

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: [redacted]

Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
7 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. / 1.557 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
7 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
7 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
8 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.555 ⊥ R.I. / 1.554 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
8 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
8 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
9 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. / 1.557 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
9 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I. / M 1 / S 1 / P 2 B 1 (FC) 6 E 1
9 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I. / M / S / P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P B (FC) E

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.0

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10 COARSE	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	3	20	97	M10	1.552 ⊥ R.I. 1.558 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
10 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	5	20	95	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
10 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
11 COARSE	(C) 2 (T) 1 (H) 2	1		1 / 2	<1 / <1	11	3	20	97	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
11 MEDIUM	(C) 3 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
11 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
12 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. 1.554 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
12 MEDIUM	(C) 2 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
12 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

ams

1.680 1.696
2 1
2 2 61

1.682 1.696
2 1
2 2 61

1.680 1.692
2 1
2 2 61

QC

Analyst: LM Date: 11.5.11 Computer: _____ Date: _____

Room Temp (C): 23.7

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (H)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

COMPONENT TYPES — Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

COMPONENT TYPES — Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
13 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
13 MEDIUM	(C) 2 (T) 2 (H)	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
13 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
14 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
15 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
15 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.547 R.I. ⊥ / 1.555 R.I. ∥; M 1 / S 1; P 2 B 1 (FC) 6 E 1
15 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC *	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 23.6°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
16 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
16 MEDIUM	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
16 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
17 COARSE	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
17 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.678 ⊥ R.I. / 1.695 ∥ R.I. / 2 M / 1 S / 2 P / 2 B / (FC) 6 / 1 E
17 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
18 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E
QC *	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E

QC

Analyst: MK Date: 11/6/11 Computer: _____ Date: _____

Room Temp (C): 24.8°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
19 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.550 ⊥ R.I. 1.555 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 10 E 1
19 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I. 1.556 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
19 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
20 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.548 ⊥ R.I. 1.554 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
20 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
20 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
21 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.549 ⊥ R.I. 1.556 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
21 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	~~M10~~ chrysotile	1.548 ⊥ R.I. 1.553 ∥ R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
21 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

amo 1.678 1.692 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.5

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (A): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Seeded, 7. Fibril, 8. Metallic, 9. Basic Shape, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Med: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
22 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
22 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
22 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 COARSE	(C) 2, (T) 1, (H) 2	1		1	<1	11	2	20	98	M10	1.547 ⊥ R.I. / 1.553 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
23 MEDIUM	(C) 2, (T) 1, (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
24 COARSE	(C) 2, (T) 1, (H) 2	1		1 2	<1 <1	11	2	20	98	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
24 MEDIUM	(C) 2, (T) 1, (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M: 1 / 1 S; P: 2 B: 1 (FC) 6 E: 1
24 FINE	(C) 2, (T) 1, (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C), (T), (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.681 1.696 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.0

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES — Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC — Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
25 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.549 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
25 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.556 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E
25 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
26 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	3	20	95	M10	1.550 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
26 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
26 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
27 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	2	20	96	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
27 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 1 E
27 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.678 1.692 2 1 2 2 61

amo 1.680 1.696 2 1 2 2 61

1.676 1.691 2 1 2 2 61

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.4

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM

Order Number: 0411281682

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (A), Sign of Elongation (S), Birefringence (B), Fiber Color (FC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (L)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
28 COARSE	(C) 1,4	1		chry	<1	11	5	20	95	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 3			amosite	<1						M; S
	(H) 1										P 3; B 1; (FC) C/A; E
28 MEDIUM	(C) 1,4	1		ch	<1	11	5	20	95	M2	1.550 ⊥ R.I.; 1.552 ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B 1; (FC) A/; E
28 FINE	(C) 1	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
29 COARSE	(C) 1,4	1		chry	<1	11	2	20	98	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E
29 MEDIUM	(C) 1,4	1		ch	<1	11	5	20	95	M2	1.550 / 1.560 ⊥ R.I.; 1.552 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E
29 FINE	(C) 1,4	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
30 COARSE	(C) 1,4	1		chry	<1	11	2	20	98	M2	1.550 ⊥ R.I.; 1.556 ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC) A/; E
30 MEDIUM	(C) 1	1		NO		11	5	20	95	M2	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
30 FINE	(C) 1	1		~		11	10	20	90	M1	⊥ R.I.; ∥ R.I.
	(T) 1										M; S
	(H) 1										P; B; (FC); E
QC 30coarse	(C) 1,4	1		chry	<1	11	5	20	95	M2	1.550 / 1.556 ⊥ R.I.; 1.551 / 1.554 ∥ R.I.
	(T) 1			amosite	<1						M; S
	(H) 1										P 2; B 2; (FC) C/A; E

QC

Analyst: David Portnoi Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): 19.4°C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

Macroscopic	Treatment	COMPONENT TYPES: Asbestos	Fibrous	Non-Fibrous	MICROSCOPIC: Optical Properties
COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow	1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted	1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite	7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair	14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other	Morphology (M), Sign of Elongation (S), Birefringence (B), Fiber Color (FC), Extinction (E)
TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other					
HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (S)					

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties: ⊥ R.I.	∥ R.I.	M	S	P	B	(FC)	E
31 COARSE	(C) 1,4	1		MD				20	10 J									
	(T) 2																	
	(H) 2																	
31 MEDIUM	(C) 1	1		Chr	C1	11	5	20	95	MX	1.NH	1.NH						
	(T) 1			Amosite	<1								1	2	1	2		
	(H) 1												2	Pl	5	2B	(PC)	1 B
31 FINE	(C) 1	1		MD		11	10	20	90	MX								
	(T) 1																	
	(H) 1																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
COARSE	(C)							20										
	(T)																	
	(H)																	
MEDIUM	(C)							20										
	(T)																	
	(H)																	
FINE	(C)							20										
	(T)																	
	(H)																	
QC 31 COARSE	(C)							20										
	(T)																	
	(H)																	

QC

Analyst: Dan Paitsa Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0001
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
01	D3	ND								FBCM		
	J4	1-2	2							FBCM		Mg, Si, Al, Ca, Fe
	O13	3	1							FBCM		Si
	H12	4	1							FBCM		Si
	I11	5-7	3							FBCM		Mg, Si, Al Ca, Fe; Si
02	F5	ND								FBCM		
	F11	8-9	2							FBCM		Si
	G15	~~10~~ NB	2							FBCM		Si
	M4	ND								FBCM		
	N10	ND								FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
										FBCM		
(Total)		11	11				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing

Mg, Al, Si, Ca, Fe; Si

Prepped w/ acid

Grid Box # Bulk:0075 Row O Column 1,2

Analyst BD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0002
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
03	C7	ND								F B C M		
	D5	↓								F B C M		
	F4	↓								F B C M		
	G11	1	1							F B C M		Si
	D13	2-4	3							F B C M		Mg,Al,Si,Ca,Fe
04	A11	ND								F B C M		
	B13	↓								F B C M		
	D12	↓								F B C M		
	F4	↓								F B C M		
	G7	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		4	4				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing

Prepped w/ Acid

Grid Box # Bulk.0075 Row O Column 3,4

Analyst RD Scope 04.03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0003
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
05	G5	ND								F B C M		
	H8	ND								F B C M		
	L10	1								F B C M		
	J9	↓								F B C M		
	D9	↓								F B C M		
06	B5	ND								F B C M		
	H9	1								F B C M		
	C13	↓								F B C M		
	D11	↓								F B C M		
	M10	1	1							F B C M		Mg, Al, Si, Ca, Fe
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg Al Si Ca Fe

Prepped w/Acid

Grid Box # Bulk-75 Row 0 Column 5/6

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0004
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P1	03	1	1							F B C M		Ca
	H2	ND								F B C M		
	J4	2-3	2							F B C M		Si, Al, Mg
	K7	4	1							F B C M		Si, Al
	D5	ND								F B C M		
P2	C11	↓								F B C M		
	D14									F B C M		
	K10									F B C M		
	H4	5	1							F B C M		Si
	J2									F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		5	3									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Si, Al, Mg, Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 1,2

Analyst BD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0014
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P3	C7	ND								F B C M		
	D9	↓								F B C M		
	G5	↓								F B C M		
	H11	↓								F B C M		
	D15	↓								F B C M		
P4	A8	1	1							F B C M		Ca
	C10	ND								F B C M		
	D15	↓								F B C M		
	K11	↓								F B C M		
	D13	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 3,4

Analyst RD Scope 0403 Date 11.08.11
RD 11/08/11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0018
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
U1	A4	ND								F B C M		
	B6	|	1							F B C M		Ca
	B8	|								F B C M		
	D6	|								F B C M		
	F8	|	1							F B C M		Si
U2	O14	|								F B C M		
	L15	|	1							F B C M		Mg, Ca, Si, Al
	K11	|								F B C M		
	F14	|								F B C M		
	E4	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		—										

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Ca, Si, Mg, Al

Prepped w/ Acid

Grid Box # Bulk-0075 Row 14 Column 1,2

Analyst RD Scope 04.03 Date 11.10.11

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
1	041128162-0001	DSY-SD-AA01-0012	10/12/2011	109.64	93.13	14.97	1.86	Y
2	041128162-0002	DSY-SD-AA01-1224	10/12/2011	110.96	96.93	12.76	1.65	Y
3	041128162-0003	DSY-SD-AA01-2448	10/12/2011	75.26	61.02	12.87	1.63	Y
4	041128162-0004	DSY-SD-DUP33-101211	10/12/2011	86.24	67.77	16.16	2.7	Y
5	041128162-0005	DSY-SD-AA05-0012	10/12/2011	119.53	98.32	19.09	2.53	Y
6	041128162-0006	DSY-SD-AA05-1224	10/12/2011	100.08	84.64	13.18	2.48	Y
7	041128162-0007	DSY-SD-AA05-2448	10/12/2011	124.57	93.44	25.08	6.31	Y
8	041128162-0008	DSY-SD-AA09-0012	10/13/2011	65.56	49.83	13.68	2.34	Y
9	041128162-0009	DSY-SD-AA09-1224	10/13/2011	100.73	70.26	24.89	5.91	Y
10	041128162-0010	DSY-SD-AA09-2448	10/13/2011	125.05	96.76	22.17	6.49	Y
11	041128162-0011	DSY-SD-AA13-0012	10/13/2011	65.37	49.82	13.41	2.33	Y
12	041128162-0012	DSY-SD-AA13-1224	10/13/2011	113.34	89.41	19.39	4.78	Y
13	041128162-0013	DSY-SD-AA13-2448	10/13/2011	98.20	82.65	13.39	2.57	Y
14	041128162-0014	DSY-SD-AA13-2448DUP	10/13/2011	77.32	63.36	11.73	2.82	Y
15	041128162-0015	DSY-SD-AA17-0013	10/13/2011	96.54	81.39	12.88	2.48	Y
16	041128162-0016	DSY-SD-AA17-1224	10/13/2011	95.61	78.01	14.97	3.04	Y
17	041128162-0017	DSY-SD-AA17-2448	10/13/2011	113.68	89.28	20.83	3.99	Y
18	041128162-0018	DSY-SD-AA21-0012	10/13/2011	63.55	53.08	9.49	1.4	Y
19	041128162-0019	DSY-SD-AA21-1224	10/13/2011	74.76	63.49	9.78	1.83	Y
20	041128162-0020	DSY-SD-AA21-2448	10/13/2011	88.76	78.89	8.24	1.67	Y
21	041128162-0021	DSY-SD-DUP34-101311	10/13/2011	105.22	82.26	19.23	4.02	Y
22	041128162-0022	DSY-SD-AA24-0012	10/13/2011	104.98	83.43	19.38	2.53	Y

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162 Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
23	041128162-0023	DSY-SD-AA24-1224	10/13/2011	75.39	60.20	13.51	1.96	Y
24	041128162-0024	DSY-SD-AA24-2448	10/13/2011	105.00	75.29	25.04	4.95	Y
25	041128162-0025	DSY-SD-AA26-0012	10/13/2011	108.33	76.40	29.73	2.71	Y
26	041128162-0026	DSY-SD-AA26-1224	10/13/2011	140.83	93.00	39.86	8.39	Y
27	041128162-0027	DSY-SD-AA26-2448	10/13/2011	121.13	79.09	31.17	11.03	Y
28	041128162-0028	DSY-SD-AA28-0016	10/13/2011	125.92	43.07	67.23	15.61	Y
29	041128162-0029	DSY-SD-DUP35-101311	10/13/2011	123.34	46.17	64.05	13.37	Y
30	041128162-0030	DSY-SD-AA30-0012	10/13/2011	292.02	11.36	263.61	17.26	Y
31	041128162-0031	DSY-SD-AA30-1224	10/13/2011	285.69	4.03	262.76	17.17	Y

4. QC Data Reports/Logs

Monthly PLM Bulk QC Summary

Laboratory: Cinnaminson, NJ **Report #** 1 **Month/Year:** Nov-11

				Original		QC		Variance		
	Date	Reference #	Sample #	Analyst	Result	Analyst	Result	Original	QC	Conclusion
1	11/4/11	041128162-0003	DSY-SD-AA01-2448	GV	0	TY	0	0.00	0.00	Pass
2	11/4/11	041128162-0006	DSY-SD-AA05-1224	GV	0	FD	0	0.00	0.00	Pass
3	11/7/11	041128162-0025C	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
4	11/7/11	041128162-0025M	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
5	11/7/11	041128162-0025F	DSY-SD-AA26-0012	LM	0	LM	0	0.00	N/A	Pass
6	11/7/11	041128162-0030	DSY-SD-AA30-0012	DP	0.5	DP	0.5	0.00	N/A	Pass

EMSL PLM ANALYST ACCURACY

Analyst: Leslie McCluskey

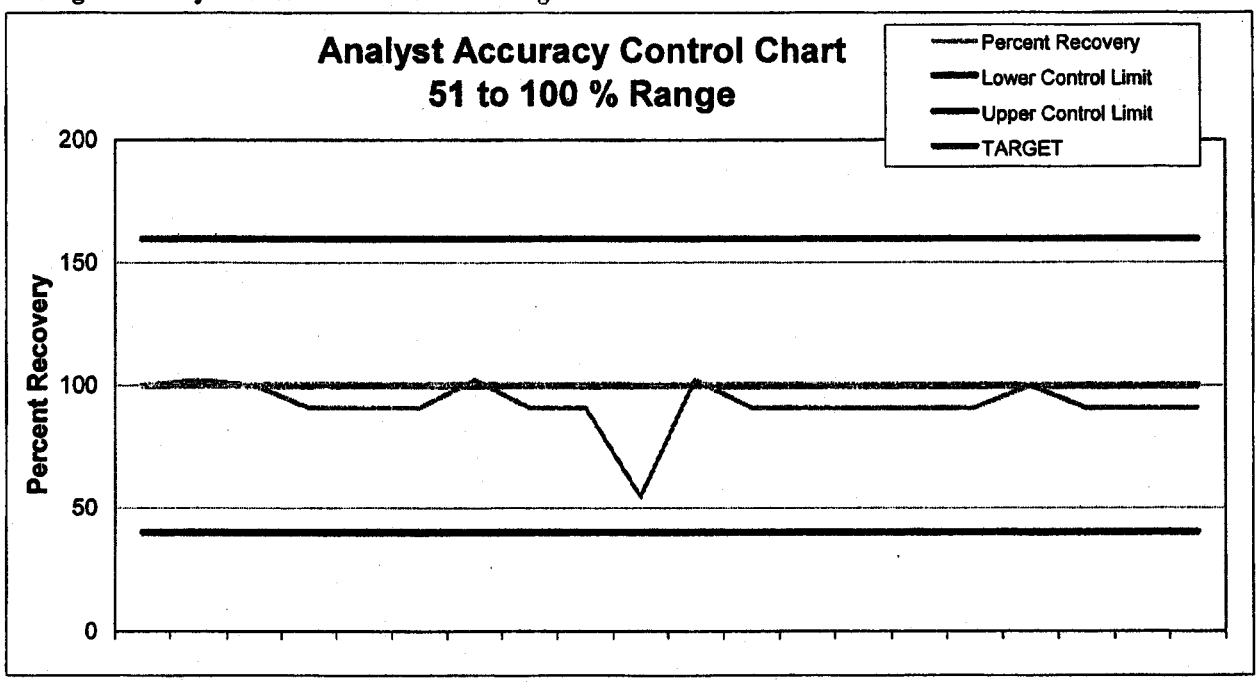
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
1/5/11	6	Chrysotile	55.00	Chrysotile	55.00	IN	100	0	IN
1/6/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
1/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
1/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
2/8/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
3/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	30.00	IN	55	45	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
5/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
6/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
10/21/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **8.5** ***Target = 0***



EMSL PLM ANALYST ACCURACY

Analyst: Melissa Klinedinst

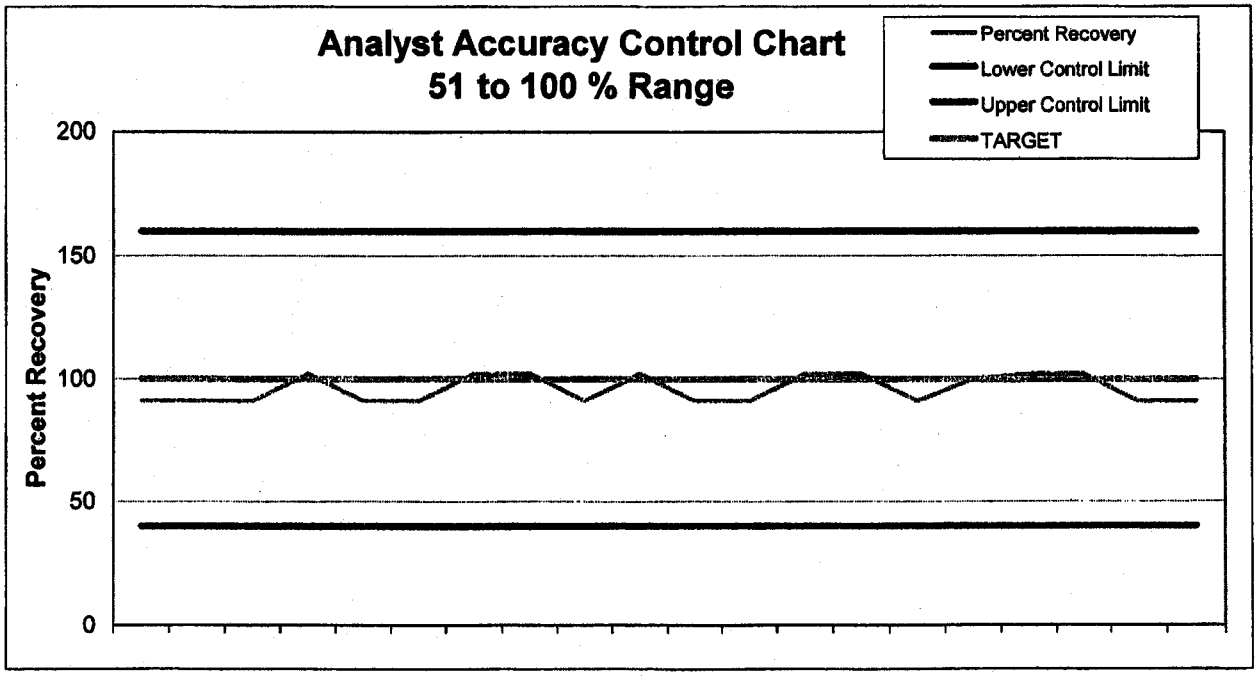
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
6/29/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/11/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/21/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/24/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
9/29/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/3/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/9/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
11/2/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/3/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/6/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **5.8** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Dave Poitras

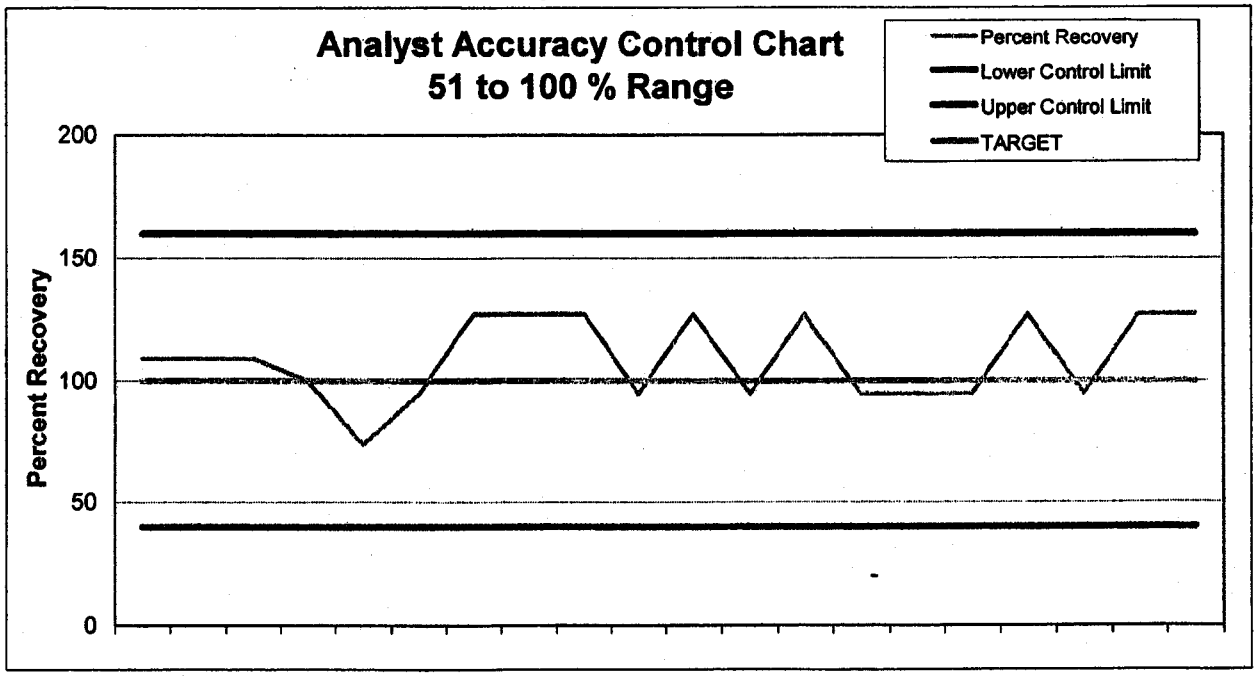
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
3/28/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/12/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
5/3/11	3	Chrysotile	95.00	Chrysotile	70.00	IN	74	26	IN
6/28/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
6/29/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/12/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
7/26/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/2/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/20/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/8/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN

Average Accuracy Coeficent = **15.4** ***Target = 0***



EMSL PLM ANALYST ACCURACY

Analyst: Garret Vliet

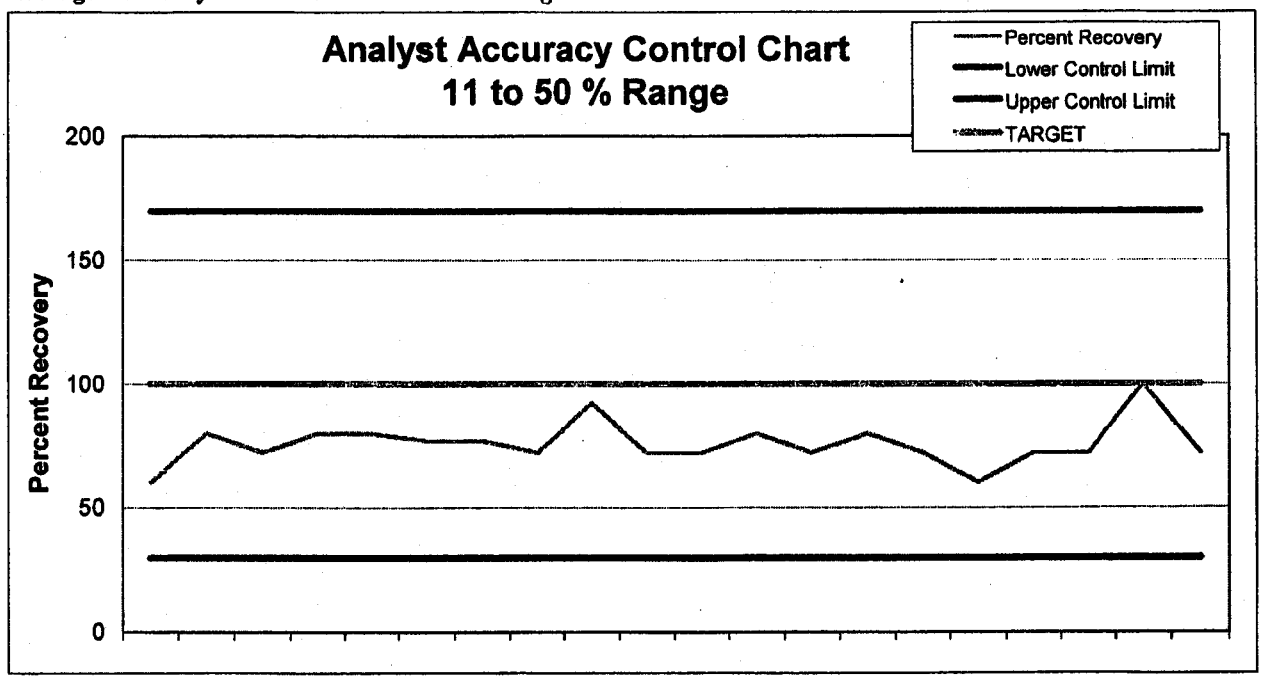
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/24/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	12.00	IN	92	8	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
9/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN

Average Accuracy Coeficent = **24.3** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Frank DiCrescenzo

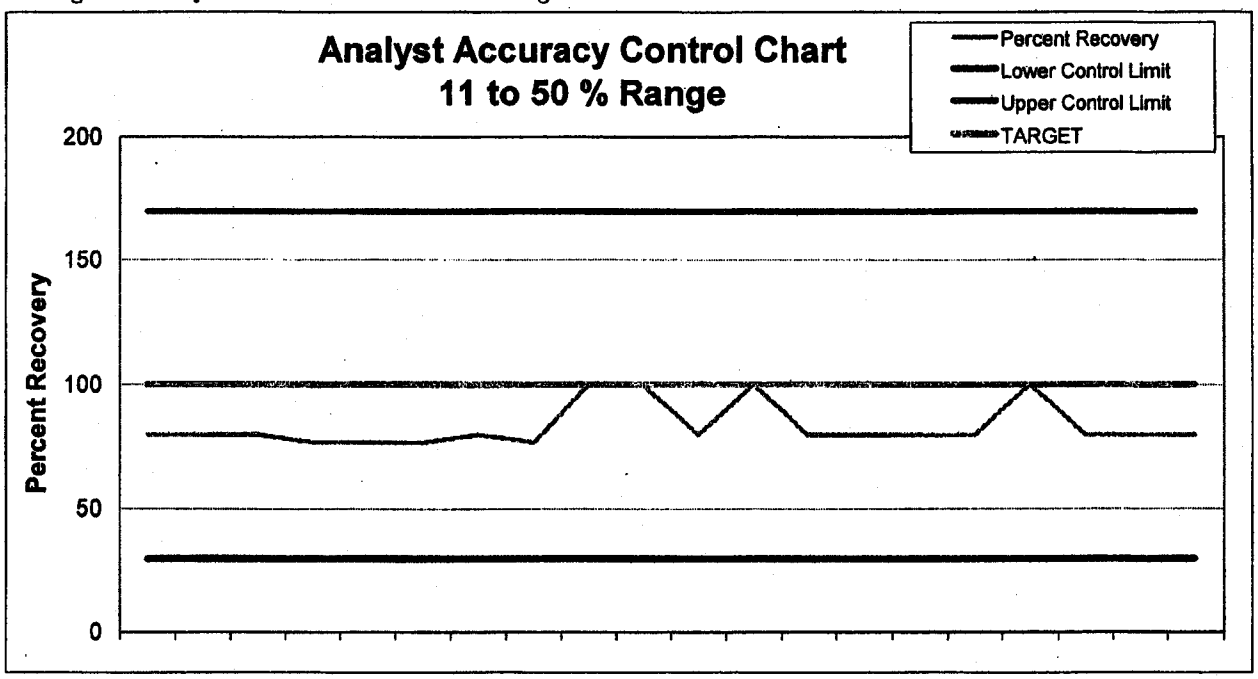
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/18/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/9/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN

Average Accuracy Coeficent = **16.6** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Ted Young

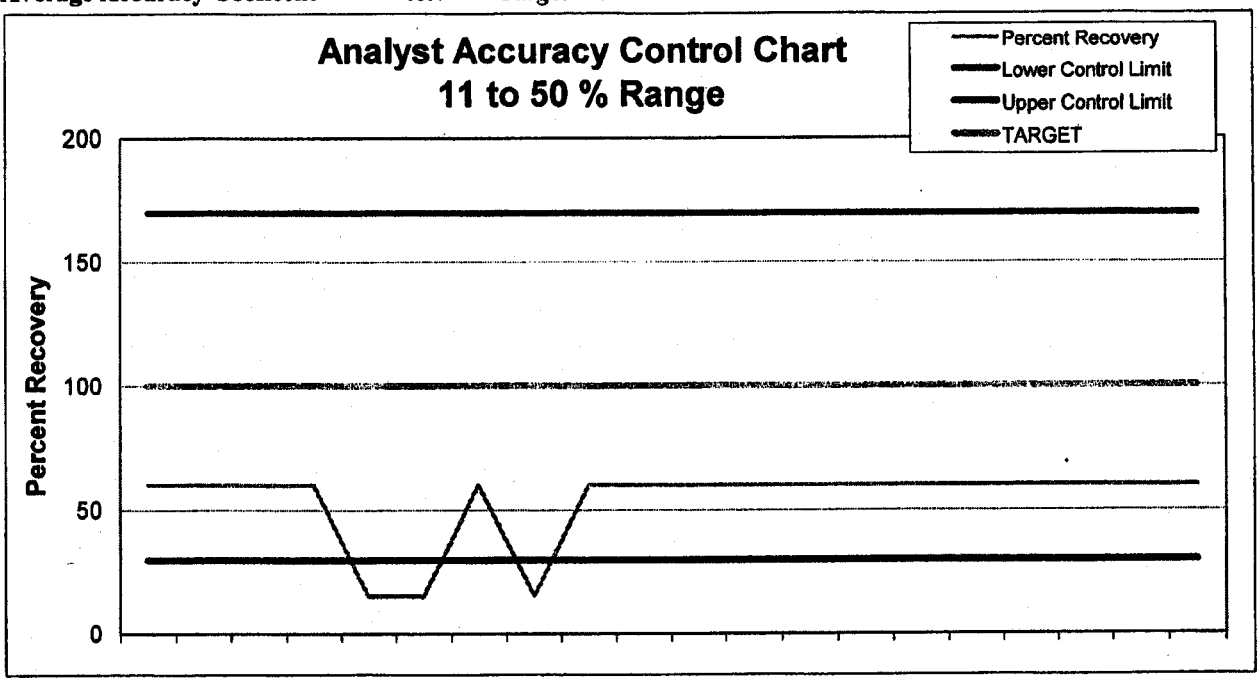
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target 100%	Target 0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/20/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
7/1/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/16/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN

Average Accuracy Coeficent = **46.7** ***Target = 0***



Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10.5 6 20.3	(C)			1	50			20			⊥ R.I. 1.551 ∥ R.I. 1.558
	(T)										M 1 S 1
	(H)										P 2 B 1 (FC) 60 E 1
11.7 6 20.3	(C)			1	50			20			⊥ R.I. 1.550 ∥ R.I. 1.557
	(T)										M 1 S 1
	(H)										P 2 B 1 (FC) 60 E 1
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: Computer: Date:

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties		
11/2/11 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/3 3	(C)			1	97			20	3		1.548 ⊥ R.I.	1.556 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/6 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
11/7 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.	21.6°
	(T)										1 M	1 S	
	(H)										2 P 1 B (PC) 6 1 E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		
	(C)							20			⊥ R.I.	∥ R.I.	
	(T)										M	S	
	(H)										P B (PC) E		

Analyst: MK Date: Nov 11 Computer: _____ Date: _____

Room Temp (C): _____

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
	(C)			act/tre	3			20	97		⊥ R.I.		∥ R.I.		21.1°C
1/1 8	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			chry	70			20	30		⊥ R.I.		∥ R.I.		25.8°C
1/5 6	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			chry	70			20	30		⊥ R.I.		∥ R.I.		19.8°C
1/7 6	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			act/tre	<1			20	100		⊥ R.I.		∥ R.I.		20°C
1/8 1	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)			antho	5			20	95		⊥ R.I.		∥ R.I.		22.8°C
1/9 10	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(PC)	E	

Analyst: David Paitsel Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc. (C) (T) (H)	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11/1 (8)	(C) (T) 1 (H)			5	2			20	98		1.605 ⊥ R.I. 1.618 ∥ R.I. 2.6
											M S
											P 2 B (FC) 1 E
11/2 (3)	(C) (T) 1 (H)	4		1	65			20	35		1.557 ⊥ R.I. 1.558 ∥ R.I. 22.5
											M 1 S
											P 2 B (FC) 1 E
11/3 (3)	(C) (T) 2 (H)	4		1	75			20	25		1.552 ⊥ R.I. 1.557 ∥ R.I. 23.0
											M 1 S
											P 2 B (FC) 1 E
11/4 (9)	(C) (T) 2 (H)	4		1	18			20	82		1.552 ⊥ R.I. 1.557 ∥ R.I. 23.0
											M 1 S
											P 2 B (FC) 1 E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.
											M S
											P B (FC) E

Analyst: G. Uliet Date: 11/1/11 Computer: _____ Date: _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Special Instructions | Order Number

Fax:

Project: Ref Slides

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 3 OTHER, 2 Heterogeneous, 4 Layers (S)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
10/31 8	(C)			5	2	-	-	20	98		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/1 8	(C)			5	2	-	-	20	98		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/2 3	(C)			1	60	-	-	20	40		⊥ R.I.		∥ R.I.		FD
	(T)										M		S		
	(H)										P	B	(FC)	E	
11/3 3	(C)			1	60	-	-	20	40		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	1 B	(FC)	E	
11/4 9	(C)			1	20	-	-	20	80		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	B	(FC)	E	
11/5 6	(C)			1	50	-	-	20	50		1.550 ⊥ R.I.		1.557 ∥ R.I.		FD
	(T)										M		S		
	(H)										2 P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	
	(C)							20			⊥ R.I.		∥ R.I.		
	(T)										M		S		
	(H)										P	B	(FC)	E	

Analyst: FD Date: 11-5-11 Computer: Date:

Room Temp (C):

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat.	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11-1-11 8-1.605	(C)			4/5	2			20	98		1.613 ⊥ R.I. 1.635 ∥ R.I.
	(T)										2 M 1 S
	(H)										2 P 2 B (PC) 6 3 E
11-2-11 3-1.550	(C)			1	60			20	40		1.548 ⊥ R.I. 1.574 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
11-3-11 3-1.550	(C)			1	60			20	40		1.549 ⊥ R.I. 1.570 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
11-4-11 9-1.550	(C)			1	15			20	85		1.550 ⊥ R.I. 1.557 ∥ R.I.
	(T)										1 M 1 S
	(H)										2 1 B (PC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (PC) E

Analyst: Tai Young Date: Nov. 2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM sieve

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 3 OTHER, 2 Heterogeneous, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
BLANK 1 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 2 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 3 MED.	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 1 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 2 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
BLANK 3 Fine	(C) 3	1		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
	(T) 2										M	S
	(H) 1										P B (FC) E	G.V.
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B (FC) E	

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3 °C

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	28162

COMPONENT TYPES | MICROSCOPIC

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (L)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

Optical Properties: Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Sealed, 7. Pitted, 8. Soluble, 9. Fusion Shape, 10. Other; Sign of Elongation (S): 1. +, 2. -, 3. Variable; Pleochroism (P): 1. Yes, 2. No; Birefringence (B): 1. Low: 0.010, 2. Med 0.010-0.050, 3. High 0.050, 4. Stress 0.005 or Isotropic; Fiber Color (F): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless; Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
intro QC 25 C	(C) 2			1	4	~~M~~		20	98	M10	1.551 ⊥ R.I. 1.557 ∥ R.I.
	(T) 1					11	2				1 M 1 S
	(H) 2										2 P ∥ B (FC) 4 1 E
M	(C) 2			1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.
	(T) 1										1 M 1 S
	(H) 2										2 P 1 B (FC) 4 1 E
F	(C) 2			ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.
	(T) 1										M S
	(H) 1										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Curled, 7. Fibril, 8. Matrix, 9. Cleavage Fragments, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low ≤0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Plane Polarized Light Color (PC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-2 COARSE	(C) 2	1/2/3		ND		—	—	20	100	NF	⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (PC) / E

FD

Analyst: FD Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: QC

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Curled, 7. Fibril, 8. Matrix, 9. Elastic Shape, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
QC-3 COARSE	(C) 2	2,3,6		NID				20	100		⊥ R.I. / ∥ R.I.
	(T) 2										M / S
	(H) 2										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

Analyst: Tim Young Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc. PLM7.9.0

5. Client and EMSL Internal Chains of Custody

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
SE6841	

LAB USE ONLY WORK ORDER #: SE6768 ~~SE6841~~

KATAHDIN PROJECT NUMBER _____

REMARKS: To EMSL

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES	Filt. ☐Y ☐N
•	DSY-SD-AA01-0012	10-12-11/14:20	SL	1	✓	SDG: DSY-23	
•	-AA01-1224	/14:23		1	✓		
•	-AA01-2448	/14:28		1	✓		
•	-DUP33-10121	/00:00		1	✓		
•	-AA05-0012	/14:45		1	✓		
•	-AA05-1224	/14:48		1	✓		
•	-AA05-2448	/14:51		1	✓		
		/					
•	DSY-SD-AA09-0012	10-13-11/11:55	SL	1	✓	SDG: DSY-24	
•	-AA09-1224	/11:58		1	✓		
•	-AA09-2448	/12:01		1	✓		
•	-AA13-0012	/12:20		1	✓		
•	-AA13-1224	/12:23		1	✓		
•	-AA13-2448	/12:26		2	✓	MS/MSD	
•	-AA17-0012	/12:45		1	✓		
•	-AA17-1224	/12:48		1	✓		

COMMENTS DOD QSM 4.1 ND to LOD QC Level IV Test America ADAPTED

Due ~~12~~ 11-1-11

31

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11/15:15	10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

041128162

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:

LAB USE ONLY WORK ORDER #: SE6841

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE
PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Asbestos	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
1	DSY-SD-AA17-2448	10-13-11 / 12:51	SL	1	✓										
2	-AA21-0012	/ 13:05													
3	-AA21-1224	/ 13:08													
4	-AA21-2448	/ 13:11													
5	-DUP34-101311	/ 00:00													
6	-AA24-0012	/ 13:25													
7	-AA24-1224	/ 13:28													
8	-AA24-2448	/ 13:31													
9	-AA26-0012	/ 14:00													
10	-AA26-1224	/ 14:03													
11	-AA26-2448	/ 14:06													
12	-AA28-0016	/ 14:30													
13	-DUP35-101311	/ 00:00													
14	-AA30-0012	/ 14:45													
15	-AA30-1224	/ 14:48													
		/													

SDG: DSY-24

Jar marked 0012

Jar rec'd broken

OCT 20 PM 5:16

COMMENTS See Page 1 called client/left message for Terri TAT CJK

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11 / 15:15	C LaLena 10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

REPORT TO INSTRUCTIONS

- ☐ Send Receipt Confirmation Emails
- ☐ Email Report Only-Do not send hard copy
- ☐ No electronic signatures
- ☐ Project ID required
- ☐ Cust. COC ID required
- ☐ Miscellaneous account

Sales Rep and Comment: ssteinmetz

Instructions
Received 2 day extention on due date

BILL TO INSTRUCTIONS

- ☐ Exempt from prep charge
- ☐ Exempt from off hour min charges
- ☐ Exempt from layer/aliquot charges
- ☐ Email Invoice Only- Do not send hard copy.
- ☐ Credit Card on File
- ☐ P.O. Required

Billing Frequency: With Report -- Print and send an invoice for each Order ID

Use Billing Contact:
Accounting Terms: N30
Payment Directions: With Report

Instructions

Internal Comment

Test: PLM ASTM Sieve Quantitative **Matrix** Soils **TAT:** 2 Week **Qty:** 31

- ☐ Lab Opening Exempt For Test
- ☐ Prep Charge Exempt For Test
- ☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments
weights are estimated using a blank sample jar as tare weight. Sludge could not be completely removed.

Prepped: DS **Date** 11/3/11
Analyzed: G.Vliet/MM MK **Date** 11/4/11 115, 117
Data Entry RD **Date** 11.8.11
Screened: **Date**
Mailed: KB **Date** 11/10/11

Special Test Instructions

Due Date 11/5/11

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		~~11/3/2011~~ 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0005	DSY-SD-AA05-0012		11/3/2011 2:00:00 PM
041128162-0006	DSY-SD-AA05-1224		11/3/2011 2:00:00 PM
041128162-0007	DSY-SD-AA05-2448		11/3/2011 2:00:00 PM
041128162-0008	DSY-SD-AA09-0012		11/3/2011 2:00:00 PM
041128162-0009	DSY-SD-AA09-1224		11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400

Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

041128162-0010	DSY-SD-AA09-2448	11/3/2011 2:00:00 PM
041128162-0011	DSY-SD-AA13-0012	11/3/2011 2:00:00 PM
041128162-0012	DSY-SD-AA13-1224	11/3/2011 2:00:00 PM
041128162-0013	DSY-SD-AA13-2448	11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP	11/3/2011 2:00:00 PM
041128162-0015	DSY-SD-AA17-0012	11/3/2011 2:00:00 PM
041128162-0016	DSY-SD-AA17-1224	11/3/2011 2:00:00 PM
041128162-0017	DSY-SD-AA17-2448	11/3/2011 2:00:00 PM
041128162-0018	DSY-SD-AA21-0012	11/3/2011 2:00:00 PM
041128162-0019	DSY-SD-AA21-1224	11/3/2011 2:00:00 PM
041128162-0020	DSY-SD-AA21-2448	11/3/2011 2:00:00 PM
041128162-0021	DSY-SD-DUP34-101311	11/3/2011 2:00:00 PM
041128162-0022	DSY-SD-AA24-0012	11/3/2011 2:00:00 PM
041128162-0023	DSY-SD-AA24-1224	11/3/2011 2:00:00 PM
041128162-0024	DSY-SD-AA24-2448	11/3/2011 2:00:00 PM
041128162-0025	DSY-SD-AA26-0012	11/3/2011 2:00:00 PM
041128162-0026	DSY-SD-AA26-1224	11/3/2011 2:00:00 PM
041128162-0027	DSY-SD-AA26-2448	11/3/2011 2:00:00 PM
041128162-0028	DSY-SD-AA28-0016	11/3/2011 2:00:00 PM
041128162-0029	DSY-SD-DUP35-101311	11/3/2011 2:00:00 PM
041128162-0030	DSY-SD-AA30-0012	11/3/2011 2:00:00 PM
041128162-0031	DSY-SD-AA30-1224	11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *11/8/2011 11:23:35 AM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM
EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

Test: **TEM ASTM Sieve Qualitative** **Matrix** Soils **TAT:** 2 Week **Qty:** 5

☐ Lab Opening Exempt For Test
☐ Prep Charge Exempt For Test
☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments

Prepped: DB **Date:** 11/8/11
Analyzed: RD **Date:** 11.8.11
Data Entry ↓ **Date:** 11.8.11
Screened: **Date:**
Mailed: DB **Date:** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		11/3/2011 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP		11/3/2011 2:00:00 PM

0411 Bulk 0076 E

Reprep w/acid DB

0411 Bulk 0075 O

6. Equipment Performance Checks

PLM Calibration & Contamination Record

Lab: Cinnaminson Month / Year: November / 2011

PLM Scope #: 02

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	C.H.	✓	✓	✓	✓	✓	✓	420	589
11/2/11	C.H.	✓	✓	✓	✓	✓	✓		
11/3/11	C.H.	✓	✓	✓	✓	✓	✓		
11/4/11	C.H.	✓	✓	✓	✓	✓	✓		
11/5/11	LM	✓	✓	✓	✓	✓	✓		
11/7/11	LM/C.H	✓	✓	✓	✓	✓	✓		
11/8/11	C.H	✓	✓	✓	✓	✓	✓		
11/9/11									
11/10/11									
11/11/11									
11/									
11/									
11/									
11/									
11/									
11/									

26.1°C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Cinn Month / Year: Nov 2011

PLM Scope #: 10

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/2/11	MK	✓	✓	✓	✓	✓	✓	4160	6220
11/3	MK	✓	✓	✓	✓	✓	✓		
11/6	MK	✓	✓	✓	✓	✓	✓		
11/7	MK	✓	✓	✓	✓	✓	✓		
11/9	MK	✓	✓	✓	✓	✓	✓		

21.6 °C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinn. NJ. Month / Year: November 2011

PLM Scope #: 5

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/2011	DP	✓	center	✓	align	✓	✓	460	620
11/2/2011	DP	✓	center	✓	✓	✓	✓		
11/5/2011	DP	✓	center	✓	✓	✓	✓		
11/7/2011	DP		center	✓	✓	✓	✓		
11/8/2011	DP	✓	center	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson 04 Month / Year: Nov. 2011

PLM Scope #: 01

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	G.V.	/	/	/	/	/	///	460	600
11/2/11	G.V.	/	/	/	/	/	///		
11/3/11	G.V.	/	/	/	/	/	////		
11/4/11	G.V.	/	/	/	/	/	///		
11/7/11	G.V.	/	/	/	/	/	///		
11/9/11	G.V.	/	/	/	/	/	///		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson-Asbestos Month / Year: 11/11

PLM Scope #: 06

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11-1-11	FD	✓	✓	✓	✓	✓	✓	460	620
11-2-11	FD	✓	✓	✓	✓	✓	✓		
11-3-11	FD	✓	✓	✓	✓	✓	✓		
11-4-11	FD	✓	✓	✓	✓	✓	✓		
11-5-11	FD	✓	✓	✓	✓	✓	✓		
11-8-11	FD	✓	✓	✓	✓	✓	✓		
11-9-11	FD	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Livermore Month / Year: Nov / 2011

PLM Scope #: 4 Tod Yang

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1	TY	✓	✓	✓	✓	✓	✓	455	550
11/2	TY	✓	✓	✓	✓	✓	✓		
11/3	TY	✓	✓	✓	✓	✓	✓		
11/4	TY	✓	✓	✓	✓	✓	✓		
11/7	TY	✓	✓	✓	✓	✓	✓		
11/8	TY	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

Daily TEM Calibration Sheet

Month: November Year: 2011 Scope: 04-03

Day (1-31)	Analyst Initials	Scope Align.	LN Dewar Filled	Al Peak Actual	Al Peak Accepted Limit	Cu Peak Actual	Cu Peak Accepted Limit	Pass/Fail* (circle)
1	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
2	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	Pass/Fail
3	CG	✓	FL	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
4	CG	✓	CG	1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
5			FL		1.47-1.49		8.03-8.05	Pass/Fail
6					1.47-1.49		8.03-8.05	Pass/Fail
7			FL		1.47-1.49		8.03-8.05	Pass/Fail
8	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
9			FL		1.47-1.49		8.03-8.05	Pass/Fail
10	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	Pass/Fail
11					1.47-1.49		8.03-8.05	Pass/Fail
12					1.47-1.49		8.03-8.05	Pass/Fail
13					1.47-1.49		8.03-8.05	Pass/Fail
14					1.47-1.49		8.03-8.05	Pass/Fail
15					1.47-1.49		8.03-8.05	Pass/Fail
16					1.47-1.49		8.03-8.05	Pass/Fail
17					1.47-1.49		8.03-8.05	Pass/Fail
18					1.47-1.49		8.03-8.05	Pass/Fail
19					1.47-1.49		8.03-8.05	Pass/Fail
20					1.47-1.49		8.03-8.05	Pass/Fail
21					1.47-1.49		8.03-8.05	Pass/Fail
22					1.47-1.49		8.03-8.05	Pass/Fail
23					1.47-1.49		8.03-8.05	Pass/Fail
24					1.47-1.49		8.03-8.05	Pass/Fail
25					1.47-1.49		8.03-8.05	Pass/Fail
26					1.47-1.49		8.03-8.05	Pass/Fail
27					1.47-1.49		8.03-8.05	Pass/Fail
28					1.47-1.49		8.03-8.05	Pass/Fail
29					1.47-1.49		8.03-8.05	Pass/Fail
30					1.47-1.49		8.03-8.05	Pass/Fail
31					1.47-1.49		8.03-8.05	Pass/Fail

*** Any failing results need immediate corrective action**

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Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Chrysotile Beam Dose Sensitivity

(Quarterly)

Date	Initials	Negative Numbers		At least 90% of patterns >15 seconds ?
		SAED	Morphology	
1/27/2009	JRB	03070	03071	PASS
5/7/2009	KLB	03125	03124	PASS
8/5/2009	KLB	03_247	03_246	PASS
11/3/2009	KLB	03-356	03-357	PASS
2/8/2010	DY	03_372	03_373	PASS
5/18/2010	DY	03373	03374	PASS
8/16/2010	DY	03030	03031	PASS
11/5/2010	CG	11-5-10CG6	11-5-10CG5	PASS
2/18/2011	CG	03125	03126	PASS
5/20/2011	CG	03155	03154	PASS
8/18/2011	CG	03227	03228	PASS
11/4/2011	CG	03316	03317	PASS

Comments:

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

Negative (Camera)					
Date	Initials	Negative Number	Camera Length	Camera Constant	Is 2 Standard Dev. < 5% Mean?
2/25/2010	CJG	03-37216	100	516.02	PASS
3/17/2010	CJG	03-6[4]	100	514.61	PASS
5/18/2010	DY	03006	100	501.47	PASS
6/18/2010	DY	03024	100	510.82	PASS
7/28/2010	DY	03027	100	521.57	PASS
9/3/2010	CG	03030	100	517.31	PASS
10/4/2010	CG	03035	100	521.76	PASS
11/5/2010	CG	11-5-10-CG1	100	526.44	PASS
12/16/2010	CG	03-278	100	527.61	PASS
1/13/2011	CG	1-13-10 CG1	100	523.21	PASS
2/17/2011	CG	03122	100	529.45	PASS
3/18/2011	CG	03139	100	523.70	PASS
4/15/2011	CG	03144	100	510.25	PASS
5/20/2011	CG	03156	100	522.70	PASS
6/13/2011	CG	03163	100	522.09	PASS
7/12/2011	CG	03169	100	533.34	PASS
8/11/2011	CG	03219	100	529.18	PASS
9/15/2011	CG	03258	100	532.16	PASS
10/12/2011	CG	03289	100	524.71	PASS
11/4/2011	CG	03318	100	532.69	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

On Screen					
Date	Initials	Camera Length	Aperture #	Aperture Diameter	Is 2 Standard Dev. < 5% Mean?
7/28/2010	DY	24	1	1.12	PASS
9/3/2010	CG	24	1	1.18	PASS
10/4/2010	CG	24	1	1.18	PASS
11/5/2010	CG	24	1	1.18	PASS
12/16/2010	CG	24	1	1.18	PASS
2/17/2011	CG	24	1	1.18	PASS
2/18/2011	CG	24	1	1.18	PASS
2/22/2011	CG	24	1	1.18	PASS
3/3/2011	CG	24	1	1.18	PASS
3/7/2011	CG	24	1	1.18	PASS
3/8/2011	CG	24	1	1.18	PASS
3/18/2011	CG	24	1	1.18	PASS
4/15/2011	CG	24	1	1.18	PASS
5/20/2011	CG	24	1	1.18	PASS
6/13/2011	CG	24	1	1.18	PASS
7/12/2011	CG	24	1	1.20	PASS
8/11/2011	CG	24	1	1.20	PASS
9/15/2011	CG	24	1	1.18	PASS
10/12/2011	CG	24	1	1.18	PASS
11/4/2011	CG	24	1	1.18	PASS

The above aperture diameter represents the on screen diameter in reciprocal space. Multiply this number times the number of layer lines seen to get layer line spacing.

Comments:

Plasma Asher Calibration

(Quarterly)

Time To Ash 5% of Collapsed MCE Filter			
Date	Initials	Min	Sec
10/28/2009	SNS	3	18
2/2/2010	SNS	6	49
5/12/2010	DY	7	28
8/20/2010	DS	9	32
9/13/2010	WP	4	15

Comments: This is Asher is no longer in use as off Dec 2010. The 2 ashers currently in use for prep are on Scope 1 and Scope 2's calibration report.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Magnification Calibrations
(Monthly)

20,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	20963	20925	PASS
6/18/2010	DY	20963	21060	PASS
7/28/2010	DY	20963	21060	PASS
9/3/2010	CG	20963	20250	PASS
10/4/2010	CG	20963	21330	PASS
11/5/2010	CG	20963	21060	PASS
12/17/2010	CG	20963	21060	PASS
1/13/2011	CG	20963	21060	PASS
2/17/2011	CG	20963	21330	PASS
3/18/2011	CG	20963	21330	PASS
4/15/2011	CG	20963	21330	PASS
5/20/2011	CG	20963	20790	PASS
6/13/2011	CG	20963	20304	PASS
7/12/2011	CG	20963	20790	PASS
8/11/2011	CG	20963	21276	PASS
9/15/2011	CG	20963	20385	PASS
10/12/2011	CG	20963	20925	PASS
11/4/2011	CG	20963	21060	PASS

Comments:

20,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DY	14474	14644	PASS
3/18/2010	DY	14474	14400	PASS
5/18/2010	DY	14474	14582	PASS
6/18/2010	DY	14474	14400	PASS
7/28/2010	DY	14474	14400	PASS
9/3/2010	CG	14474	14164	PASS
10/3/2010	CG	14474	14521	PASS
11/5/2010	CG	14474	14644	PASS
12/17/2010	CG	14474	14400	PASS
1/13/2011	CG	14474	14400	PASS
2/17/2011	CG	14474	14521	PASS
3/18/2011	CG	14474	14644	PASS
4/15/2011	CG	14474	14644	PASS
5/20/2011	CG	14474	14400	PASS
6/13/2011	CG	14474	14521	PASS
7/12/2011	CG	14474	14400	PASS
8/11/2011	CG	14474	14521	PASS
9/15/2011	CG	14474	14521	PASS
10/11/2011	CG	14474	14281	PASS
11/4/2011	CG	14474	14400	PASS

Comments:

10,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	10641	10800	PASS
6/18/2010	DY	10641	10962	PASS
7/28/2010	DY	10641	10800	PASS
9/3/2010	CG	10641	10908	PASS
10/4/2010	CG	10641	10584	PASS
11/5/2010	CG	10641	10692	PASS
12/17/2010	CG	10641	10757	PASS
1/13/2011	CG	10641	10757	PASS
2/17/2011	CG	10641	10584	PASS
3/18/2011	CG	10641	10843	PASS
4/15/2011	CG	10641	10692	PASS
5/20/2011	CG	10641	10584	PASS
6/13/2011	CG	10641	10303	PASS
7/12/2011	CG	10641	10368	PASS
8/11/2011	CG	10641	10627	PASS
9/15/2011	CG	10641	10152	PASS
10/12/2011	CG	10641	10584	PASS
11/4/2011	CG	10641	10541	PASS

Comments:

10,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DLY	7293	7448	PASS
3/18/2010	DLY	7293	7353	PASS
5/18/2010	DY	7293	7353	PASS
6/18/2010	DY	7293	7353	PASS
7/28/2010	DY	7293	7353	PASS
9/3/2010	CG	7293	7082	PASS
10/4/2010	CG	7293	7140	PASS
11/5/2010	CG	7293	7385	PASS
12/16/2010	CG	7293	7200	PASS
1/13/2011	CG	7293	7140	PASS
2/17/2011	CG	7293	7261	PASS
3/18/2011	CG	7293	7448	PASS
4/15/2011	CG	7293	7448	PASS
5/20/2011	CG	7293	7291	PASS
6/13/2011	CG	7293	7353	PASS
7/12/2011	CG	7293	7291	PASS
8/11/2011	CG	7293	7322	PASS
9/15/2011	CG	7293	7200	PASS
10/11/2011	CG	7293	7140	PASS
11/4/2011	CG	7293	7140	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Calibration of On Screen 0.5 and 5µm

Measuring Aids at EPA AHERA Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DY	0.55	5.46
3/18/2010	DY	0.56	5.56
5/18/2010	DY	0.55	5.49
6/18/2010	DY	0.56	5.56
7/28/2010	DY	0.56	5.56
9/3/2010	CG	0.56	5.65
10/3/2010	CG	0.55	5.51
11/5/2010	CG	0.55	5.46
12/17/2010	CG	0.56	5.56
1/13/2011	CG	0.56	5.56
2/17/2011	CG	0.55	5.51
3/18/2011	CG	0.55	5.46
4/15/2011	CG	0.55	5.46
5/20/2011	CG	0.56	5.56
6/13/2011	CG	0.55	5.51
7/12/2011	CG	0.56	5.56
8/11/2011	CG	0.55	5.51
9/15/2011	CG	0.55	5.51
10/11/2011	CG	0.56	5.60
11/4/2011	CG	0.56	5.56
Comments:			

Calibration of On Screen 1.0 and 10µm

Measuring Aids at EPA 100.2 Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DLY	1.07	10.74
3/18/2010	DLY	1.09	10.88
5/18/2010	DY	1.09	10.88
6/18/2010	DY	1.09	10.88
7/28/2010	DY	1.09	10.88
9/3/2010	CG	1.13	11.30
10/4/2010	CG	1.12	11.20
11/5/2010	CG	1.08	10.83
12/16/2010	CG	1.11	11.11
1/13/2011	CG	1.12	11.20
2/17/2011	CG	1.10	11.02
3/18/2011	CG	1.07	10.74
4/15/2011	CG	1.07	10.74
5/20/2011	CG	1.10	10.97
6/13/2011	CG	1.09	10.88
7/12/2011	CG	1.10	10.97
8/11/2011	CG	1.09	10.93
9/15/2011	CG	1.11	11.11
10/11/2011	CG	1.12	11.20
11/4/2011	CG	1.12	11.20
Comments:			

Spot Size Measurements

(Quarterly)

Date	Initials	Actual Spot	Target Spot Size	FAIL ≤250nm =	Is 2 SD <25% of
5/18/2010	DY	203.11	≤ 250 nm	PASS	PASS
8/16/2010	DY	213.68	≤ 250 nm	PASS	PASS
11/5/2010	CG	216.38	≤ 250 nm	PASS	PASS
12/17/2010	CG	206.76	≤ 250 nm	PASS	PASS
2/17/2011	CG	192.34	≤ 250 nm	PASS	PASS
2/18/2011	CG	216.38	≤ 250 nm	PASS	PASS
2/22/2011	CG	201.95	≤ 250 nm	PASS	PASS
3/3/2011	CG	221.19	≤ 250 nm	PASS	PASS
3/7/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/8/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/18/2011	CG	192.34	≤ 250 nm	PASS	PASS
4/15/2011	CG	201.95	≤ 250 nm	PASS	PASS
5/20/2011	CG	240.42	≤ 250 nm	PASS	PASS
6/13/2011	CG	231.48	≤ 250 nm	PASS	PASS
7/12/2011	CG	216.45	≤ 250 nm	PASS	PASS
8/11/2011	CG	197.41	≤ 250 nm	PASS	PASS
9/15/2011	CG	245.28	≤ 250 nm	PASS	PASS
10/12/2011	CG	215.05	≤ 250 nm	PASS	PASS
11/4/2011	CG	223.17	≤ 250 nm	PASS	PASS
Comments:					

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

K Factors

(Semi-Annually)

Test Dates	Initials	Mean K Factor	Pass Criteria	Actual	PASS FAIL	Acceptance Criteria	PASS/FAIL
5/19/2011	CG	Mg:Si	1.0 - 2.0	1.63	PASS	2SD < 10% Mean	PASS
5/19/2011	CG	Ca:Si	1.0 - 1.75	1.11	PASS	2SD < 10% Mean	PASS
----		Fe:Si	1.0 - 2.0	1.46	PASS	2SD < 10% Mean	PASS
----		Mg:Fe	1.5 or less	1.11	PASS	N / A	N / A
12/16/2010	CG	Na:Si	1.0 - 4.0	3.02	PASS	2SD < 20% Mean	PASS
5/20/2011	CG	Al:Si	1.0 - 1.75	1.19	PASS	2SD < 10% Mean	PASS

Comments:

Detector Resolution

(Semi-Annually / Quarterly when necessary to meet TNI Standard)

Date	@Mn Kα Peak Initials	Resolution	<175?	Resolution + 2(s) <180?
10/25/2007	GPA	130.5	Pass	Pass
5/1/2008	GPA	134.8	Pass	Pass
10/29/2008	JRB	115.9	Pass	Pass
5/6/2009	JB	128.9	Pass	Pass
11/3/2009	KLB	141.0	Pass	Pass
4/28/2010	DY	131.0	Pass	Pass
11/4/2010	CG	120.0	Pass	Pass
5/20/2011	CG	135.0	Pass	Pass
8/18/2011	CG	125.0	Pass	Pass
11/4/2011	CG	135.0	Pass	Pass

Comments:

Significant Na and Resolvable Mg-Si Peaks

(Quarterly)

Significant Na				Resolvable			
Date	Initials	Na		Date	Initials	Mg	Si
8/5/2009	KLB	Pass		8/5/09	KLB	Yes	Yes
11/3/2009	KLB	Pass		11/3/09	KLB	Yes	Yes
2/5/2010	DY	Pass		2/5/10	DY	Yes	Yes
4/28/2010	DY	Pass		4/28/10	DY	Yes	Yes
7/28/2010	DY	Pass		7/28/10	DY	Yes	Yes
11/5/2010	CG	Pass		11/4/10	CG	Yes	Yes
2/18/2011	CG	Pass		2/18/11	CG	Yes	Yes
5/20/2011	CG	Pass		5/20/11	CG	Yes	Yes
8/18/2011	CG	Pass		8/18/11	CG	Yes	Yes
11/4/2011	CG	Pass		11/4/11	CG	Yes	Yes

Comments:

7. NVLAP/AIHA Certifications

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2006-05-19)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.

Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
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Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC thereby conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA-LAP, LLC in the following:

LABORATORY ACCREDITATION PROGRAMS

√	INDUSTRIAL HYGIENE	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL LEAD	Accreditation Expires: July 01, 2012
√	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: July 01, 2012
☐	FOOD	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current scope of accreditation.

Dave Sandusky

Dave Sandusky, CIH
Chairperson, Analytical Accreditation Board

Date Issued: 07/01/2010

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
107 Haddon Avenue, Westmont, NJ 08108

Laboratory ID: 100194
Issue Date: 07/01/2010

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or revocation. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Gas Chromatography	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1400	
		NIOSH 1500	
		NIOSH 1550	
		NIOSH 1603	
		NIOSH 2000	
		NIOSH 2551	
		NIOSH 5502	
		NIOSH 5503	
		NIOSH 5510	
		OSHA 1010	
	GC (Diffusive Samplers)	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1501	
	GC/MS	EPA TO-15	
	HPLC	NIOSH 2016	
		NIOSH 5506	
		OSHA 47	
		OSHA 58	
	AA	NIOSH 6009	
		NIOSH 7105	
		OSHA ID-140	
		OSHA ID-145	
	ICP	NIOSH 7300	
	XRD	NIOSH 7500	
	Ion Chromatography	NIOSH 6004	
		NIOSH 6011	
		NIOSH 7903	

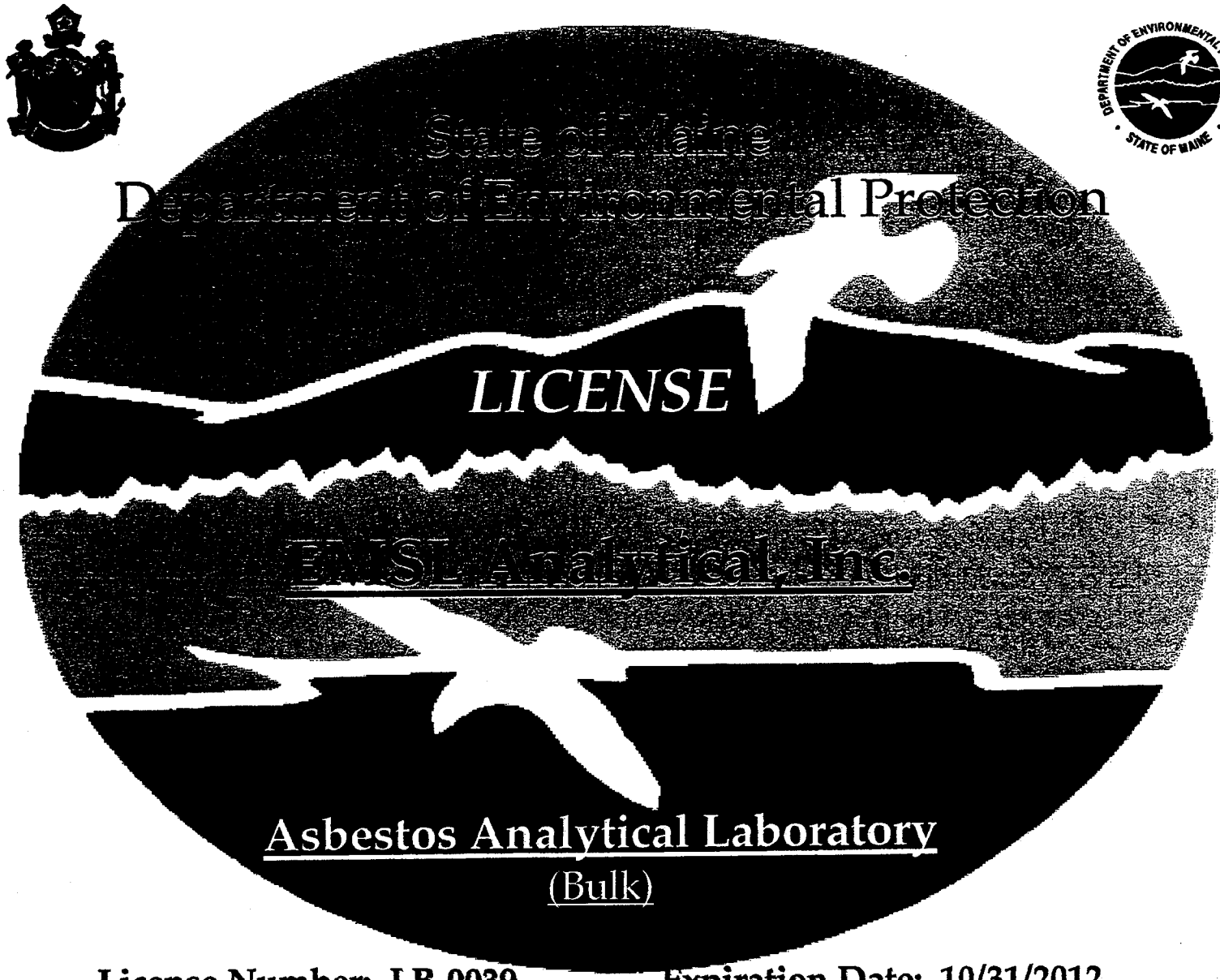
AIHA
Laboratory Accreditation Programs, LLC

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Ion Chromatography	OSHA ID-214	
		OSHA ID-215	
	Gravimetric	NIOSH 0500	
		NIOSH 0600	
	UV/VIS (Colorimetric)	NIOSH 6010	
	Thermal Optical Analyzer	NIOSH 5040	
	Polarized Light Microscopy (PLM)	EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)	NIOSH 7400	
	Transmission Electron Microscopy (TEM)	EPA AHERA - 40 CFR Part 763	
		NIOSH 7402	

The laboratory participates in the following AIHA-LAP, LLC-approved proficiency testing programs:

- ✓ Metals*
- ✓ Silica*
- ✓ Asbestos*
- ☐ Bulk Asbestos*
- ✓ Beryllium
- ☐ WASP[1] (Thermal Desorption Tubes)
- ☐ Pharmaceutical Round Robin
- ☐ Compressed/Breathing Air Round Robin
- ☐ NVLAP (determined at the time of site assessment)
- ✓ Organic Solvents*
- ✓ Diffusive Sampler (3M)*
- ☐ Diffusive Sampler (SKC)*
- ☐ Diffusive Sampler (AT)
- ✓ WASP[1] (Formaldehyde)

[1] Workplace Analytical Scheme for Proficiency



License Number: LB-0039 **Expiration Date:** 10/31/2012

8. Shipping Documentation

From:
WILLARD WARREN
KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY

SCARBOROUGH, ME 04074
(207) 874-2400

Ship Date: 18OCT11
ActWgt: 36.6 LB
CAD: 683287/CAFE2472

TO SAMPLE RECEIVING
EMSL
3 COOPER STREET

WESTMONT, NJ 08108 (US)

FedEx Ground

Ref:
INV:
PO:
Dept:

1 of 1

(9612019) 8146969 60046520

Part # 156148-434 RIT2 04/11 **

GND Prepaid

Katahdin ANALYTICAL SERVICES

Date: 10-18-11 Signature

CUS

ENVIRONMEN
ULTRA CL

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE:** **DECEMBER 14, 2011**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – COPPER, LEAD, ZINC/TOC**
CTO WE61, NAVAL STATION (NAVSTA), DERECKTOR SHIPYARD, NEWPORT, RI
SAMPLE DELIVERY GROUP (SDG) – DSY-9

SAMPLES: 13/Sediment/Lead

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448
DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
DSY-SD-DUP11-092611		

3/Sediment/Copper/Zinc

DSY-SD-AC24-0012	DSY-SD-AC24-1224	DSY-SD-AC24-2448

5/Sediment/TOC

DSY-SD-AC24-0012	DSY-SD-AE24-0012	DSY-SD-AG26-0012
DSY-SD-AI26-0012	DSY-SD-DUP11-092611	

1/Aqueous/Copper/Lead/Zinc

DSY-SD-RB04-092611

Overview

The sample set for NAVSTA Derecktor Shipyard, Newport, CTO WE61, SDG DSY-9, consisted of thirteen (13) sediment samples and one rinsate (1) blank. All fourteen (14) samples were analyzed for lead. Three (3) sediment samples and the one (1) rinsate blank were additionally analyzed for copper and zinc. Five (5) sediment samples were analyzed for total organic carbon (TOC). One field duplicate pair was included in this SDG: DSY-SD-DUP11-092611/ DSY-SD-AG26-0012.

The samples were collected by Tetra Tech NUS on September 26, 2011 and analyzed by Katahdin Analytical Services. The analyses were conducted in accordance with SW-846 Method 6010C and Lloyd Kahn analytical and reporting protocols. A Tier II data validation was performed based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
• Laboratory Method/Preparation Blank Analyses
* • ICP Interference Results

- Laboratory Duplicate Results
* • Laboratory Control Sample Results
- Matrix Spike Recovery
* • Field Duplicate Precision
* • ICP Serial Dilution
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets. Appendix D contains the documentation to support the findings as discussed in this validation report.

NOTES

The following analytes were detected in the preparation blank at the following maximum concentrations:

Analyte	Maximum Concentration (mg/Kg)	Action Level (mg/Kg)
Copper [1]	0.198	0.99
Zinc [1]	5.802	29.01

[1] - Affecting samples associated with preparation batch #BJ10ICS1.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Percent moisture, sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No action was taken on this basis because all results were greater than the action level.

According to the laboratory's case narrative, the zinc result in the initial analysis of sample DSY-SD-AC24-1224 (associated with batch #BJ10ISC1) was not greater than 10X the project acceptance limit (>1/2 Limit of Quantitation (LOQ)) of the preparation blank zinc result, PBSBJ10ICS1. This sample was redigested and reanalyzed for zinc. The result for zinc from this redigestate was used in the data validation.

The laboratory preparation blank associated with batch #BJ04ICW1 and the initial calibration blank (10/4/11 @ 14:52) had positive results for copper, lead, and zinc. No action was taken because the associated rinsate blank, DSY-SD-RB04-092611, is not qualified for blank contamination.

The Relative Percent Difference (RPD) for lead between the sample, DSY-SD-AG26-1224, and its duplicate, DSY-SD-AG26-1224D, the exceeded the laboratory's quality control limit of 20%, however, the RPD was below the project specific 35% quality control limit for sediments as presented in the Sampling and Analysis Plan (SAP). No validation action was necessary in the associated samples.

The RPD for the first TOC in the duplicate results (shown as TOC(1) and TOC(2)) between the sample, DSY-SD-SE26-0012, and its laboratory duplicate, DSY-SD-AE26-0012D was greater than the 30% quality control limit. The RPD for the second TOC (2) results was acceptable. No action was taken in the associated samples.

The Matrix Spike (MS) sample had a Percent Recovery (%R) for lead above the upper quality control limit. No action was taken because the concentration of lead in the environmental sample was 4X greater than the spike concentration.

The MS %R for TOC (1) was below the lower quality control limit. No action was taken in the associated samples because TOC (2) had an acceptable %R.

Sample DSY-SD-AC24-0012 was analyzed for TOC, however, this analysis was not requested on the Chain of Custody (COC) contained in the data package. Because the TOC results were present in the data package, the data validator included the TOC results for this sample in the data review.

The TOC results performed in duplicate for each sample. The laboratory provided both results and the average of the two. The average result was used in the data validation.

EXECUTIVE SUMMARY

Laboratory Performance: The RPD quality control limit was exceeded in the laboratory duplicate analyses for lead and TOC.

Other Factors Affecting Data Quality: One MS %R TOC was low.

The Tier II data validation performed for these analyses were completed with reference to the Region 1 EPA-NE Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, Part VI, November 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April, 2009.

The text of this report has been formulated to address only those areas affecting data quality.

For Tetra Tech NUS
Michelle L. Allen
Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region I Worksheets
4. Appendix D – Support Documentation

Appendix A – Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747 SDG: DSY-9 FRACTION: M MEDIA: SOIL	NSAMPLE	DSY-SD-AC24-0012			DSY-SD-AC24-1224			DSY-SD-AC24-2448			DSY-SD-AE24-0012		
	LAB_ID	SE6227-008			SE6227-009			SE6227-010			SE6227-011		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	34.2			69.5			76.7			36.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		119			6			59.1					
LEAD		90.8			4.6			42.9			1020		
ZINC		320			424			126					

PROJ_NO: 02747 SDG: DSY-9 FRACTION: M MEDIA: SOIL	NSAMPLE	DSY-SD-AE24-1224			DSY-SD-AE24-2448			DSY-SD-AG26-0012			DSY-SD-AG26-1224		
	LAB_ID	SE6227-012			SE6227-013			SE6227-004			SE6227-005		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.8			75.0			36.4			43.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		198			4.8			67.2			113		
ZINC													

PROJ_NO: 02747 SDG: DSY-9 FRACTION: M MEDIA: SOIL	NSAMPLE	DSY-SD-AG26-2448			DSY-SD-AI26-0012			DSY-SD-AI26-1224			DSY-SD-AI26-2448		
	LAB_ID	SE6227-006			SE6227-001			SE6227-002			SE6227-003		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	66.0			38.2			40.0			56.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		25.7			54.6			98.2			62.1		
ZINC													

PROJ_NO: 02747 SDG: DSY-9 FRACTION: M MEDIA: SOIL	NSAMPLE	DSY-SD-DUP11-092611		
	LAB_ID	SE6227-007		
	SAMP_DATE	9/26/2011		
	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	37.4		
	DUP_OF	DSY-SD-AG26-0012		
PARAMETER		RESULT	VQL	QLCD
COPPER				
LEAD		70.6		
ZINC				

PROJ_NO: 02747 SDG: DSY-9 FRACTION: M MEDIA: WATER	NSAMPLE	DSY-SD-RB04-092611		
	LAB_ID	SE6227-014		
	SAMP_DATE	9/26/2011		
	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
COPPER		1	J	P
LEAD		4	U	
ZINC		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC24-0012						DSY-SD-AC24-1224			DSY-SD-AC24-2448		
SDG: DSY-9	LAB_ID	SE6227-8						SE6227-9			SE6227-10		
FRACTION: MISC	SAMP_DATE	9/26/2011						9/26/2011			9/26/2011		
MEDIA: SOIL	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	34.2			34.2			69.5			76.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					42000								
TOTAL SOLIDS		34						70			77		

PROJ_NO: 02747 SDG: DSY-9 FRACTION: MISC MEDIA: SOIL	NSAMPLE	DSY-SD-AE24-0012						DSY-SD-AE24-1224			DSY-SD-AE24-2448		
	LAB_ID	SE6227-11						SE6227-12			SE6227-13		
	SAMP_DATE	9/26/2011						9/26/2011			9/26/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	36.0			36.0			48.8			75.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					53000								
TOTAL SOLIDS		36						49			75		

PROJ_NO: 02747 SDG: DSY-9 FRACTION: MISC MEDIA: SOIL	NSAMPLE	DSY-SD-AG26-0012						DSY-SD-AG26-1224			DSY-SD-AG26-2448		
	LAB_ID	SE6227-4						SE6227-5			SE6227-6		
	SAMP_DATE	9/26/2011						9/26/2011			9/26/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	36.4			36.4			43.0			66.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					40000								
TOTAL SOLIDS		36						43			66		

PROJ_NO: 02747 SDG: DSY-9 FRACTION: MISC MEDIA: SOIL	NSAMPLE	DSY-SD-AI26-0012						DSY-SD-AI26-1224			DSY-SD-AI26-2448		
	LAB_ID	SE6227-1						SE6227-2			SE6227-3		
	SAMP_DATE	9/26/2011						9/26/2011			9/26/2011		
	QC_TYPE	NM						NM			NM		
	UNITS	%			MG/KG			%			%		
	PCT_SOLIDS	38.2			38.2			40.0			56.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					35000								
TOTAL SOLIDS		38						40			56		

PROJ_NO: 02747 SDG: DSY-9 FRACTION: MISC MEDIA: SOIL	NSAMPLE	DSY-SD-DUP11-092611					
	LAB_ID	SE6227-7					
	SAMP_DATE	9/26/2011					
	QC_TYPE	NM					
	UNITS	%			MG/KG		
	PCT_SOLIDS	37.4			37.4		
	DUP_OF	DSY-SD-AG26-0012			DSY-SD-AG26-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON					38000		
TOTAL SOLIDS		37					

Appendix B – Results as Reported by the Laboratory

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC24-0012

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 34.2 **Lab Sample ID:** SE6227-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	119			P	1	4.6	0.29	1.9
7439-92-1	LEAD, TOTAL	90.8		*	P	1	0.93	0.16	0.74
7440-66-6	ZINC, TOTAL	320			P	1	4.6	0.31	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC24-1224

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 69.5 **Lab Sample ID:** SE6227-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	6.0			P	1	2.3	0.14	0.90
7439-92-1	LEAD, TOTAL	4.6		*	P	1	0.45	0.08	0.36
7440-66-6	ZINC, TOTAL	424			P	1	2.2	0.15	0.89

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AC24-2448

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 76.7 **Lab Sample ID:** SE6227-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	59.1			P	1	2.3	0.14	0.90
7439-92-1	LEAD, TOTAL	42.9		*	P	1	0.45	0.08	0.36
7440-66-6	ZINC, TOTAL	126			P	1	2.3	0.15	0.90

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE24-0012

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 36.0 **Lab Sample ID:** SE6227-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	1020		*	P	1	0.80	0.14	0.64

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE24-1224

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 48.8 **Lab Sample ID:** SE6227-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	198		*	P	1	0.66	0.12	0.53

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AE24-2448

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 75.0 **Lab Sample ID:** SE6227-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	4.8		*	P	1	0.33	0.06	0.27

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG26-0012

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 36.4 **Lab Sample ID:** SE6227-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	67.2		*	P	1	1.0	0.18	0.81

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG26-1224

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 43.0 **Lab Sample ID:** SE6227-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7439-92-1	LEAD, TOTAL	113		*	P	1	1.0	0.18	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AG26-2448

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 66.0 **Lab Sample ID:** SE6227-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	25.7		*	P	1	0.66	0.11	0.53

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AI26-0012

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 38.2 **Lab Sample ID:** SE6227-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	54.6		*	P	1	1.2	0.21	0.95

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AI26-1224

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 40.0 **Lab Sample ID:** SE6227-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	98.2		*	P	1	1.1	0.20	0.92

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-AI26-2448

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 56.4 **Lab Sample ID:** SE6227-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	62.1		*	P	1	0.62	0.11	0.50

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-DUP11-092611

Matrix: SOIL **SDG Name:** DSY-9

Percent Solids: 37.4 **Lab Sample ID:** SE6227-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7439-92-1	LEAD, TOTAL	70.6		*	P	1	0.74	0.13	0.59

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DSY-SD-RB04-092611

Matrix: WATER **SDG Name:** DSY-9

Percent Solids: 0.00 **Lab Sample ID:** SE6227-014

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-50-8	COPPER, TOTAL	1.0	J		P	1	25	0.63	10
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	1.07	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.72	10

Comments:

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Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-8
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC24-0012	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	41000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG98860	08-OCT-11 12:16:38	N/A	N/A	
Toc In Soil(2)	43000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG98860	08-OCT-11 12:45:19	N/A	N/A	
Toc In Soil(Avg)	42000 ug/gdrywt	1200	250	880	LLOYD KAHN	WG98860	08-OCT-11 07:02:00	N/A	N/A	
Total Solids	34. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:28:30	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-9
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC24-1224	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	70. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:28:43	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-10
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AC24-2448	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	77. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:28:56	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-11
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE24-0012	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	60000 ug/gdrywt	1100	240	830	LLOYD KAHN	WG99016	10-OCT-11 10:11:23	N/A	N/A	
Toc In Soil(2)	46000 ug/gdrywt	1100	240	830	LLOYD KAHN	WG99016	10-OCT-11 10:38:36	N/A	N/A	
Toc In Soil(Avg)	53000 ug/gdrywt	1100	240	830	LLOYD KAHN	WG99016	10-OCT-11 08:54:19	N/A	N/A	
Total Solids	36. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:29:05	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-12
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE24-1224	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	49. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:29:21	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-13
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AE24-2448	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	75. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:29:28	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-4
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG26-0012	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	41000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG98860	08-OCT-11 11:20:33	N/A	N/A	
Toc In Soil(2)	38000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG98860	08-OCT-11 11:31:51	N/A	N/A	
Toc In Soil(Avg)	40000 ug/gdrywt	1100	230	820	LLOYD KAHN	WG98860	08-OCT-11 07:02:00	N/A	N/A	
Total Solids	36. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:27:40	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-5
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG26-1224	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	43. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:27:54	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-6
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AG26-2448	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	66. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:28:08	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-1
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-AI26-0012	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	35000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG98860	08-OCT-11 10:53:58	N/A	N/A	
Toc In Soil(2)	36000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG98860	08-OCT-11 11:06:09	N/A	N/A	
Toc In Soil(Avg)	35000 ug/gdrywt	1000	220	780	LLOYD KAHN	WG98860	08-OCT-11 07:02:00	N/A	N/A	
Total Solids	38. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:27:09	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-2
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-A126-1224	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	40. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:27:19	ASTM D2216	10-OCT-11	

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Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-3
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-A126-2448	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	56. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:27:28	ASTM D2216	10-OCT-11	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: SE6227-7
Report Date: 10-NOV-11
Client PO: 1045366 50-CTO WE61
Project: NAVSTA Newport CTO W
SDG: DSY-9

Sample Description	Matrix	Date Sampled	Date Received
DSY-SD-DUP11-092611	SL	26-SEP-11	27-SEP-11

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Toc In Soil(1)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG98860	08-OCT-11 11:54:47	N/A	N/A	
Toc In Soil(2)	37000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG98860	08-OCT-11 12:05:54	N/A	N/A	
Toc In Soil(Avg)	38000 ug/gdrywt	1100	230	800	LLOYD KAHN	WG98860	08-OCT-11 07:02:00	N/A	N/A	
Total Solids	37. %	1		N/A	SM2540G	WG98948	11-OCT-11 09:28:21	ASTM D2216	10-OCT-11	

Appendix C – Region I Worksheets

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name NAVSTA Davisville Shipyard, Newport
Reference No. _____

REGION I INORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Katahdin Analytical Services
Case/Project No. #02747, CTONE61
SDG No. DSY-9
No. of Samples/Matrix _____

SOW/Method No. _____
Sampling Date(s) _____
Shipping Date(s) _____
Date Rec'd by lab _____

Traffic Report Sample Nos. _____

DV letter

Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. See _____
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision _____ was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPP or amendment to QAPP).

A (Tier II) or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a ~~partial~~ Tier III was used, then identify samples, parameters, etc., that received partial Tier III validation.

_____

_____

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- ICP-MS Tune
- Calibrations
- Blanks
- ICP-AES Interference Check Sample (ICS)
- ICP-MS Interference Check Sample (ICS)
- ICP-MS Internal Standards
- Matrix Spikes
- Laboratory Duplicate Samples
- Field Duplicates
- ICP Serial Dilutions
- Sensitivity Check
- Performance Evaluation Samples/Accuracy Check
- Analyte Quantitation and Reported Quantitation Limits
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with analyte is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Analyte not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
BB, EB - Analyte detected in aqueous bottle blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Michelle Allen Company Name TetraTech Phone Number _____

Date Validation Started 12/01/11 Date Validation Completed 12/8/11

EPA-NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet is provided. Indicate NA if worksheet is not applicable to the analytical method. Note: there is no standard worksheet for System Performance; however, the validator must document all system performance issues in the Data Validation Memorandum.

INORG Worksheets:

INORG	COMPLETE SDG FILE (CSF) AUDIT	_____
INORG-I	PRESERVATION AND TECHNICAL HOLDING TIMES	_____
INORG-II	ICP-MS TUNE	_____
INORG-III-A/B	CALIBRATIONS	_____
INORG-IV-A/B	BLANKS	_____
INORG-IV-C.1	BLANKS	_____
INORG-IV-C.2	BLANKS	_____
INORG-V-A	ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB	_____
INORG-V-B.1	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-V-B.2	ICP-AES INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-VI-A	ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB	_____
INORG-VI-B	ICP-MS INTERFERENCE CHECK SAMPLE - ICSA	_____
INORG-VII	ICP-MS INTERNAL STANDARDS	_____
INORG-VIII	MATRIX SPIKES	_____
INORG-IX	LABORATORY DUPLICATE SAMPLES	_____
INORG-X	FIELD DUPLICATES	_____
INORG-XI	ICP SERIAL DILUTIONS	_____
INORG-XII-A/B	SENSITIVITY CHECK	_____
INORG-XIII-A	PE SAMPLES/ACCURACY CHECK- LCS	_____
INORG-XIII-B	PE SAMPLES/ACCURACY CHECK- PE RESULTS	_____
INORG-XIV	ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS	_____
TABLE II-WORKSHEET	OVERALL EVALUATION OF DATA	_____

see DV letter

I certify that all criteria were met for the worksheets checked above.

Signature: _____ Name: Michelle Ahn

Date: 12/8/11

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Part I - Data Validation Manual, Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with PO/DV Chemist/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

Site:_____ Case:_____ SDG:_____ See DV Letter

INORGANICS					
DQO (List all DQOs)	Sampling and/or Analytical Method Appropriate? (Yes or No)	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Michelle Allen

Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG

COMPLETE SDG FILE (CSF) AUDIT

Inorganic Parameters:_____

Missing Information	Date Lab Contacted	Date Received
N/A		

Validator: Maelle Allen

Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-I

I. PRESERVATION AND HOLDING TIMES

Circle sample numbers with exceeded technical holding times or omitted preservation.
Circle all exceeded technical holding times. See DV letter

Sample No.	Matrix	Pres. Code		Date Sampled	Metals		Hg		CN		Action
		Metals	CN		Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	Date Analyzed	# of Days from Samp. to Analysis	

Preservation Code:
1. Cool (≤ 6°C)
2. pH < 2 with HNO_3
3. pH > 12 with NaOH
4. Room Temperature
5. Freeze
6. Reducing agent (for oxidants)
7. Treated for sulfides
8. Other - _____

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Sampler:_____ Company:_____ Contacted: Y N Date:_____

Validator: Maille Allen Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-II

II. ICP-MS TUNE

List all Tunes that are outside method QC acceptance criteria.

Method:_____

Method QC acceptance criteria for mass calibration:_____

Method QC acceptance criteria for resolution check/peak width:_____ at_____% peak height.

Method QC acceptance criteria for % RSD:_____ N/A

Analysis Date and Time	Analyte	Mass Calibration			Mass Resolution		% RSD of Absolute Signals	Analyte/Samples Affected	Action
		True Mass (amu)	Measured Mass (amu)	Absolute Difference of Masses (amu)	Peak Width (amu)	% Peak Height			
Comments:									

Validator: Michelle Nevin

Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-III-A/B/C

III. CALIBRATIONS

see DV letter

A. Instrument Calibration - List all calibration correlation coefficients that are outside the method QC acceptance criteria.
Calibration correlation QC acceptance criteria: _____ Calibration Type: _____

Date/Time	Instr.	Analyte	Corr. Coef.	Samples Affected	Action

B. Initial and Continuing Calibration Verifications - List all ICV and CCV analyte recoveries that are outside the method QC acceptance criteria.
ICV method QC acceptance criteria: _____ CCV method QC acceptance criteria: _____

Date	Instr.	Analyte	ICV/CCV #	% R	Samples Affected	Action

C. Quantitation Limit Check Standard - List all QL Check Standard analytes that are outside method QC acceptance criteria.
QL Check Standard method QC acceptance criteria: _____

Date	Instr.	Analyte	QL Check Std. #	% R	Affected Range	Samples Affected	Action

Comments: _____

Validator: Michelle Allen Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG-IV-A/B

IV. BLANKS - List the blank contamination and negative blank results below.

Sampler: _____ Company: _____ Contacted: Y N Date: _____

A. Laboratory: Preparation (Method) and Calibration (Instrument) Blanks

See DV Letter

Date Prepared	Date Analyzed	Blank Type (ICB/CCB#/Prep Blank)	Matrix	Instrument	Analyte	Conc. (units)

B. Field: Equipment (Rinsate) and Bottle Blanks

Date Sampled	Date Analyzed	Sample No. (Blank Type)	Matrix	Instrument	Analyte	Conc. (units)

Were the proper number of blanks analyzed at the proper frequency? Y N

For ICP MS - Are internal standard responses in all blanks within method QC acceptance criteria? Y N

Comments: _____

Validator: Michelle Allen Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG-IV-C.1
IV. BLANKS

C.1 Blank Contamination Worksheet

Circle the highest concentration of each contaminant.

see DV letter

Analyte	Date Analyzed	ICB	CCB							PBW	PBS	EB	BB	Max. Conc.	Action Level
			1	2	3	4	5	6	7						
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead															
Magnesium															
Manganese															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Vanadium															
Zinc															
Cyanide															

Validator: Michelle Allen

Date: 12/8/14

EPA-NE - Data Validation Worksheet
INORG-IV-C.2

IV. BLANKS

C.2 Blank Actions - List the maximum concentrations of each analyte among all blanks associated with each sample. see DV Letter

Analyte	Type of Blank	Date Blank Originated	Max. Conc. (units)	Blank Action Level (units)	Sample QL	Samples Affected	Action
Comments:							

Validator: Michelle Allen

Date: 12/9/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-A

V. A. ICP-AES INTERFERENCE CHECK SAMPLE - ICSAB

1. List all analytes in the ICSAB that are outside ICSAB percent recovery criteria. see DV letter

Date	Analyte	%R	Conc. of Interferents Observed in ICSAB (ug/L)				Samples Affected	Action
			Al	Ca	Fe	Mg		
Comments:								

Validator: Michelle Allen

Date: 12/8/1

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-V-B.1

V. B.1 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

1. List all analytes in the ICSA that are outside ICSA criteria. see DV letter

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV±2xMDL	Conc. of Interferents Observed in ICSA (ug/L)				Associated Samples
						Al	Ca	Fe	Mg	
Comments:										

Validator: Michelle Allen

Date: 12/9/11

EPA NE - Data Validation Worksheet
INORG-V-B.2

V. B.2 ICP-AES INTERFERENCE CHECK SAMPLE - ICSA

2. List all affected sample results. see DV letter

Affected Sample	Interferent	Conc. in Sample (ug/L)	Analyte	Conc. in Sample (ug/L)	Estimated Interference in Sample (ug/L)	Action
Comments:						

Validator: Michelle Allen

Date: 12/01/11

DRAFT 11/08

EPA NE - Data Validation Worksheet
INORG-VI-A

VI. A. ICP-MS INTERFERENCE CHECK SAMPLE - ICSAB

List all analytes that are outside ICSAB criteria of 80-120% R.

see DV letter

Date	Analyte	%R	Samples Affected	Action

Comments:

Validator: Michelle Allen

Date: 12/8/11

EPA NE - Data Validation Worksheet
INORG-VI-B

VI. B. ICP-MS INTERFERENCE CHECK SAMPLE - ICSA

List all analytes that are outside ICSA criteria. see DV letter

Date	Analyte	MDL (ug/L)	ICSA Observed Conc. (ug/L)	ICSA True Value (ug/L)	Criteria: 80-120% R or TV ± 2xMDL	Samples Affected	Action
Comments:							

Validator: Michelle Allen

Date: 12/8/14

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-VII

VII. ICP-MS INTERNAL STANDARDS

List all internal standards that are outside method QC acceptance criteria.

IS method QC acceptance criteria: _____ N/A

Sample Number	Date and Time Analyzed	IS, amu	% RI	Analytes Affected (amu)	Action

Comments:

Validator: Michelle Allen

Date: 12/9/11

EPA-NE - Data Validation Worksheet
INORG-VIII

VIII. MATRIX SPIKES - List all matrix spike analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each matrix spike sample.

Sample No.: _____ Matrix: _____ see DV letter

Method	Analyte	Spiked Sample Result	Sample Result	Amount of Spike Added	MS % Recovery	Method QC Limits % Recovery	Post-Digest Spike % Recovery	Action
Comments:								

Validator: Michelle Allen Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-IX

IX. LABORATORY DUPLICATE SAMPLES - List all analytes that are outside method QC acceptance criteria for the specific matrix.

Use a separate worksheet for each laboratory duplicate sample.

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Laboratory duplicate sample method QC acceptance criteria:_____ see DV letter

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the field duplicate sample data indicate acceptable field precision? Y N

Comments:_____

Validator: Michelle Allen Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-X

X. FIELD DUPLICATES - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair. see DV Later

Sample No.:_____ Duplicate Sample No.:_____ Matrix:_____

Method	Analyte	Sample Conc.	Sample		Duplicate Conc.	Duplicate		RPD or Abs. Diff.	QC Acceptance Criteria (RPD or Abs. Diff.)	Action
			SQL	5xSQL		SQL	5xSQL			

Do the laboratory duplicate sample data indicate acceptable laboratory precision? Y N

Comments: _____

_____

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for contact and resolution obtained: _____

Validator: Michelle Allen Date: 12/8/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XI

XI. ICP SERIAL DILUTIONS

Use a separate worksheet for each serial dilution sample.

Sample No.:_____ Matrix:_____ Method:_____

List all serial dilution analytes that are outside method QC acceptance criteria.

% Difference method QC acceptance criteria: _____
Minimum concentration required to apply the % D criteria (e.g., 50x MDL): _____ see DV letter

Analyte	MDL	Min. Conc. Required	Sample Result	Serial Dilution Sample Result (corrected for dilution)	% D	Action
Comments:						

Validator: Michelle Allen

Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG-XII-A/B

XII. SENSITIVITY CHECK

A. Method Detection Limit Study - List all analytes that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each analyte and matrix of interest? **Y N**
- Were samples analyzed within one year of the MDL study and on the same instrument? **Y N**

See DV Letter

Matrix	Analyte	MDL	MDL > QL	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

B. Laboratory Fortified Blank - List all LFB analytes that are outside the LFB criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? **Y N**
- Does the LFB contain all target analytes at their QLs? **Y N**

Matrix	Method	Analyte	% R	Method QC Limits % R	Samples Affected	Action

Comments: _____

Validator: Michelle Allen Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG-XIII-A

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

A. Laboratory Control Samples - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Are more than one-half of the LCS analytes within criteria for each parameter and method? **Y** **N** see DV letter

Date Prepared	Date Analyzed	Parameter/ Method	Matrix	Analyte	% Recovery (or Observed Conc.)	Method QC Acceptance Criteria	Samples Affected	Action
Comments:								

Validator: Michelle Allen

Date: 12/9/11

DRAFT 11/08

EPA-NE - Data Validation Worksheet
INORG-XIII-B

XIII. PERFORMANCE EVALUATION SAMPLES/ACCURACY CHECK

B. Performance Evaluation Results - List all analytes that are outside criteria.

SDG No.:_____ Case:_____

Indicate the source of the PES: Region 1 EPA PES Non-EPA PES

Are more than one-half of the PES analytes within criteria for each parameter and method? Y N see DV letter

PE Sample Number	Ampule Number	Parameter/ Method	Type of PES	Matrix	Analyte	Conc.	PES Score*	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High, Action Low, Analyte Missed, Contaminant.
For Non-EPA PESs indicate the Non-EPA PES Score: PES Analyte Missed; PES Analyte Contaminant; PES Analyte Hit (% Recovery Limits).

Comments:_____

Validator: Michelle Allen

Date: 12/8/11

EPA-NE - Data Validation Worksheet
INORG-XIV

XIV. ANALYTE QUANTITATION AND REPORTED QUANTITATION LIMITS

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per analytical method. (Note: Although Section XIV, C.2.a, requires that one calculation for each method in each sample be performed, the validator is only required to reproduce an example, for each method, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? **Y** **N**

- If no, were any steps employed to address the high moisture content? See DV letter
- Indicate the action and list the affected sample nos.: _____

Method		Calculation
ICP-AES		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
ICP-MS		
Sample No.:		
Reported Analyte:		
Reported Value:		
Non-Detected Analyte:		
Reported Quantitation Limit:		
Mercury		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		
Cyanide		
Sample No.:		
Reported Value:		
Sample No.:		
Reported Quantitation Limit:		

Validator: Michelle Allen

Date: 12/8/11

Appendix D – Support Documentation

HOLDTIME

SDG DSY-9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE24-0012	SE6227-011	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-DUP11-092611	SE6227-007	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-0012	SE6227-008	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-1224	SE6227-002	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-0012	SE6227-001	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-2448	SE6227-006	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-1224	SE6227-005	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AG26-0012	SE6227-004	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AI26-2448	SE6227-003	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AE24-1224	SE6227-012	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-2448	SE6227-010	NM	09/26/2011	10/10/2011	10/13/2011	14	3	17
M	MG/KG	DSY-SD-AC24-2448	SE6227-010	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-1224	SE6227-009R	NM	09/26/2011	10/13/2011	10/14/2011	17	1	18
M	MG/KG	DSY-SD-AC24-1224	SE6227-009	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	MG/KG	DSY-SD-AC24-0012	SE6227-008	NM	09/26/2011	10/10/2011	10/13/2011	14	3	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DSY-SD-AE24-2448	SE6227-013	NM	09/26/2011	10/10/2011	10/12/2011	14	2	16
M	UG/L	DSY-SD-RB04-092611	SE6227-014	NM	09/26/2011	10/04/2011	10/04/2011	8	0	8
TDS	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TDS	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/10/2011	10/11/2011	14	1	15
TOC	UG/GD	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/10/2011	10/10/2011	14	0	14
TOC	UG/GD	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
TOC	UG/GD	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TOC	UG/GD	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
TOC	UG/GD	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/08/2011	10/08/2011	12	0	12
OS	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/05/2011	4	5	9
OS	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	10/29/2011	10	23	33
OS	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/05/2011	4	5	9
SIM	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	11/02/2011	4	33	37
SIM	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/06/2011	11/02/2011	10	27	37
SIM	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/06/2011	11/01/2011	10	26	36
SIM	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	11/02/2011	4	33	37
PCB	%	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/07/2011	10/18/2011	11	11	22
PCB	%	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	%	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/13/2011	4	13	17
PCB	%	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	DSY-SD-AC24-1224	SE6227-9	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AC24-2448	SE6227-10	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-0012	SE6227-11	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-1224	SE6227-12	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AE24-2448	SE6227-13	NM	09/26/2011	10/07/2011	10/18/2011	11	11	22
PCB	UG/KG	DSY-SD-AG26-0012	SE6227-4	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AG26-1224	SE6227-5	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AG26-2448	SE6227-6	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-0012	SE6227-1	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-1224	SE6227-2	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AI26-2448	SE6227-3	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-DUP11-092611	SE6227-7	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/KG	DSY-SD-AC24-0012	SE6227-8	NM	09/26/2011	10/07/2011	10/17/2011	11	10	21
PCB	UG/L	DSY-SD-RB04-092611	SE6227-14	NM	09/26/2011	09/30/2011	10/13/2011	4	13	17

NAVSTA NEWPORT
SOIL DATA
DSY-9

FRACTION	CHEMICAL	DSY-SD-AG26-0012	UNITS	DSY-SD-DUP11-092611	RPD	D
M	LEAD	67.2	MG/KG	70.6	4.93	3.40

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAVSTA NEWPORT
SOIL DATA
DSY-9

FRACTION	CHEMICAL	DSY-SD-AG26-0012	UNITS	DSY-SD-DUP11-092611	RPD	D
MISC	TOTAL ORGANIC CARBON	40000	MG/KG	38000	5.13	2000.00
MISC	TOTAL SOLIDS	36	%	37	2.74	1.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
SEE PAGE ONE	SEE PAGE ONE	( )	( )

Address	City	State	Zip Code
SEE PAGE ONE		SEE PAGE ONE	

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	CTO WE61, Derecktor Shipyard	

Bill (if different than above)	Address
SEE PAGE ONE	

Sampler (Print / Sign)	Copies To:
Michael Horton / ~~SE6225~~ SE6226	

LAB USE ONLY WORK ORDER #: SE6226/SE6227

KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: ____

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: DAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AG28-2448	9/26/11 1106	SED	2	X	X	X							
	DSY-SD-DUP10-092611	/ —		2	X	X	X							
	DSY-SD-AG24-0012	/ 1145		3	X	X	X	X						
	DSY-SD-AG24-1224	/ 1148		2	X	X	X							
	DSY-SD-AG24-2448	/ 1151		2	X	X	X							
	DSY-SD-AI24-0012	/ 1200		3/6	X	X	X	X						
	DSY-SD-AI24-1224	/ 1203		2	X	X	X							
	DSY-SD-AI24-2448	/ 1206		2	X	X	X							
	DSY-SD-AI26-0012	/ 1305		3	X	X	X	X	✓					
	DSY-SD-AI26-1224	/ 1308		2	X	X	X							
	DSY-SD-AI26-2448	/ 1311		2	X	X	X		✓					
	DSY-SD-AG26-0012	/ 1320		3	X	X	X	X	✓					
	DSY-SD-AG26-1224	/ 1323		2	X	X	X							
	DSY-SD-AG26-2448	/ 1326		2	X	X	X		✓					
	DSY-SD-DUP011-092611	/ —		3	X	X	X	X	✓					
	DSY-SD-AC24-0012	↓ / 1415	↓	2	X	X	~~X~~ HGP		✓ X					

COMMENTS

AT24-0012 is designated as Lab QC

MJH ~~AG26-0012 is DUP11~~

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9/27/11 1300				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

DUPLICATE

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: SEE PAGE ONE | Contact: SEE PAGE ONE | Phone # ( ) | Fax # ( )

Address: SEE PAGE ONE | City | State | Zip Code

Purchase Order # | Proj. Name / No. CTO WE61, Dereck for Shipyard | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) Michael Horton | Copies To:

LAB USE ONLY | WORK ORDER #: SE6227 | KATAHDIN PROJECT NUMBER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE PRESERVATIVES: PAH (Filt. ☐Y ☐N)	PCB (Filt. ☐Y ☐N)	TOC (Filt. ☐Y ☐N)	Metals (Pb) (Filt. ☐Y ☐N)	Metals (Pb, Cu, Zn) (Filt. ☐Y ☐N)	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	DSY-SD-AC24-1224	9/26/11 / 1418	SED	2	X	X			X					
	DSY-SD-AC24-2448	/ 1421		2	X	X			X					
	DSY-SD-AE MS/MSD AE24-0012	/ 1430		3	X	X	X	X						
	DSY-SD-AE24-1224	/ 1433		2	X	X		X						
	DSY-SD-AE24-2448	/ 1436	↓	2	X	X		X						
	DSY-SD-RB01-092611 RB04	↓ / 1605	AQ	5	X	X			X					
		/												
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COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/27/11 1300	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS

ORIGINAL

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 02, 2011
07:27 AM

Login Number: SE6227

Account: TETRAT001
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Web

Quote/Incoming: TT-DERECKTOR

Primary Report Address:
Tobrena Sedlmyer
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

Primary Invoice Address:
Accounts Payable
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh,PA 15220

Report CC Addresses:

Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	DoD QSM with lab limits. ND to LOD. "J" flag between MDL and LOQ. For sediments, decant standing water, homogenize and determine solids prior to analysis. Increase sample wt or centrifuge to eliminate more water to meet project LOQ goals. If moisture still too high, contact client for further procedures. SVOA is PAH (8270D) only. Extract for both SIM and scan. Run Scan first. If BAP "U" or "J" flagged, analyze BAP by SIM. Metals (6010C)- run MS/lab dup, post dig spike and serial dilution.
CHECK NO.	:	
CLIENT PO#	:	1045366 50-CTO WE61 112G03016 112G02747
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	4.3, 4.1, 4.0, 5.9, 4.5
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	KAS119QC-CSV
LOGIN INITIALS	:	GN
PM	:	KAP
PROJECT NAME	:	NAVSTA Newport CTO WE61 Derecktor
QC LEVEL	:	IV
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	Summary package needs all forms. Send HC, CD and original COC to Lucy. Send CD, EDD and copy of COC to Tobrena.
SDG ID	:	DSY-9
SDG STATUS	:	Begin/End

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6227-1	DSY-SD-AI26-0012	26-SEP-11 13:05	27-SEP-11		4-OCT-11	14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	10-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	10-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	10-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	8oz Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-2	DSY-SD-AI26-1224	26-SEP-11 13:08	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-3	DSY-SD-AI26-2448	26-SEP-11 13:11	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-4	DSY-SD-AG26-0012	26-SEP-11 13:20	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	10-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	10-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	10-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	8oz Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

GP 11.2.11

0000016

Login Number: SE6227

Quote/Incoming: TT-DERECKTOR

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6227-5	DSY-SD-AG26-1224	26-SEP-11 13:23	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-6	DSY-SD-AG26-2448	26-SEP-11 13:26	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-7	DSY-SD-DUP11-092611	26-SEP-11 00:00	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	10-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	10-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	10-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	8oz Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-8	DSY-SD-AC24-0012	26-SEP-11 14:15	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	10-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	10-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	10-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		
Solid	S	SW6010-COPPER	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW6010-ZINC	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	8oz Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-9	DSY-SD-AC24-1224	26-SEP-11 14:18	27-SEP-11		14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW6010-ZINC	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

QO 11.2.11

0000017

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Nov. 02, 2011
07:27 AM

Quote/Incoming: TT-DERECKTOR

Login Number: SE6227

Account: TETRAT001 Web
Tetra Tech NUS, Inc.

Project: TT-DERECKTOR
TT-DERECKTOR

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SE6227-10	DSY-SD-AC24-2448	26-SEP-11 14:21	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-COPPER	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW6010-ZINC	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-11	DSY-SD-AE24-0012	26-SEP-11 14:30	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	LLOYD-TOCAVG-12	10-OCT-11	8oz Glass		DOD
Solid	S	LLOYDKAHN-TOCSOIL(1)	10-OCT-11	8oz Glass		
Solid	S	LLOYDKAHN-TOCSOIL(2)	10-OCT-11	8oz Glass		
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	8oz Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-12	DSY-SD-AE24-1224	26-SEP-11 14:33	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-13	DSY-SD-AE24-2448	26-SEP-11 14:36	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW3050-PREP	24-MAR-12	8oz Glass		DOD
Solid	S	SW6010-LEAD	24-MAR-12	8oz Glass		
Solid	S	SW8082-S	10-OCT-11	100g Glass		
Solid	S	SW8270-S	10-OCT-11	1L N-Amber Glass		
Solid	S	SW8270SIMPAH-S	10-OCT-11	1L N-Amber Glass		
Solid	S	TS	26-OCT-11	8oz Glass		

SE6227-14	DSY-SD-RB04-092611	26-SEP-11 16:25	27-SEP-11			14-OCT-11	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SW3010-PREP	24-MAR-12	250mL Plastic+HNO3		DOD
Aqueous	S	SW6010-COPPER	24-MAR-12	250mL Plastic+HNO3		
Aqueous	S	SW6010-LEAD	24-MAR-12	250mL Plastic+HNO3		
Aqueous	S	SW6010-ZINC	24-MAR-12	250mL Plastic+HNO3		
Aqueous	S	SW8082-S	03-OCT-11	1L N-Amber Glass		
Aqueous	S	SW8270-S	03-OCT-11	1L N-Amber Glass		
Aqueous	S	SW8270SIMPAH-S	03-OCT-11	1L N-Amber Glass		

Total Samples: *14* ***Total Analyses:*** *106*

11.2.11

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: DSY-9 **SOW No.** SW846

Client Field ID	Lab Sample ID
DSY-SD-AC24-0012	SE6227-008
DSY-SD-AC24-1224	SE6227-009
DSY-SD-AC24-2448	SE6227-010
DSY-SD-AE24-0012	SE6227-011
DSY-SD-AE24-1224	SE6227-012
DSY-SD-AE24-2448	SE6227-013
DSY-SD-AG26-0012	SE6227-004
DSY-SD-AG26-1224	SE6227-005
DSY-SD-AG26-1224	SE6227-005A
DSY-SD-AG26-1224	SE6227-005D
DSY-SD-AG26-1224	SE6227-005S
DSY-SD-AG26-2448	SE6227-006
DSY-SD-AI26-0012	SE6227-001
DSY-SD-AI26-1224	SE6227-002
DSY-SD-AI26-2448	SE6227-003
DSY-SD-DUP11-092611	SE6227-007
DSY-SD-RB04-092611	SE6227-014

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Heather Manz Name: Heather Manz

Date: 11-7-11 Title: Analyst I

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS, INC.
NAVSTA NEWPORT CTO WE61 DERECKTOR
SDG: DSY-9
SE6227

Sample Receipt

The following samples were received on September 27, 2011 and were logged in under Katahdin Analytical Services work order number SE6227 for a hardcopy due date of October 14, 2011.

KATAHDIN Sample No.	TTNUS Sample Identification
SE6227-1	DSY-SD-AI26-0012
SE6227-2	DSY-SD-AI26-1224
SE6227-3	DSY-SD-AI26-2448
SE6227-4	DSY-SD-AG26-0012
SE6227-5	DSY-SD-AG26-1224
SE6227-6	DSY-SD-AG26-2448
SE6227-7	DSY-SD-DUP11-092611
SE6227-8	DSY-SD-AC24-0012
SE6227-9	DSY-SD-AC24-1224
SE6227-10	DSY-SD-AC24-2448
SE6227-11	DSY-SD-AE24-0012
SE6227-12	DSY-SD-AE24-1224
SE6227-13	DSY-SD-AE24-2448
SE6227-14	DSY-SD-RB04-092611

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Jennifer Obrin**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG DSY-9 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste

and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270C SIM Analysis

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All of the samples were scheduled to be analyzed using method 8270-SCAN. The project LOQ for the analyte benzo(a)pyrene could only be achievable using method 8270-SIM. If the analyte benzo(a)pyrene was detected above the LOQ in 8270-SCAN analysis, the sample was not analyzed by 8270-SIM. The samples were spiked only with the 8270-SCAN surrogates and only the 8270-SCAN LCS/LCSD were extracted. The report package for SIM analysis does not have a Form 2 for surrogates or a Form 3 for a LCS/LCSD with one exception. The method blank WG98304-1 and LCS/LCSD WG98304-2 and 3, associated with the aqueous sample SE6227-14, were spiked with surrogates. There is a Form 2 for the method blank and LCS/LCSD and a Form 3 for the LCS/LCSD.

Samples SE6227-3, 5, 9, 11, 12 and 13 were manually integrated for the internal standards chrysene-d12 and/or perylene-d12. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1, 2, 4, 9, 10, 11, 12 and 13 and method blank WG100237-1 had high and/or low responses for the internal standards acenaphthene-d10, phenanthrene-d10, chrysene-d12 and/or perylene-d12 that resulted in %D's which were outside the DoD QSM 4.1 acceptance limit of -50% to +100% of the responses of the internal standards of the midpoint initial calibration standard. All of the CV's and the associated QC samples had acceptable internal standard responses. This indicates that the failing internal standard responses in the samples are likely due to a matrix effect. Therefore, these samples were not reanalyzed.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCSD WG98304-3 had a high recovery for the spiked target analyte benzo(a)pyrene that was high and outside of the laboratory established acceptance limits. Since the LCS WG98304-2 was acceptable, no further action was taken.

8082 Analysis

The reported percent recovery acceptance limits for the surrogates, as well as spike recoveries for LCS/LCSD's and MS/MSD's, are based on laboratory established acceptance limits.

Samples SE6227-5, 6, 9, and 12, were manually integrated for Aroclor 1254. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1 through 13 had low recoveries for TCX and DCB on one or both channels, which were outside the laboratory established acceptance limits. The sample extracts were very discolored. Therefore, the low recoveries of surrogates are likely due to a matrix effect. Therefore, the samples were not reextracted.

Sample SE6227-14 and the method blank WG98765-1 had low recoveries for DCB on channel A and/or B, which were outside the laboratory established acceptance limits. Since the recoveries were acceptable on the confirmation channels, no further action was taken.

The opening calibration verification (CV) (file 7EJ386) had high responses for TCX and Aroclor 1016 on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for TCX and Aroclor 1016 were acceptable on channel B, the associated samples were not reanalyzed.

The closing CVs (files 7EJ398, and 7EJ497) had high responses for TCX on channel A, which resulted in %D's that were outside of the DoD QSM acceptance limits of 20%. Since the responses for TCX were acceptable on channel B, the associated samples were not reanalyzed.

The closing CV (7EJ500) had a high response Aroclor 1254 on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for Aroclor 1254 was acceptable on channel B, the associated samples were not reanalyzed.

The opening CV (file 7EJ481) had a low response for DCB on channel A, which resulted in a %D that was outside of the DoD QSM acceptance limits of 20%. Since the response for DCB was acceptable on channel B, the associated samples were not reanalyzed.

The LCS WG98765-2 had a low recovery for Aroclor 1260 that was outside laboratory established acceptance limits. The LCS also had low recoveries for DCB on both channels, which were outside the laboratory established acceptance limits. Since the associated LCSD had acceptable recoveries, no further action was taken.

<u>8270C SCAN Analysis</u>

Surrogate recoveries for the sample and QC were evaluated using laboratory established acceptance limits.

All soil samples and associated QC were subjected to the GPC sample clean-up process.

Samples SE6227-1 and 7 were manually integrated the target analytes benzo(b)fluoranthene and benzo(k)fluoranthene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

Samples SE6227-1, 3, 5, 7, 8, 9, 10 and 12 had responses for one or two internal standards, which were outside the DoD QSM acceptance limit of -50% to +100% of the responses of the internal standards of the ICAL midpoint standard.

DoD QSM Version 4.1 Table F-4 mentions that the tailing factor for the analytes benzidine and pentachlorophenol should not exceed 2 for method 8270. The tune (files UD702, and UD706) had tailing factors greater than 2% for benzidine and pentachlorophenol. Many of the soil samples from this project caused significant tailing on the instrument. Maintenance was performed several times on the instrument and sometimes could not achieve the tailing criteria. Pentachlorophenol is an acid and all of the target analytes were PAHs. For these reasons, the associated samples were not reanalyzed.

In the initial calibration analyzed on the U instrument on 10/25/10 the target analyte indeno(1,2,3-cd)pyrene failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990 respectively. This compound was calibrated using the average model.

The reported percent recovery acceptance limits for the soil Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The aqueous LCS's statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The LCSD WG98302-3 had five spiked target analytes with recoveries that were low and outside of the laboratory established acceptance limits. The DoD QSM allowable number of exceedances for 10 target analytes is no analytes. Since the LCS WG98302-2 was acceptable, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG DSY-9 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998, & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Number SE6227-14 was digested for ICP analysis on 10/04/11 (QC Batch BJ04ICW1) in accordance with USEPA Method 3010A.
Solid-matrix Katahdin Sample Numbers SE6227-(1-13) were digested for ICP analysis on 10/10/11 (QC Batch BJ10ICS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SE6227-5 was prepared in duplicate and with a matrix-spiked aliquot. The measured

zinc (5.802 mg/Kgdrywt) concentration of the preparation blank in this batch exceeds the project acceptance limit (> ½ LOQ). However, because the measured zinc concentrations of Katahdin Sample Numbers SE6227-8 and10 are greater than ten times that of the preparation blank, no corrective action was necessary. Solid-matrix Katahdin Sample Number SE6227-9 was redigested for ICP analysis on 10/13/11 (QC Batch BJ13ICS1) in accordance with USEPA Method 3050B. This redigestate is identified on sample preparation and analysis run logs and throughout the raw data by the suffix "R" appended to the Katahdin Sample Number, e.g. "SE6227-009R". This redigestate was successfully analyzed for zinc.

ICP analyses of SDG DSY-9 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of lead in the matrix-spiked aliquot of Katahdin Sample Numbers SE6227-5 is within the project acceptance criteria (80% - 120% recovery of the added element, if the native concentration is less than four times the amount added).

The duplicate analysis of Katahdin Sample Number SE6227-5 is outside the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for lead.

The measured recovery of lead in post-digestion spike of SE6227-5 is within the project acceptance criteria (75% - 125% recovery of the added element).

The serial dilution analysis of Katahdin Sample Number SE6227-5 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOQ) for lead.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the laboratory's limits of quantitation (LOQ) are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQ's, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of SDG DSY-9 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total organic carbon (TOC) were performed according to "Determination of Total Organic Carbon in Sediment", Lloyd Kahn, USEPA Region II, 7/88. These TOC analyses were performed in duplicate, and the results for both of the duplicate analyses as well as the average of the two analyses are listed on the Report of Analytical Results for each sample.

Analyses for total solids were performed according to "Annual Book of ASTM Standards", Method D2216-98 "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass".

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met, with the following exceptions:

The TOC recovery, relative to the TOC (1) result for the unspiked sample, for the matrix spike (41%) aliquot of Katahdin Sample No. SE6227-11 is outside the laboratory's acceptance limits of 75% - 125%. The matrix spike recovery relative to the TOC(2) result for the unspiked sample is within the laboratory's acceptance limits.

The relative percent difference (46%) between duplicate TOC(1) analyses of Katahdin Sample No. SE6227-11 is greater the laboratory's acceptance limit of 20%. The relative percent difference between duplicate TOC(2) analyses of this sample is within the laboratory's acceptance limit.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Jennifer O'Brien per 11·10·11

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	Spiked sample recovery not within control limits.
*	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a greater rate for false negatives, i.e. greater than 1%, than those results reported as "U" PQL/LOQ or "U" LOD.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	10.00	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.00	ug/L	P	SW846 3010A / SW846 6010C
ZINC	10.00	ug/L	P	SW846 3010A / SW846 6010C

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
COPPER	1.00	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.40	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	1.00	mg/Kg	P	SW846 3050B / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.63	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.07	ug/L	P	SW846 3010A / SW846 6010C
ZINC	0.72	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/20/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
COPPER	0.16	mg/Kg	P	SW846 3050B / SW846 6010C
LEAD	0.09	mg/Kg	P	SW846 3050B / SW846 6010C
ZINC	0.17	mg/Kg	P	SW846 3050B / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 4/29/2011

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0002086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0429115	0.0	0.0	0.0
ANTIMONY	206.88	0.0000122	0.0	0.0000328	0.0	-0.0001492	0.0127235	0.0	0.0	0.0	-0.0003049	-0.0005901	0.0	-0.0014750
ARSENIC	189.04	0.0000070	0.0	-0.0001627	0.0	0.0	0.0005362	0.0	0.0	0.0	0.0009188	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0005721	0.0001425
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0377834	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0003106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0	-0.0009160	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	-0.0000059	0.0	0.0	0.0	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000151	0.0	0.0	-0.0000930	0.0	0.0	0.0	0.0	0.0002140	0.0021732	0.0
COPPER	327.40	0.0	0.0	-0.0000222	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0006350	0.0001092
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0001215	0.0	0.0000341	0.0	0.0	0.0	0.0000540	0.0000406	0.0	-0.0012070	0.0002080	-0.0000711	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.50	0.0	0.0	0.0001162	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0003128	0.0
MANGANESE	257.61	0.0000009	0.0	0.0000138	-0.0000037	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0001080	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000509	0.0	0.0	0.0	0.0000689	0.0	0.0	0.0027299	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000289	0.0	0.0000050	0.0	-0.0001745	0.0	-0.0001909	0.0	0.0002049	0.0	0.0	0.0	-0.0001715
SILICON	251.61	0.0	0.0	-0.0001166	0.0	0.0	0.0	0.0	0.0	0.0	0.0115903	0.0	0.0009942	0.0
SILVER	328.07	0.0	0.0	-0.0003802	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0002850	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000038	0.0	-0.0000002	0.0	0.0	0.0	0.0032040	0.0001434	-0.0010500	0.0000740	0.0	-0.0006398	0.0001102
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001287	0.0	0.0	0.0	0.0004768	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000149	0.0	0.0	-0.0013158	0.0	0.0	-0.0008201	-0.0081695	0.0	0.0003853	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	-0.0011406	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM XI - IN

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 10/28/2011

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	1000000	P
CALCIUM	5.00	500000	P
COPPER	10.00	20000	P
IRON	5.00	200000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	500000	P
ZINC	45.00	20000	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 6/9/2011

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	14.40	P
CALCIUM	100	11.40	P
COPPER	25	0.64	P
IRON	100	3.02	P
LEAD	5.0	1.33	P
MAGNESIUM	100	5.50	P
ZINC	25	0.19	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ04ICW1

Matrix: WATER **SDG Name:** DSY-9

Method: P **Prep Date:** 10/04/2011

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWBJ04ICW1	LCSWBJ04ICW1	0.05	0.05	
PBWBJ04ICW1	PBWBJ04ICW1	0.05	0.05	
DSY-SD-RB04-092611	SE6227-014	0.05	0.05	A

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWBJ04ICW1

Matrix: WATER **SDG Name:** DSY-9

QC Batch ID: BJ04ICW1

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	1.021	J
LEAD	1.816	J
ZINC	1.031	J

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWBJ04ICW1

Matrix: WATER **SDG Name:** DSY-9

QC Batch ID: BJ04ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250.00	274.20	109.7	80	120
LEAD	100.00	106.50	106.5	80	120
ZINC	500.00	540.90	108.2	80	120

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ10ICS1

Matrix: SOIL **SDG Name:** DSY-9

Method: P **Prep Date:** 10/10/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ10ICS1	LCSOBJ10ICS1	1	0.1	
PBSBJ10ICS1	PBSBJ10ICS1	1	0.1	
DSY-SD-AI26-0012	SE6227-001	1.1	0.1	B
DSY-SD-AI26-1224	SE6227-002	1.09	0.1	A
DSY-SD-AI26-2448	SE6227-003	1.43	0.1	A
DSY-SD-AG26-0012	SE6227-004	1.36	0.1	A
DSY-SD-AG26-1224	SE6227-005	1.1	0.1	A
DSY-SD-AG26-1224D	SE6227-005D	1.15	0.1	A
DSY-SD-AG26-1224S	SE6227-005S	1.14	0.1	A
DSY-SD-AG26-2448	SE6227-006	1.15	0.1	A
DSY-SD-DUP11-092611	SE6227-007	1.8	0.1	B
DSY-SD-AC24-0012	SE6227-008	1.57	0.1	A
DSY-SD-AC24-1224	SE6227-009	1.59	0.1	A
DSY-SD-AC24-2448	SE6227-010	1.44	0.1	B
DSY-SD-AE24-0012	SE6227-011	1.74	0.1	A
DSY-SD-AE24-1224	SE6227-012	1.54	0.1	A
DSY-SD-AE24-2448	SE6227-013	1.99	0.1	B

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ10ICS1

Matrix: SOIL **SDG Name:** DSY-9

QC Batch ID: BJ10ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
COPPER	0.198	J
LEAD	0.40	U
ZINC	5.802	

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ10ICS1

Matrix: SOIL **SDG Name:** DSY-9

QC Batch ID: BJ10ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	25.00	26.34	105.4	80	120
LEAD	10.00	10.10	101.0	80	120
ZINC	50.00	53.69	107.4	80	120

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 43.0

Client Field ID: DSY-SD-AG26-1224S

SDG Name: DSY-9

Lab Sample ID: SE6227-005S

Concentration Units : mg/Kgdrywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	147.9249		112.9497		20.39	171.5		80	120	P

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 43.0

Client Field ID: DSY-SD-AG26-1224S

SDG Name: DSY-9

Lab Sample ID: SE6227-005A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
LEAD, TOTAL	985.8000		534.6000		500	90.2		75	125	P

Comments:

FORM V (Part 2) - IN

DUPLICATES

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Percent Solids: 43.0

Client Field ID: DSY-SD-AG26-1224D

SDG Name: DSY-9

Lab Sample ID: SE6227-005D

Concentration Units : mg/Kgdrywt

Analyte	Control Limits	Sample Result	C	Duplicate Result	C	RPD	Q	M
LEAD, TOTAL		112.9497		151.7111		29.3	*	P

Comments:

FORM VI - IN

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Client Field ID: DSY-SD-AG26-1224L

SDG Name: DSY-9

Lab Sample ID: SE6227-005L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
LEAD, TOTAL	534.60		563.00		5.3		P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** BJ13ICS1

Matrix: SOIL **SDG Name:** DSY-9

Method: P **Prep Date:** 10/13/2011

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOBJ13ICS1	LCSOBJ13ICS1	1	0.1	
PBSBJ13ICS1	PBSBJ13ICS1	1	0.1	
DSY-SD-AC24-1224	SE6227-009R	1.61	0.1	A

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSBJ13ICS1

Matrix: SOIL **SDG Name:** DSY-9

QC Batch ID: BJ13ICS1

Concentration Units : mg/Kgdrywt

Analyte	RESULT	C
ZINC	1.0	U

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOBJ13ICS1

Matrix: SOIL **SDG Name:** DSY-9

QC Batch ID: BJ13ICS1

Concentration Units : mg/Kgdrywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ZINC	50.00	51.22	102.4	80	120

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ04A

Date: 10/4/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
Blank		1	14:38	AL	CA	CU FE PB MG	ZN
Std 1		1	14:43	AL	CA	CU FE PB MG	ZN
ICV		1	14:47	AL	CA	CU FE PB MG	ZN
ICB		1	14:52	AL	CA	CU FE PB MG	ZN
PQL		1	14:56	AL	CA	CU FE PB MG	ZN
ICSA		1	15:01	AL	CA	CU FE PB MG	ZN
ICSAB		1	15:06	AL	CA	CU FE PB MG	ZN
CCV		1	15:10	AL	CA	CU FE PB MG	ZN
CCB		1	15:14	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:24				
ZZZZZZ		1	15:28				
ZZZZZZ		5	15:32				
ZZZZZZ		1	15:37				
ZZZZZZ		1	15:41				
ZZZZZZ		1	15:46				
ZZZZZZ		1	15:50				
ZZZZZZ		1	15:55				
ZZZZZZ		1	15:59				
CCV		1	16:04	AL	CA	CU FE PB MG	ZN
CCB		1	16:08	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:13				
ZZZZZZ		1	16:18				
ZZZZZZ		25	16:22				
ZZZZZZ		1	16:27				
ZZZZZZ		1	16:31				
ZZZZZZ		1	16:36				
ZZZZZZ		1	16:40				
ZZZZZZ		1	16:45				
ZZZZZZ		1	16:49				
ZZZZZZ		1	16:54				
CCV		1	16:58	AL	CA	CU FE PB MG	ZN
CCB		1	17:03	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	17:07				
ZZZZZZ		1	17:12				
ZZZZZZ		5	17:17				
ZZZZZZ		1	17:21				
ZZZZZZ		1	17:26				
ZZZZZZ		1	17:30				
ZZZZZZ		1	17:35				
ZZZZZZ		1	17:39				
ZZZZZZ		1	17:44				
ZZZZZZ		1	17:48				
CCV		1	17:53	AL	CA	CU FE PB MG	ZN
CCB		1	17:57	AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:02				
ZZZZZZ		1	18:06				
ZZZZZZ		1	18:11				
ZZZZZZ		5	18:15				
ZZZZZZ		1	18:20				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ04A

Date: 10/4/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		1	18:24			
ZZZZZZ		1	18:29			
ZZZZZZ		1	18:33			
ZZZZZZ		1	18:38			
ZZZZZZ		1	18:42			
CCV		1	18:47 AL	CA	CU FE PB MG	ZN
CCB		1	18:51 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:56			
ZZZZZZ		1	19:00			
ZZZZZZ		5	19:05			
ZZZZZZ		1	19:09			
ZZZZZZ		1	19:14			
ZZZZZZ		1	19:18			
ZZZZZZ		1	19:23			
ZZZZZZ		1	19:27			
ZZZZZZ		1	19:32			
ZZZZZZ		1	19:36			
CCV		1	19:41 AL	CA	CU FE PB MG	ZN
CCB		1	19:45 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	19:50			
ZZZZZZ		1	19:54			
ZZZZZZ		1	19:59			
ZZZZZZ		5	20:03			
ZZZZZZ		1	20:08			
ZZZZZZ		1	20:13			
ZZZZZZ		1	20:17			
ZZZZZZ		1	20:22			
ZZZZZZ		1	20:26			
ZZZZZZ		1	20:31			
CCV		1	20:36 AL	CA	CU FE PB MG	ZN
CCB		1	20:40 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	20:45			
ZZZZZZ		1	20:49			
ZZZZZZ		1	20:54			
ZZZZZZ		1	20:58			
ZZZZZZ		1	21:03			
ZZZZZZ		1	21:08			
ZZZZZZ		1	21:12			
ZZZZZZ		1	21:17			
ZZZZZZ		1	21:21			
ZZZZZZ		5	21:26			
CCV		1	21:31 AL	CA	CU FE PB MG	ZN
CCB		1	21:35 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	21:40			
ZZZZZZ		1	21:44			
PBWBJ04ICW1		1	21:49		CU PB	ZN
LCSWBJ04ICW1		1	21:53		CU PB	ZN
ZZZZZZ		5	21:58			
ZZZZZZ		1	22:03			
ZZZZZZ		1	22:07			
ZZZZZZ		1	22:11			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ04A

Date: 10/4/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time		Elements	
ZZZZZZ		1	22:16			
ZZZZZZ		1	22:21			
CCV		1	22:25 AL	CA	CU FE PB MG	ZN
CCB		1	22:30 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	22:34			
ZZZZZZ		1	22:39			
ZZZZZZ		1	22:43			
ZZZZZZ		1	22:48			
ZZZZZZ		5	22:53			
ZZZZZZ		1	22:58			
ZZZZZZ		1	23:02			
ZZZZZZ		1	23:07			
ZZZZZZ		1	23:12			
ZZZZZZ		1	23:16			
CCV		1	23:21 AL	CA	CU FE PB MG	ZN
CCB		1	23:25 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	23:30			
ZZZZZZ		1	23:34			
ZZZZZZ		1	23:39			
SE6227-014	DSY-SD-RB04-092611	1	23:44		CU PB	ZN
ZZZZZZ		1	23:48			
CCV		1	23:53 AL	CA	CU FE PB MG	ZN
CCB		1	23:57 AL	CA	CU FE PB MG	ZN

FORM XIV - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ04A Oct 04, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
CALCIUM	10000.0	9925.00	99.3
COPPER	400.0	401.80	100.4
IRON	10000.0	10130.00	101.3
LEAD	400.0	404.40	101.1
MAGNESIUM	10000.0	9978.00	99.8
ZINC	400.0	402.60	100.6

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 15:10

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12840.00	102.7
CALCIUM	12500.0	12470.00	99.8
COPPER	500.0	503.30	100.7
IRON	12500.0	12750.00	102.0
LEAD	500.0	509.00	101.8
MAGNESIUM	12500.0	12490.00	99.9
ZINC	500.0	508.80	101.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 16:04

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13220.00	105.8
CALCIUM	12500.0	12680.00	101.4
COPPER	500.0	501.30	100.3
IRON	12500.0	13070.00	104.6
LEAD	500.0	503.80	100.8
MAGNESIUM	12500.0	12470.00	99.8
ZINC	500.0	506.60	101.3

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 16:58

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12870.00	103.0
CALCIUM	12500.0	12470.00	99.8
COPPER	500.0	497.70	99.5
IRON	12500.0	12820.00	102.6
LEAD	500.0	512.20	102.4
MAGNESIUM	12500.0	12610.00	100.9
ZINC	500.0	513.60	102.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 17:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12860.00	102.9
CALCIUM	12500.0	12320.00	98.6
COPPER	500.0	499.50	99.9
IRON	12500.0	12780.00	102.2
LEAD	500.0	511.20	102.2
MAGNESIUM	12500.0	12620.00	101.0
ZINC	500.0	514.60	102.9

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 18:47

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12970.00	103.8
CALCIUM	12500.0	12510.00	100.1
COPPER	500.0	504.60	100.9
IRON	12500.0	12900.00	103.2
LEAD	500.0	505.60	101.1
MAGNESIUM	12500.0	12460.00	99.7
ZINC	500.0	503.70	100.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 19:41

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12730.00	101.8
CALCIUM	12500.0	12480.00	99.8
COPPER	500.0	500.10	100.0
IRON	12500.0	12700.00	101.6
LEAD	500.0	514.00	102.8
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	517.80	103.6

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 20:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12810.00	102.5
CALCIUM	12500.0	12600.00	100.8
COPPER	500.0	504.20	100.8
IRON	12500.0	12800.00	102.4
LEAD	500.0	509.60	101.9
MAGNESIUM	12500.0	12640.00	101.1
ZINC	500.0	512.10	102.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 21:31

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12650.00	101.2
CALCIUM	12500.0	12570.00	100.6
COPPER	500.0	505.60	101.1
IRON	12500.0	12670.00	101.4
LEAD	500.0	505.10	101.0
MAGNESIUM	12500.0	12540.00	100.3
ZINC	500.0	501.40	100.3

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 22:25

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12830.00	102.6
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	508.30	101.7
IRON	12500.0	12790.00	102.3
LEAD	500.0	504.20	100.8
MAGNESIUM	12500.0	12490.00	99.9
ZINC	500.0	498.90	99.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 23:21

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12880.00	103.0
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	506.40	101.3
IRON	12500.0	12790.00	102.3
LEAD	500.0	499.00	99.8
MAGNESIUM	12500.0	12360.00	98.9
ZINC	500.0	493.00	98.6

SAMPLE: CCV

File: IBJ04A Oct 04, 2011 23:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	13190.00	105.5
CALCIUM	12500.0	12880.00	103.0
COPPER	500.0	517.00	103.4
IRON	12500.0	13160.00	105.3
LEAD	500.0	495.00	99.0
MAGNESIUM	12500.0	12340.00	98.7
ZINC	500.0	486.80	97.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ04A Oct 04, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	326.60	108.9
CALCIUM	100.0	105.80	105.8
COPPER	25.0	26.85	107.4
IRON	100.0	118.90	118.9
LEAD	5.0	5.00	100.0
MAGNESIUM	100.0	98.38	98.4
ZINC	20.0	21.93	109.7

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ04A Oct 04, 2011 14:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	21.570	J
COPPER	0.699	J
IRON	6.312	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.199	J

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	8.058	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 16:08

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.179	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 17:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.667	J
IRON	5.871	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 17:57

Analyte	Result	C
ALUMINUM	19.140	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	5.718	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 18:51

Analyte	Result	C
ALUMINUM	19.430	J
CALCIUM	11.400	U
COPPER	0.640	U
IRON	9.325	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ04A Oct 04, 2011 19:45

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.636	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ04A Oct 04, 2011 20:40

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	5.099	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ04A Oct 04, 2011 21:35

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	5.083	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 22:30

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.207	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 23:25

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	1.281	J
IRON	9.884	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	-0.190	J

OK

SAMPLE: CCB

File: IBJ04A Oct 04, 2011 23:57

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	1.166	J
IRON	9.686	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ04A Oct 04, 2011 15:01

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	497200	99.4
CALCIUM	500000	460900	92.2
COPPER	0	6	
IRON	200000	184300	92.2
LEAD	0	-3	
MAGNESIUM	500000	456300	91.3
ZINC	0	3	

SAMPLE: ICSAB

File: IBJ04A Oct 04, 2011 15:06

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	499500	99.9
CALCIUM	500000	457200	91.4
COPPER	500	534	106.8
IRON	200000	184600	92.3
LEAD	50	46	92.0
MAGNESIUM	500000	456700	91.3
ZINC	1000	956	95.6

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ12A

Date: 10/12/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements		
Blank		1	14:38 AL	CA	CU FE PB MG	ZN
Std 1		1	14:42 AL	CA	CU FE PB MG	ZN
ICV		1	14:47 AL	CA	CU FE PB MG	ZN
ICB		1	14:51 AL	CA	CU FE PB MG	ZN
PQL		1	14:56 AL	CA	CU FE PB MG	ZN
ICSA		1	15:00 AL	CA	CU FE PB MG	ZN
ICSAB		1	15:05 AL	CA	CU FE PB MG	ZN
CCV		1	15:09 AL	CA	CU FE PB MG	ZN
CCB		1	15:14 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	15:18			
ZZZZZZ		1	15:23			
ZZZZZZ		1	15:27			
ZZZZZZ		2	15:32			
ZZZZZZ		1	15:37			
ZZZZZZ		1	15:41			
ZZZZZZ		1	15:46			
ZZZZZZ		1	15:51			
ZZZZZZ		5	15:55			
ZZZZZZ		1	16:00			
CCV		1	16:04 AL	CA	CU FE PB MG	ZN
CCB		1	16:09 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	16:13			
ZZZZZZ		1	16:18			
ZZZZZZ		1	16:22			
ZZZZZZ		1	16:27			
ZZZZZZ		1	16:31			
ZZZZZZ		1	16:36			
ZZZZZZ		1	16:41			
ZZZZZZ		1	16:45			
ZZZZZZ		1	16:50			
ZZZZZZ		1	16:54			
CCV		1	16:59 AL	CA	CU FE PB MG	ZN
CCB		1	17:03 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	17:08			
ZZZZZZ		1	17:12			
ZZZZZZ		1	17:17			
ZZZZZZ		1	17:22			
ZZZZZZ		1	17:26			
ZZZZZZ		5	17:31			
ZZZZZZ		1	17:35			
ZZZZZZ		1	17:40			
ZZZZZZ		1	17:44			
ZZZZZZ		1	17:49			
CCV		1	17:53 AL	CA	CU FE PB MG	ZN
CCB		1	17:58 AL	CA	CU FE PB MG	ZN
ZZZZZZ		1	18:02			
ZZZZZZ		1	18:07			
ZZZZZZ		1	18:11			
ZZZZZZ		1	18:16			
ZZZZZZ		1	18:20			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ12A

Date: 10/12/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	18:25	
ZZZZZZ		1	18:29	
ZZZZZZ		1	18:34	
ZZZZZZ		1	18:38	
ZZZZZZ		1	18:43	
CCV		1	18:47 AL	CA CU FE PB MG ZN
CCB		1	18:52 AL	CA CU FE PB MG ZN
ZZZZZZ		1	18:56	
ZZZZZZ		1	19:01	
ZZZZZZ		1	19:05	
ZZZZZZ		1	19:10	
ZZZZZZ		1	19:14	
ZZZZZZ		1	19:19	
PBSBJ10ICS1		1	19:23	CU PB ZN
LCSOBJ10ICS1		1	19:28	CU PB ZN
SE6227-001	DSY-SD-AI26-0012	1	19:32	PB
SE6227-002	DSY-SD-AI26-1224	1	19:37	PB
CCV		1	19:41 AL	CA CU FE PB MG ZN
CCB		1	19:46 AL	CA CU FE PB MG ZN
SE6227-003	DSY-SD-AI26-2448	1	19:50	PB
SE6227-004	DSY-SD-AG26-0012	1	19:55	PB
SE6227-005	DSY-SD-AG26-1224	1	19:59	PB
SE6227-005L	DSY-SD-AG26-1224L	5	20:04	PB
SE6227-005A	DSY-SD-AG26-1224A	1	20:08	PB
SE6227-005D	DSY-SD-AG26-1224D	1	20:13	PB
SE6227-005S	DSY-SD-AG26-1224S	1	20:17	PB
SE6227-006	DSY-SD-AG26-2448	1	20:22	PB
SE6227-007	DSY-SD-DUP11-092611	1	20:26	PB
SE6227-008	DSY-SD-AC24-0012	1	20:31	CU PB
CCV		1	20:35 AL	CA CU FE PB MG ZN
CCB		1	20:39 AL	CA CU FE PB MG ZN
SE6227-009	DSY-SD-AC24-1224	1	20:44	CU PB
SE6227-010	DSY-SD-AC24-2448	1	20:49	CU PB
SE6227-011	DSY-SD-AE24-0012	1	20:53	PB
SE6227-012	DSY-SD-AE24-1224	1	20:58	PB
SE6227-013	DSY-SD-AE24-2448	1	21:02	PB
ZZZZZZ		1	21:06	
ZZZZZZ		1	21:11	
ZZZZZZ		1	21:15	
ZZZZZZ		1	21:20	
ZZZZZZ		1	21:25	
CCV		1	21:29 AL	CA CU FE PB MG ZN
CCB		1	21:33 AL	CA CU FE PB MG ZN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ12A Oct 12, 2011 14:47

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9783.00	97.8
CALCIUM	10000.0	9746.00	97.5
COPPER	400.0	398.70	99.7
IRON	10000.0	9964.00	99.6
LEAD	400.0	412.60	103.2
MAGNESIUM	10000.0	10450.00	104.5
ZINC	400.0	409.70	102.4

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12600.00	100.8
CALCIUM	12500.0	12600.00	100.8
COPPER	500.0	505.40	101.1
IRON	12500.0	12690.00	101.5
LEAD	500.0	509.90	102.0
MAGNESIUM	12500.0	12750.00	102.0
ZINC	500.0	505.90	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 16:04

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12470.00	99.8
CALCIUM	12500.0	12520.00	100.2
COPPER	500.0	505.60	101.1
IRON	12500.0	12680.00	101.4
LEAD	500.0	506.90	101.4
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	500.90	100.2

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 16:59

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12500.00	100.0
CALCIUM	12500.0	12750.00	102.0
COPPER	500.0	521.80	104.4
IRON	12500.0	13270.00	106.2
LEAD	500.0	518.60	103.7
MAGNESIUM	12500.0	13250.00	106.0
ZINC	500.0	519.20	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 17:53

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12290.00	98.3
CALCIUM	12500.0	12460.00	99.7
COPPER	500.0	504.90	101.0
IRON	12500.0	12770.00	102.2
LEAD	500.0	512.70	102.5
MAGNESIUM	12500.0	13090.00	104.7
ZINC	500.0	511.00	102.2

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 18:47

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12450.00	99.6
CALCIUM	12500.0	12530.00	100.2
COPPER	500.0	509.20	101.8
IRON	12500.0	12930.00	103.4
LEAD	500.0	513.50	102.7
MAGNESIUM	12500.0	13140.00	105.1
ZINC	500.0	510.20	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 19:41

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12520.00	100.2
CALCIUM	12500.0	12660.00	101.3
COPPER	500.0	510.60	102.1
IRON	12500.0	12950.00	103.6
LEAD	500.0	520.70	104.1
MAGNESIUM	12500.0	13290.00	106.3
ZINC	500.0	519.80	104.0

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 20:35

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12330.00	98.6
CALCIUM	12500.0	12330.00	98.6
COPPER	500.0	505.50	101.1
IRON	12500.0	12600.00	100.8
LEAD	500.0	510.50	102.1
MAGNESIUM	12500.0	13040.00	104.3
ZINC	500.0	503.10	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ12A Oct 12, 2011 21:29

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12460.00	99.7
CALCIUM	12500.0	12430.00	99.4
COPPER	500.0	511.10	102.2
IRON	12500.0	12730.00	101.8
LEAD	500.0	510.70	102.1
MAGNESIUM	12500.0	13180.00	105.4
ZINC	500.0	507.80	101.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ12A Oct 12, 2011 14:56

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	324.60	108.2
CALCIUM	100.0	107.40	107.4
COPPER	25.0	26.89	107.6
IRON	100.0	108.90	108.9
LEAD	5.0	4.61	92.2
MAGNESIUM	100.0	116.80	116.8
ZINC	20.0	22.44	112.2

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ12A Oct 12, 2011 14:51

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ12A Oct 12, 2011 15:14

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.821	J
ZINC	0.190	U

SAMPLE: CCB

File: IBJ12A Oct 12, 2011 16:09

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 17:03

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	3.645	J
LEAD	1.330	U
MAGNESIUM	6.612	J
ZINC	0.190	U

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 17:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	-0.699	J
IRON	4.773	J
LEAD	1.330	U
MAGNESIUM	6.602	J
ZINC	0.190	U

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 18:52

Analyte	Result	C
ALUMINUM	20.060	J
CALCIUM	-14.970	J
COPPER	0.640	U
IRON	3.020	U
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 19:46

Analyte	Result	C
ALUMINUM	27.130	J
CALCIUM	11.400	U
COPPER	-0.903	J
IRON	3.020	U
LEAD	-1.537	J
MAGNESIUM	5.757	J
ZINC	0.190	U

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 20:39

Analyte	Result	C
ALUMINUM	23.690	J
CALCIUM	11.400	U
COPPER	-0.785	J
IRON	4.434	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ12A Oct 12, 2011 21:33

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
COPPER	0.640	U
IRON	6.127	J
LEAD	1.330	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ12A Oct 12, 2011 15:00

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	503000	100.6
CALCIUM	500000	468900	93.8
COPPER	0	3	
IRON	200000	185800	92.9
LEAD	0	1	
MAGNESIUM	500000	435900	87.2
ZINC	0	4	

SAMPLE: ICSAB

File: IBJ12A Oct 12, 2011 15:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	491500	98.3
CALCIUM	500000	458900	91.8
COPPER	500	516	103.2
IRON	200000	184400	92.2
LEAD	50	44	88.0
MAGNESIUM	500000	422200	84.4
ZINC	1000	930	93.0

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ13B

Date: 10/13/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
Blank		1	17:52 AL	CA	FE	MG	ZN
Std 1		1	17:56 AL	CA	FE	MG	ZN
ICV		1	18:01 AL	CA	FE	MG	ZN
ICB		1	18:05 AL	CA	FE	MG	ZN
PQL		1	18:10 AL	CA	FE	MG	ZN
ICSA		1	18:14 AL	CA	FE	MG	ZN
ICSAB		1	18:19 AL	CA	FE	MG	ZN
CCV		1	18:23 AL	CA	FE	MG	ZN
CCB		1	18:28 AL	CA	FE	MG	ZN
ZZZZZZ		1	18:32				
ZZZZZZ		5	18:37				
ZZZZZZ		25	18:41				
ZZZZZZ		5	18:46				
ZZZZZZ		25	18:51				
ZZZZZZ		5	18:55				
ZZZZZZ		25	19:00				
ZZZZZZ		5	19:04				
ZZZZZZ		5	19:09				
ZZZZZZ		25	19:14				
CCV		1	19:18 AL	CA	FE	MG	ZN
CCB		1	19:22 AL	CA	FE	MG	ZN
ZZZZZZ		125	19:27				
ZZZZZZ		25	19:32				
ZZZZZZ		25	19:36				
ZZZZZZ		5	19:41				
ZZZZZZ		25	19:45				
ZZZZZZ		1	19:50				
ZZZZZZ		2	19:54				
ZZZZZZ		1	19:59				
ZZZZZZ		1	20:03				
ZZZZZZ		1	20:08				
CCV		1	20:12 AL	CA	FE	MG	ZN
CCB		1	20:17 AL	CA	FE	MG	ZN
ZZZZZZ		1	20:21				
ZZZZZZ		2	20:26				
ZZZZZZ		1	20:30				
ZZZZZZ		1	20:35				
ZZZZZZ		1	20:39				
ZZZZZZ		1	20:44				
ZZZZZZ		1	20:48				
ZZZZZZ		1	20:53				
ZZZZZZ		1	20:57				
ZZZZZZ		2	21:02				
CCV		1	21:06 AL	CA	FE	MG	ZN
CCB		1	21:11 AL	CA	FE	MG	ZN
ZZZZZZ		1	21:15				
ZZZZZZ		5	21:20				
ZZZZZZ		1	21:24				
ZZZZZZ		1	21:29				
ZZZZZZ		1	21:33				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ13B

Date: 10/13/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	21:38				
ZZZZZZ		1	21:42				
ZZZZZZ		1	21:47				
ZZZZZZ		1	21:51				
ZZZZZZ		1	21:56				
CCV		1	22:00 AL	CA	FE	MG	ZN
CCB		1	22:05 AL	CA	FE	MG	ZN
ZZZZZZ		1	22:09				
ZZZZZZ		1	22:14				
ZZZZZZ		1	22:18				
SE6227-008	DSY-SD-AC24-0012	1	22:23				ZN
ZZZZZZ		1	22:27				
SE6227-010	DSY-SD-AC24-2448	1	22:32				ZN
ZZZZZZ		1	22:36				
ZZZZZZ		1	22:41				
ZZZZZZ		1	22:45				
ZZZZZZ		1	22:50				
CCV		1	22:54 AL	CA	FE	MG	ZN
CCB		1	22:58 AL	CA	FE	MG	ZN
ZZZZZZ		2	23:03				
ZZZZZZ		1	23:07				
ZZZZZZ		5	23:12				
ZZZZZZ		1	23:16				
ZZZZZZ		1	23:21				
ZZZZZZ		1	23:25				
ZZZZZZ		1	23:30				
ZZZZZZ		1	23:34				
ZZZZZZ		5	23:39				
ZZZZZZ		1	23:43				
CCV		1	23:48 AL	CA	FE	MG	ZN
CCB		1	23:52 AL	CA	FE	MG	ZN
ZZZZZZ		1	23:57				
ZZZZZZ		1	0:01				
ZZZZZZ		5	0:06				
ZZZZZZ		1	0:10				
ZZZZZZ		1	0:15				
ZZZZZZ		1	0:19				
ZZZZZZ		1	0:24				
ZZZZZZ		1	0:28				
ZZZZZZ		1	0:33				
ZZZZZZ		2	0:37				
CCV		1	0:42 AL	CA	FE	MG	ZN
CCB		1	0:46 AL	CA	FE	MG	ZN
ZZZZZZ		1	0:50				
ZZZZZZ		1	0:55				
ZZZZZZ		1	1:00				
ZZZZZZ		1	1:04				
ZZZZZZ		1	1:09				
ZZZZZZ		1	1:13				
ZZZZZZ		1	1:18				
ZZZZZZ		1	1:23				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Instrument ID: THERMO ICAP 6500 **File Name:** IBJ13B

Date: 10/14/2011 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	1:27				
ZZZZZZ		1	1:32				
CCV		1	1:36	AL	CA	FE	MG	ZN
CCB		1	1:41	AL	CA	FE	MG	ZN
ZZZZZZ		1	1:45				
ZZZZZZ		1	1:50				
ZZZZZZ		1	1:55				
ZZZZZZ		5	1:59				
ZZZZZZ		1	2:04				
ZZZZZZ		1	2:08				
ZZZZZZ		1	2:13				
ZZZZZZ		1	2:17				
ZZZZZZ		1	2:22				
ZZZZZZ		1	2:27				
CCV		1	2:31	AL	CA	FE	MG	ZN
CCB		1	2:36	AL	CA	FE	MG	ZN
ZZZZZZ		1	2:40				
ZZZZZZ		1	2:45				
ZZZZZZ		1	2:49				
ZZZZZZ		1	2:54				
ZZZZZZ		1	2:58				
ZZZZZZ		1	3:03				
ZZZZZZ		1	3:07				
ZZZZZZ		1	3:12				
ZZZZZZ		1	3:17				
ZZZZZZ		5	3:21				
CCV		1	3:26	AL	CA	FE	MG	ZN
CCB		1	3:30	AL	CA	FE	MG	ZN
ZZZZZZ		1	3:35				
ZZZZZZ		1	3:39				
ZZZZZZ		1	3:44				
ZZZZZZ		1	3:48				
ZZZZZZ		1	3:53				
ZZZZZZ		1	3:57				
PBSBJ13ICS1		1	4:02					ZN
LCSOBJ13ICS1		1	4:07					ZN
SE6227-009R	DSY-SD-AC24-1224R	1	4:11					ZN
CCV		1	4:15	AL	CA	FE	MG	ZN
CCB		1	4:20	AL	CA	FE	MG	ZN

FORM XIV - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICV

File: IBJ13B Oct 13, 2011 18:01

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	9739.00	97.4
CALCIUM	10000.0	9724.00	97.2
IRON	10000.0	9831.00	98.3
MAGNESIUM	10000.0	10150.00	101.5
ZINC	400.0	398.40	99.6

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 18:23

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12500.00	100.0
CALCIUM	12500.0	12530.00	100.2
IRON	12500.0	12480.00	99.8
MAGNESIUM	12500.0	12810.00	102.5
ZINC	500.0	506.50	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 19:18

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12220.00	97.8
CALCIUM	12500.0	12650.00	101.2
IRON	12500.0	12220.00	97.8
MAGNESIUM	12500.0	12760.00	102.1
ZINC	500.0	497.50	99.5

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 20:12

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12460.00	99.7
CALCIUM	12500.0	12620.00	101.0
IRON	12500.0	12360.00	98.9
MAGNESIUM	12500.0	12770.00	102.2
ZINC	500.0	502.90	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 21:06

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12610.00	100.9
CALCIUM	12500.0	12580.00	100.6
IRON	12500.0	12510.00	100.1
MAGNESIUM	12500.0	12640.00	101.1
ZINC	500.0	499.80	100.0

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 22:00

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12660.00	101.3
CALCIUM	12500.0	12640.00	101.1
IRON	12500.0	12600.00	100.8
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	498.20	99.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 22:54

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12440.00	99.5
CALCIUM	12500.0	12460.00	99.7
IRON	12500.0	12450.00	99.6
MAGNESIUM	12500.0	12540.00	100.3
ZINC	500.0	493.20	98.6

SAMPLE: CCV

File: IBJ13B Oct 13, 2011 23:48

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12630.00	101.0
CALCIUM	12500.0	12760.00	102.1
IRON	12500.0	12520.00	100.2
MAGNESIUM	12500.0	12860.00	102.9
ZINC	500.0	498.60	99.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 14, 2011 0:42

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12330.00	98.6
CALCIUM	12500.0	12510.00	100.1
IRON	12500.0	12280.00	98.2
MAGNESIUM	12500.0	12620.00	101.0
ZINC	500.0	490.30	98.1

SAMPLE: CCV

File: IBJ13B Oct 14, 2011 1:36

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12360.00	98.9
CALCIUM	12500.0	12630.00	101.0
IRON	12500.0	12330.00	98.6
MAGNESIUM	12500.0	12670.00	101.4
ZINC	500.0	491.40	98.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 14, 2011 2:31

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12410.00	99.3
CALCIUM	12500.0	12690.00	101.5
IRON	12500.0	12360.00	98.9
MAGNESIUM	12500.0	12660.00	101.3
ZINC	500.0	490.90	98.2

SAMPLE: CCV

File: IBJ13B Oct 14, 2011 3:26

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12410.00	99.3
CALCIUM	12500.0	12720.00	101.8
IRON	12500.0	12320.00	98.6
MAGNESIUM	12500.0	12720.00	101.8
ZINC	500.0	491.10	98.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCV

File: IBJ13B Oct 14, 2011 4:15

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12280.00	98.2
CALCIUM	12500.0	12610.00	100.9
IRON	12500.0	12160.00	97.3
MAGNESIUM	12500.0	12830.00	102.6
ZINC	500.0	493.50	98.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: PQL

File: IBJ13B Oct 13, 2011 18:10

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	311.20	103.7
CALCIUM	100.0	108.20	108.2
IRON	100.0	103.80	103.8
MAGNESIUM	100.0	109.80	109.8
ZINC	20.0	21.13	105.7

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICB

File: IBJ13B Oct 13, 2011 18:05

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB

File: IBJ13B Oct 13, 2011 18:28

Analyte	Result	C
ALUMINUM	14.510	J
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	-11.960	J
ZINC	0.190	U

SAMPLE: CCB

File: IBJ13B Oct 13, 2011 19:22

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.117	J
MAGNESIUM	5.500	U
ZINC	0.190	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ13B Oct 13, 2011 20:17

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 13, 2011 21:11

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 13, 2011 22:05

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ13B Oct 13, 2011 22:58

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	5.256	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 13, 2011 23:52

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 14, 2011 0:46

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	4.181	J
MAGNESIUM	5.500	U
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB
File: IBJ13B Oct 14, 2011 1:41

Analyte	Result	C
ALUMINUM	15.300	J
CALCIUM	11.400	U
IRON	4.059	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 14, 2011 2:36

Analyte	Result	C
ALUMINUM	-16.960	J
CALCIUM	11.400	U
IRON	8.192	J
MAGNESIUM	5.500	U
ZINC	0.190	U

SAMPLE: CCB
File: IBJ13B Oct 14, 2011 3:30

Analyte	Result	C
ALUMINUM	-28.860	J
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	-6.353	J
ZINC	0.190	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: CCB

File: IBJ13B Oct 14, 2011 4:20

Analyte	Result	C
ALUMINUM	14.400	U
CALCIUM	11.400	U
IRON	3.020	U
MAGNESIUM	5.500	U
ZINC	0.190	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** DSY-9

Concentration Units: ug/L

SAMPLE: ICSA

File: IBJ13B Oct 13, 2011 18:14

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	487000	97.4
CALCIUM	500000	469000	93.8
IRON	200000	182600	91.3
MAGNESIUM	500000	431200	86.2
ZINC	0	2	

SAMPLE: ICSAB

File: IBJ13B Oct 13, 2011 18:19

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	477900	95.6
CALCIUM	500000	454800	91.0
IRON	200000	179000	89.5
MAGNESIUM	500000	416000	83.2
ZINC	1000	931	93.1

Quality Control Report

Blank Sample Summary Report

Toc In Soil(1)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG98860	Lloyd Kahn	08-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300
MBLANK	WG99016	Lloyd Kahn	10-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Toc In Soil(2)

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG98860	Lloyd Kahn	08-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300
MBLANK	WG99016	Lloyd Kahn	10-OCT-11	N/A	U 300 ug/gdrywt	400 ug/gdrywt	300

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG98948	ASTM D2216	11-OCT-11	10-OCT-11	U 1 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Toc In Soil(1)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG98860-2	LCS	WG98860	08-OCT-11	N/A	ug/gdrywt	400000.000	420000	104	80-120	
WG99016-2	LCS	WG99016	10-OCT-11	N/A	ug/gdrywt	400000.000	410000	104	80-120	

Toc In Soil(2)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG98860-2	LCS	WG98860	08-OCT-11	N/A	ug/gdrywt	400000.000	420000	104	80-120	
WG99016-2	LCS	WG99016	10-OCT-11	N/A	ug/gdrywt	400000.000	410000	104	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG98948-2	LCS	WG98948	11-OCT-11	10-OCT-11	%	90	88.	98	80-120	

Quality Control Report

Matrix Spike Sample Summary Report

Toc In Soil(1)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99016-4	MS	SE6227-11	WG99016	10-OCT-11	ug/gdrywt	32304.96	60000	74000	41*	75 - 125

Toc In Soil(2)

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG99016-4	MS	SE6227-11	WG99016	10-OCT-11	ug/gdrywt	32304.96	46000	74000	85	75 - 125

Quality Control Report

Duplicate Sample Summary Report

Toc In Soil(1)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99016-3	SE6227-11	WG99016	10-OCT-11	ug/gdrywt	60000	38000	46*	30

Toc In Soil(2)

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG99016-3	SE6227-11	WG99016	10-OCT-11	ug/gdrywt	46000	38000	18	30

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG98948-4	SE6227-12	WG98948	11-OCT-11	%	49.	50.	2	20

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport

Inorganic Data Validation, SDG

2. DATE OF DOCUMENT: 11/28/11 DOCUMENT CONTROL No.: C-Navy-11-11-4901W

AUTHORS: **J. Cardinal** TtNUS JOB CHARGE No.: **112G02747**-SA.DV

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Cuczman								11/28/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4901W

Date: November 28, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Jennifer Cardinal (no copy)

Subject: Tier II Inorganic Data Validation, SDG DSY-14
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Copper/Lead/Zinc:

11/Sediments/ DSY-SD-DUP18-093011, DSY-SD-DUP19-093011, DSY-SD-W09-0012, DSY-SD-W09-1224, DSY-SD-W09-2448, DSY-SD-W17-0012, DSY-SD-W17-1224, DSY-SD-W17-2448, DSY-SD-W21-0012, DSY-SD-W21-1224, DSY-SD-W21-2448

(Field Duplicate Pairs:
DSY-SD-W13-1224 [SDG DSY-13]/DSY-SD-DUP18-093011,
DSY-SD-W21-0012/DSY-SD-DUP19-093011)

1/Rinsate Blank/DSY-SD-RB07-093011

Lead:

9/Sediments/ DSY-SD-O21-0012, DSY-SD-O21-1224, DSY-SD-O21-2448, DSY-SD-S17-0012, DSY-SD-S17-1224, DSY-SD-S17-2448, DSY-SD-S21-0012, DSY-SD-S21-1224, DSY-SD-S21-2448

(Field Duplicate Pair:
DSY-SD-S21-2448/DSY-SD-DUP20-093011 [SDG DSY-16])

TOC:

7/Sediments/ DSY-SD-DUP19-093011, DSY-SD-O21-0012, DSY-SD-S17-0012, DSY-SD-S21-0012, DSY-SD-W09-0012, DSY-SD-W17-0012, DSY-SD-W21-0012

(Field Duplicate Pair: DSY-SD-W21-0012/DSY-SD-DUP19-093011)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the copper, lead, zinc, and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected

as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The copper, lead, zinc, and TOC data were evaluated based on the following parameters:

- Laboratory Data Completeness
- * Holding Times
- * Calibration Verification
- Laboratory Blank Analyses
- * ICP Interference Check Sample Results
- Matrix Spike Recoveries
- Laboratory Duplicate Results
- * Laboratory Control Sample Results
- * Field Duplicate Precision
- * ICP Serial Dilution Results
- * Percent Solids
- * Limits of Detection

* All quality control criteria were met for this parameter.

Laboratory Data Completeness

Sample DSY-SD-DUP18-093011 was listed on the chain-of-custody form with the suffix "-093010". The laboratory correctly logged in the sample with the suffix "-093011".

Laboratory Blank Analyses

Copper/Lead/Zinc

The rinsate blank results were used for information purposes only not to calculate blank actions.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the aqueous rinsate blank sample in this SDG:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)	Affected Sample
Zinc	0.317	1.585	DSY-SD-RB07-093011

The positive zinc result below the blank action level is changed to a non-detected value (U) at the sample-specific limit of detection (LOD) due to laboratory blank contamination.

Although zinc contamination was found in the laboratory blank, the project sensitivity goals are not impacted since there are no PALs established for the rinsate blank samples. The non-detected result in the affected sample is usable as a non-detected result.

Matrix Spike Recoveries

TOC

The following table summarizes the recoveries outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample DSY-SD-S17-0012:

Analyte	%Recovery	Action	
		(+)	NDs
TOC	126	J	
TOC	135	J	

The positive TOC results are estimated (J) in all sediment samples due to high MS recoveries.

Although the MS percent recovery criterion was not met for TOC, the project accuracy goals are not impacted since there are no PALs established for TOC for the sediment samples. The positive TOC results in all samples are usable as estimated values which may be biased high.

Laboratory Duplicate Results

Lead

The following table summarizes the analyte which was outside the 20% RPD QC limit in the analysis of the laboratory duplicate of sample DSY-SD-O21-2448:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
Lead	51.7400	78.7204	41.4	J	

The positive lead results are estimated (J) in all samples due to poor laboratory duplicate precision.

The results of the laboratory duplicate analysis exceeded the QC limits for lead; therefore, the project precision goals may be impacted. The positive lead results in all samples are usable as estimated values for which the bias is indeterminate.

Limits of Detection

All results in this SDG were positive. Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

Copper/Lead/Zinc

All results for lead, copper, and zinc were reported as positive values in the sediment samples; therefore, the project action limits were not evaluated.

The zinc result in samples DSY-SD-RB07-093011 was changed to a non-detected value due to blank contamination. Data usability is not impacted.

TOC

There are no project action limits established for TOC for the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Copper/Lead/Zinc

The project goals with respect to precision were met for the copper, lead, and zinc data set with the following exception. Lead was qualified as estimated in all samples due to poor laboratory duplicate precision. Although specific method criteria were not met in this instance, the affected results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the copper, lead, and zinc data set. Data usability was not impacted with regards to accuracy, sensitivity, and completeness.

TOC

The project goals with respect to accuracy were met for the TOC data set. TOC results were estimated in all sediment samples due to high MS recoveries. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to precision and completeness.

The project goals with respect to sensitivity could not be evaluated since there are no PALs established for TOC for the sediment samples.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-14 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP18-093011			DSY-SD-DUP19-093011			DSY-SD-O21-0012			DSY-SD-O21-1224		
	LAB_ID	SE6442-001			SE6442-011			SE6442-015			SE6442-016		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	66.6			35.8			41.9			43.3		
	DUP_OF	DSY-SD-W13-1224			DSY-SD-W21-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		15.2			106								
LEAD		23.3	J	F	71.3	J	F	51.5	J	F	56.4	J	F
ZINC		66.2			210								

PROJ_NO: 02747 SDG: DSY-14 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O21-2448			DSY-SD-S17-0012			DSY-SD-S17-1224			DSY-SD-S17-2448		
	LAB_ID	SE6442-017			SE6442-012			SE6442-013			SE6442-014		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	65.7			56.0			70.1			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		51.7	J	F	18	J	F	11.5	J	F	6.4	J	F
ZINC													

PROJ_NO: 02747 SDG: DSY-14 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S21-0012			DSY-SD-S21-1224			DSY-SD-S21-2448			DSY-SD-W09-0012		
	LAB_ID	SE6442-018			SE6442-019			SE6442-020			SE6442-002		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	46.8			63.5			64.9			44.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER											75.4		
LEAD		64.6	J	F	80.4	J	F	12.2	J	F	64.7	J	F
ZINC											148		

PROJ_NO: 02747 SDG: DSY-14 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W09-1224			DSY-SD-W09-2448			DSY-SD-W17-0012			DSY-SD-W17-1224		
	LAB_ID	SE6442-003			SE6442-004			SE6442-005			SE6442-006		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	54.0			61.9			38.5			55.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		17			7.9			167			239		
LEAD		46.4	J	F	12.3	J	F	118	J	F	210	J	F
ZINC		84			49.8			823			590		

PROJ_NO: 02747 SDG: DSY-14 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W17-2448			DSY-SD-W21-0012			DSY-SD-W21-1224			DSY-SD-W21-2448		
	LAB_ID	SE6442-007			SE6442-008			SE6442-009			SE6442-010		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	64.8			36.7			56.3			64.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		5.2			160			47			6.6		
LEAD		6.6	J	F	63.4	J	F	133	J	F	7.8	J	F
ZINC		42.5			182			122			44.5		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB07-093011		
SDG: DSY-14	LAB_ID	SE6442-021		
FRACTION: M	SAMP_DATE	9/30/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
COPPER		10	U	
LEAD		4	U	
ZINC		10	UJ	AP

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP19-093011			DSY-SD-O21-0012			DSY-SD-S17-0012			DSY-SD-S21-0012		
SDG: DSY-14	LAB_ID	SE6442-11			SE6442-15			SE6442-12			SE6442-18		
FRACTION: MISC	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	35.8			41.9			56.0			46.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		36000	J	D	36000	J	D	21000	J	D	36000	J	D

PROJ_NO: 02747 SDG: DSY-14 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W09-0012			DSY-SD-W17-0012			DSY-SD-W21-0012		
	LAB_ID	SE6442-2			SE6442-5			SE6442-8		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	44.6			38.5			36.7		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		31000	J	D	35000	J	D	43000	J	D

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport

Inorganic Data Validation, SDG DSY-13

2. DATE OF DOCUMENT: 11/25/11 DOCUMENT CONTROL No.: C-Navy-11-11-4898W

AUTHORS: **J. Cardinal** TtNUS JOB CHARGE No.: **112G02747**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Cuzzi								11/25/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4898W

Date: November 25, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Jennifer Cardinal (no copy)

Subject: Tier II Inorganic Data Validation, SDG DSY-13
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

17/Sediments/	DSY-SD-DUP16-093011	DSY-SD-DUP17-093011
	DSY-SD-O09-0012	DSY-SD-O09-1224
	DSY-SD-O09-2448	DSY-SD-O13-0012
	DSY-SD-O13-1224	DSY-SD-O13-2448
	DSY-SD-O17-0012	DSY-SD-O17-1224
	DSY-SD-O17-2448	DSY-SD-S09-0012
	DSY-SD-S09-1224	DSY-SD-S09-2448
	DSY-SD-S13-0012	DSY-SD-S13-1224
	DSY-SD-S13-2448	

(Field Duplicate Pairs: DSY-SD-S09-2448/DSY-SD-DUP16-093011, DSY-SD-O13-0012/DSY-SD-DUP17-093011)

Copper/Lead/Zinc:

3/Sediments/	DSY-SD-W13-0012	DSY-SD-W13-1224
	DSY-SD-W13-2448	

(Field Duplicate Pair:
DSY-SD-W13-1224/DSY-SD-DUP18-093011 [SDG DSY-14])

TOC:

7/Sediments/	DSY-SD-DUP17-093011	DSY-SD-O09-0012
	DSY-SD-O13-0012	DSY-SD-O17-0012
	DSY-SD-S09-0012	DSY-SD-S13-0012
	DSY-SD-W13-0012	

(Field Duplicate Pair: DSY-SD-O13-0012/DSY-SD-DUP17-093011)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the copper, lead, zinc, and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The copper, lead, zinc, and TOC data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Holding Times
* • Calibration Verification
* • Laboratory Blank Analyses
* • ICP Interference Check Sample Results
* • Matrix Spike Recoveries
• Laboratory Duplicate Results
* • Laboratory Control Sample Results
• Field Duplicate Precision
* • ICP Serial Dilution Results
* • Percent Solids
* • Limits of Detection

* All quality control criteria were met for this parameter.

Laboratory Duplicate Results

Lead

The following table summarizes the analyte which was outside the 20% RPD QC limit in the analysis of the laboratory duplicate of sample DSY-SD-O17-2448:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
Lead	37.16	78.78	71.8	J	

The positive lead results are estimated (J) in all samples due to poor laboratory duplicate precision.

Although the results of the laboratory duplicate analysis exceeded the QC limits for lead, the project precision goals are not impacted since the affected sample results are more than an order of magnitude below the PAL. The positive lead results in all samples are usable as estimated values for which the bias is indeterminate.

Field Duplicate Precision

Lead

The following table summarizes the analytes that recovered outside of the 50% RPD QC limit in the analysis of the field duplicate pair DSY-SD-O13-0012/DSY-SD-DUP17-093011:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
Lead	41.4	13.9	99	J	

The positive lead results are estimated (J) in samples DSY-SD-O13-0012 and DSY-SD-DUP17-093011 due to poor field duplicate precision.

Although the results of the field duplicate analysis exceeded the QC limits for lead, the project precision goals are not impacted since the affected sample results are more than an order of magnitude below the PAL. The positive lead results in samples DSY-SD-O13-0012 and DSY-SD-DUP17-093011 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

All results for copper, lead, and zinc were reported as positive values above the LOQs in the sediment samples; therefore, the project action limits were not evaluated.

There are no project action limits established for TOC for the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Copper/Lead/Zinc

The project goals with respect to precision were met for the copper, lead, and zinc data set. Lead was qualified as estimated in all samples due to poor laboratory duplicate precision. Lead was also qualified as estimated in samples DSY-SD-O13-0012 and DSY-SD-DUP17-093011 due to poor field duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the copper, lead, and zinc data set. Data usability was not impacted with regards to accuracy, sensitivity, and completeness.

TOC

The project goals with respect to accuracy, precision, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, and completeness.

The project goals with respect to sensitivity could not be evaluated since there are no PALs established for TOC for the sediment samples.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-13 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP16-093011			DSY-SD-DUP17-093011			DSY-SD-O09-0012			DSY-SD-O09-1224		
	LAB_ID	SE6441-004			SE6441-014			SE6441-005			SE6441-006		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	65.3			72.6			52.7			69.0		
	DUP_OF	DSY-SD-S09-2448			DSY-SD-O13-0012								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		7.2	J	F	13.9	J	FG	63.5	J	F	6.2	J	F
ZINC													

PROJ_NO: 02747 SDG: DSY-13 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O09-2448			DSY-SD-O13-0012			DSY-SD-O13-1224			DSY-SD-O13-2448		
	LAB_ID	SE6441-007			SE6441-011			SE6441-012			SE6441-013		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.5			76.9			75.5			74.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		5.6	J	F	41.4	J	FG	3.7	J	F	4.5	J	F
ZINC													

PROJ_NO: 02747 SDG: DSY-13 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O17-0012			DSY-SD-O17-1224			DSY-SD-O17-2448			DSY-SD-S09-0012		
	LAB_ID	SE6441-008			SE6441-009			SE6441-010			SE6441-001		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	42.5			43.7			61.7			48.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		45.4	J	F	79.8	J	F	37.2	J	F	51.1	J	F
ZINC													

PROJ_NO: 02747 SDG: DSY-13 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S09-1224			DSY-SD-S09-2448			DSY-SD-S13-0012			DSY-SD-S13-1224		
	LAB_ID	SE6441-002			SE6441-003			SE6441-015			SE6441-016		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	62.6			64.7			44.7			46.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		12.6	J	F	7.5	J	F	48.6	J	F	97	J	F
ZINC													

PROJ_NO: 02747	NSAMPLE	DSY-SD-S13-2448			DSY-SD-W13-0012			DSY-SD-W13-0012RA			DSY-SD-W13-1224		
SDG: DSY-13	LAB_ID	SE6441-017			SE6441-018			SE6441-018			SE6441-019		
FRACTION: M	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	59.5			59.9			59.9			65.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER					90.8			90.8			19.4		
LEAD		19.4	J	F	58.2	J	F	58.2	J	F	27.8	J	F
ZINC					172			172			70.4		

PROJ_NO: 02747 SDG: DSY-13 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W13-1224RA			DSY-SD-W13-2448		
	LAB_ID	SE6441-019			SE6441-020		
	SAMP_DATE	9/30/2011			9/30/2011		
	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	65.3			68.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		19.4			6.4		
LEAD		27.8	J	F	7	J	F
ZINC		70.4			46.3		

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP17-093011			DSY-SD-O09-0012			DSY-SD-O13-0012			DSY-SD-O17-0012		
SDG: DSY-13	LAB_ID	SE6441-14			SE6441-5			SE6441-11			SE6441-8		
FRACTION: MISC	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	72.6			52.7			76.9			42.5		
	DUP_OF	DSY-SD-O13-0012											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		9100			23000			9200			28000		

PROJ_NO: 02747 SDG: DSY-13 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S09-0012			DSY-SD-S13-0012			DSY-SD-W13-0012		
	LAB_ID	SE6441-1			SE6441-15			SE6441-18		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.8			44.7			59.9		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		28000			31000			24000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

IN **Organic Data Validation, SDG** D54 – 15

2. DATE OF DOCUMENT: 12/13/11 DOCUMENT CONTROL No.: C-Navy-12-11-4931W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Matteo							PDM	12-7-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4931W

Date: December 13, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-15
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

13/Sediments/	DSY-SD-K09-0012	DSY-SD-K09-1224	DSY-SD-K09-2448
	DSY-SD-K13-0012	DSY-SD-K13-1224	DSY-SD-K13-2448
	DSY-SD-K17-0012	DSY-SD-K17-1224	DSY-SD-K17-2448
	DSY-SD-K21-0012	DSY-SD-K21-1224	DSY-SD-K21-2448
	DSY-SD-DUP21-100311		

Field Duplicate Pair: DSY-SD-K09-0012/DSY-SD-DUP21-100311

Copper/Lead/Zinc

7/Sediments/	DSY-SD-K05-0012	DSY-SD-K05-1224	DSY-SD-K05-2448
	DSY-SD-Y03-0012	DSY-SD-Y03-1224	DSY-SD-Y03-2448
	DSY-SD-DUP22-100311		

Field Duplicate Pair: DSY-SD-Y03-2448/DSY-SD-DUP22-100311

TOC:

7/Sediments/	DSY-SD-K05-0012	DSY-SD-K09-0012	DSY-SD-K13-0012
	DSY-SD-K17-0012	DSY-SD-K21-0012	DSY-SD-Y03-0012
	DSY-SD-DUP21-100311		

Field Duplicate Pair: DSY-SD-K09-0012/DSY-SD-DUP21-100311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals (copper, lead, zinc) and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The lead and TOC data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Holding Times
* • Calibration Verification
* • Laboratory Blank Analyses
* • ICP Interference Check Sample Results
* • Matrix Spike Recoveries
• Laboratory Duplicate Results
* • Laboratory Control Sample Results
* • Field Duplicate Precision
* • ICP Serial Dilution Results
* • Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Laboratory Duplicate Results

TOC

The following table summarizes the TOC results that exceeded the 20% RPD QC limit in the analysis of the laboratory duplicate of sample DSY-SD-K09-0012:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
TOC	11350	8650	27	J	

The positive TOC results are estimated (J) in all samples due to poor laboratory duplicate precision.

Although the results of the laboratory duplicate analysis exceeded the QC limits for TOC, the project precision goals are not impacted since there are no PALs for TOC. The positive TOC results in all samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

All results for copper, lead, zinc, and TOC were reported as positive values above the LOQs in the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Copper, Lead, Zinc

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the metals data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

TOC

The project goals with respect to precision were met for the TOC data set. TOC was qualified as estimated in all samples due to poor laboratory duplicate precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-K05-0012			DSY-SD-K09-0012			DSY-SD-K13-0012		
SDG: DSY-15	LAB_ID	SE6443-4			SE6443-5			SE6443-1			SE6443-8		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	69.1			60.1			73.7			52.9		
	DUP_OF	DSY-SD-K09-0012											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		9200	J	F	22000	J	F	11000	J	F	34000	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-K17-0012			DSY-SD-K21-0012			DSY-SD-Y03-0012		
SDG: DSY-15	LAB_ID	SE6443-11			SE6443-18			SE6443-14		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	34.9			38.0			57.8		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		33000	J	F	37000	J	F	17000	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-DUP22-100311			DSY-SD-K05-0012			DSY-SD-K05-1224		
SDG: DSY-15	LAB_ID	SE6443-004			SE6443-017			SE6443-005			SE6443-006		
FRACTION: M	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	69.1			65.0			60.1			78.3		
	DUP_OF	DSY-SD-DUP21-100311			DSY-SD-Y03-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER					7.2			42.2			4.2		
LEAD		17.2			7.6			1410			5.3		
ZINC					43.6			678			24.9		

PROJ_NO: 02747 SDG: DSY-15 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K05-2448			DSY-SD-K09-0012			DSY-SD-K09-1224			DSY-SD-K09-2448		
	LAB_ID	SE6443-007			SE6443-001			SE6443-002			SE6443-003		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	76.1			73.7			72.0			75.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		4											
LEAD		4.4			10.6			4.9			4.7		
ZINC		25.5											

PROJ_NO: 02747 SDG: DSY-15 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K13-0012			DSY-SD-K13-1224			DSY-SD-K13-2448			DSY-SD-K17-0012		
	LAB_ID	SE6443-008			SE6443-009			SE6443-010			SE6443-011		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	52.9			74.7			75.5			34.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		598			168			5.2			55.1		
ZINC													

PROJ_NO: 02747 SDG: DSY-15 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K17-1224			DSY-SD-K17-2448			DSY-SD-K21-0012			DSY-SD-K21-1224		
	LAB_ID	SE6443-012			SE6443-013			SE6443-018			SE6443-019		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.9			75.9			38.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER													
LEAD		13			3.4			57.4			135		
ZINC													

PROJ_NO: 02747 SDG: DSY-15 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K21-2448			DSY-SD-Y03-0012			DSY-SD-Y03-1224			DSY-SD-Y03-2448		
	LAB_ID	SE6443-020			SE6443-014			SE6443-015			SE6443-016		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	76.4			57.8			62.9			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER					9.3			6.2			6.4		
LEAD		7.2			11.1			7.3			7.4		
ZINC					48.4			41.2			42		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

IN **Organic Data Validation, SDG** DSY-16

2. DATE OF DOCUMENT: 12/20/11 DOCUMENT CONTROL No.: C-Nary-12-11-4937W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Mattei							fee	12-15-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4937W

Date: November 20, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-16
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

14/Sediments/	DSY-SD-Y25-0012	DSY-SD-Y25-1224	DSY-SD-Y25-2448
	DSY-SD-Y26-0012	DSY-SD-Y26-1224	DSY-SD-Y26-2448
	DSY-SD-Y28-0012	DSY-SD-Y28-1224	DSY-SD-Y28-2448
	DSY-SD-Y30-0012	DSY-SD-Y30-1224	DSY-SD-Y30-2448
	DSY-SD-DUP20-093011		
	DSY-SD-DUP23-100311		

Field Duplicate Pair: DSY-SD-S21-2448/DSY-SD-DUP20-093011
DSY-SD-Y25-2448/DSY-SD-DUP23-100311

Copper/Lead/Zinc:

1/Rinsate Blank/	DSY-SD-RB08-100311

TOC:

4/Sediments/	DSY-SD-Y25-0012	DSY-SD-Y26-0012	DSY-SD-Y28-0012
	DSY-SD-Y30-0012		

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals (copper, lead, and/or zinc) and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, and October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to the USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The lead and TOC data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Holding Times
* • Calibration Verification
* • Laboratory Blank Analyses
* • ICP Interference Check Sample Results
* • Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Sample Results
* • Field Duplicate Precision
* • ICP Serial Dilution Results
* • Reporting Limits

* - All quality control criteria were met for this parameter.

Laboratory Data Completeness

The chain-of-custody form required TOC analysis for sample DSY-SD-RB08-100311; however, no TOC jars were received, only metal containers. This sample was analyzed for lead, copper, and zinc only.

The laboratory received the containers for sample DSY-SD-DUP20-093011; however this sample was not listed on the chain-of-custody form. The sampler was contacted and he instructed the laboratory to analyze this sample. The sampler submitted an amended chain-of-custody form including this sample.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs in the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Lead

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-16 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP20-093011			DSY-SD-DUP23-100311			DSY-SD-Y25-0012			DSY-SD-Y25-1224		
	LAB_ID	SE6444-015			SE6444-004			SE6444-001			SE6444-002		
	SAMP_DATE	9/30/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.7			65.3			37.4			41.1		
	DUP_OF	DSY-SD-21-2448			DSY-SD-Y25-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		13.2			37.8			165			918		

PROJ_NO: 02747 SDG: DSY-16 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y25-2448			DSY-SD-Y26-0012			DSY-SD-Y26-1224			DSY-SD-Y26-2448		
	LAB_ID	SE6444-003			SE6444-005			SE6444-006			SE6444-007		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	66.4			37.5			39.9			63.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		59.9			69.5			160			125		

PROJ_NO: 02747 SDG: DSY-16 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y28-0012			DSY-SD-Y28-1224			DSY-SD-Y28-2448			DSY-SD-Y30-0012		
	LAB_ID	SE6444-008			SE6444-009			SE6444-010			SE6444-011		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	32.9			39.8			65.7			55.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		69.4			199			52.4			256		

PROJ_NO: 02747	NSAMPLE	DSY-SD-Y30-1224		
SDG: DSY-16	LAB_ID	SE6444-012		
FRACTION: M	SAMP_DATE	10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	69.9		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		41		

PROJ_NO: 02747 SDG: DSY-16 FRACTION: M MEDIA: WATER	NSAMPLE	DSY-SD-RB08-100311		
	LAB_ID	SE6444-013		
	SAMP_DATE	10/3/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
COPPER		0.91	J	P
LEAD		4	U	
ZINC		2.3	J	P

PROJ_NO: 02747 SDG: DSY-16 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y25-0012			DSY-SD-Y26-0012			DSY-SD-Y28-0012			DSY-SD-Y30-0012		
	LAB_ID	SE6444-1			SE6444-5			SE6444-8			SE6444-11		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	37.4			37.5			32.9			55.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		45000			48000			40000			26000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

IN **Organic Data Validation, SDG** DSG-17

2. DATE OF DOCUMENT: 12/20/11 DOCUMENT CONTROL No.: C-Navy-12-11-4939W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	12/18/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4939W

Date: December 20, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DSY-17
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Metals (lead only):

20/Sediments/	DSY-SD-J24-0012	DSY-SD-J24-1224	DSY-SD-J26-0012
	DSY-SD-J26-1224	DSY-SD-J26-2448	DSY-SD-J28-0012
	DSY-SD-J28-1224	DSY-SD-J28-2448	DSY-SD-J30-0012
	DSY-SD-J30-1224	DSY-SD-J30-2448	DSY-SD-L26-0012
	DSY-SD-L28-0012	DSY-SD-L28-1224	DSY-SD-L28-2448
	DSY-SD-L30-0012	DSY-SD-L30-1224	DSY-SD-L30-2448
	DSY-SD-DUP24-100411		
	DSY-SD-DUP25-100411		

Field Duplicate Pairs: DSY-SD-J26-2448/DSY-SD-DUP24-100411
DSY-SD-L28-1224/SDY-SD-DUP25-100411

TOC:

7/Sediments/	DSY-SD-J24-0012	DSY-SD-J26-0012	DSY-SD-J28-0012
	DSY-SD-J30-0012	DSY-SD-L26-0012	DSY-SD-L28-0012
	DSY-SD-L30-0012		

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals (lead) and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 4, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The metals and TOC data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
*	•	Holding Times
*	•	Calibration Verification
*	•	Laboratory Blank Analyses
N/A	•	ICP Interference Check Sample Results
	•	Matrix Spike Recoveries
*	•	Laboratory Duplicate Results
*	•	Laboratory Control Sample Results
	•	Field Duplicate Precision
*	•	ICP Serial Dilution Results
*	•	Reporting Limits

* - All quality control criteria were met for this parameter.
NA - Not applicable to this data set.

Matrix Spike Recoveries

Metals

The following table summarizes the results that recovered outside of the 80-120% recovery QC limits in the matrix spike (MS) analysis of sample DSY-SD-L30-0012:

Analyte	Average MS%Recovery	Affected Samples	Action	
			(+)	NDs
Lead	-1.6	All samples	J	

The positive lead results are estimated (J) in all the sediment samples due to low matrix spike recovery.

Lead recovery low in the matrix spike analysis of sample DSY-SD-L30-0012, consequently, the project precision goals may be impacted. The positive lead results in all sediment samples are usable as estimated values which may be bias low.

TOC

The following table summarizes the results that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of sample DSY-SD-L30-0012:

Analyte	Average MS%Recovery	Affected Samples	Action	
			(+)	NDs
TOC	127	All samples	J	

Although the percent recovery was above the criteria for TOC the project accuracy goals are not impacted since there are no PALs for TOC. The positive lead results in affected samples are usable as estimated values that may be biased high.

Field Duplicate Precision

Lead

The following table summarizes the lead results that recovered outside of the 50% RPD QC limit in the analysis of the field duplicate pair DSY-SD-L26-2448/DSY-SD-DUP24-100411:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
Lead	61.6	26.3	80	J	

The following table summarizes the lead results that recovered outside of the 50% RPD QC limit in the analysis of the field duplicate pair DSY-SD-L28-1224/DSY-SD-DUP25-100411:

Analyte	Sample Result	Duplicate Result	RPD	Action	
	mg/kg	mg/kg		(+)	NDs
Lead	37.0	134	113	J	

The positive lead results are estimated (J) in all the sediment samples due to poor field duplicate precision.

The lead results of the field duplicate analysis for both field duplicate pairs exceeded the QC limits, consequently, the project precision goals may be impacted. The positive lead results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Metals

The project goals with respect to accuracy were met for the metals data set with the following exception. The positive lead results in all sediment samples are qualified as estimated due to low matrix spike recovery. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the metals data set with the following exception. The positive lead results in all sediment samples are qualified as estimated due to poor field duplicate precision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to sensitivity and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to -sensitivity and laboratory data completeness.

TOC

The project goals with respect to accuracy were met for the TOC data set. The positive TOC results in all sediment samples are qualified as estimated due to the high matrix spike recovery; results may be biased high. Although specific method criteria were not met in this instance, the affected results are usable as estimated values and data usability is not impacted.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP24-100411			DSY-SD-DUP25-100411			DSY-SD-J24-0012			DSY-SD-J24-1224		
SDG: DSY-17	LAB_ID	SE6616-006			SE6616-019			SE6616-001			SE6616-002		
FRACTION: M	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	66.4			68.6			62.6			70.3		
	DUP_OF	DSY-SD-J26-2448			DSY-SD-L28-1224								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		26.3	J	DG	134	J	DG	1100	J	DG	610	J	DG

PROJ_NO: 02747	NSAMPLE	DSY-SD-J26-0012			DSY-SD-J26-1224			DSY-SD-J26-2448			DSY-SD-J28-0012		
SDG: DSY-17	LAB_ID	SE6616-003			SE6616-004			SE6616-005			SE6616-007		
FRACTION: M	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	34.2			40.0			56.6			44.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		57.9	J	DG	54.9	J	DG	61.6	J	DG	52.2	J	DG

PROJ_NO: 02747	NSAMPLE	DSY-SD-J28-1224			DSY-SD-J28-2448			DSY-SD-J30-0012			DSY-SD-J30-1224		
SDG: DSY-17	LAB_ID	SE6616-008			SE6616-009			SE6616-010			SE6616-011		
FRACTION: M	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	42.1			56.5			33.1			38.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		315	J	DG	51.9	J	DG	58.6	J	DG	81	J	DG

PROJ_NO: 02747 SDG: DSY-17 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J30-2448			DSY-SD-L26-0012			DSY-SD-L28-0012			DSY-SD-L28-1224		
	LAB_ID	SE6616-012			SE6616-020			SE6616-016			SE6616-017		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	60.8			52.1			48.0			70.0		
	DUP_OF										DSY-SD-L28-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		94.1	J	DG	324	J	DG	878	J	DG	37	J	DG

PROJ_NO: 02747 SDG: DSY-17 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L28-2448			DSY-SD-L30-0012			DSY-SD-L30-1224			DSY-SD-L30-2448		
	LAB_ID	SE6616-018			SE6616-013			SE6616-014			SE6616-015		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	77.9			49.6			72.4			79.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		10.3	J	DG	65.2	J	DG	9.5	J	DG	5.7	J	DG

PROJ_NO: 02747 SDG: DSY-17 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J24-0012			DSY-SD-J26-0012			DSY-SD-J28-0012			DSY-SD-J30-0012		
	LAB_ID	SE6616-1			SE6616-3			SE6616-7			SE6616-10		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	62.6			34.2			44.3			33.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		28000	J	D	38000	J	D	28000	J	D	36000	J	D

PROJ_NO: 02747 SDG: DSY-17 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-0012			DSY-SD-L28-0012			DSY-SD-L30-0012		
	LAB_ID	SE6616-20			SE6616-16			SE6616-13		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	52.1			48.0			49.6		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		36000	J	D	39000	J	D	27000	J	D

PROJ_NO: 02747 SDG: DSY-17 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J24-0012			DSY-SD-J26-0012			DSY-SD-J28-0012			DSY-SD-J30-0012		
	LAB_ID	SE6616-1			SE6616-3			SE6616-7			SE6616-10		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	62.6			34.2			44.3			33.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		28000	J	D	38000	J	D	28000	J	D	36000	J	D

PROJ_NO: 02747 SDG: DSY-17 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-0012			DSY-SD-L28-0012			DSY-SD-L30-0012		
	LAB_ID	SE6616-20			SE6616-16			SE6616-13		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	52.1			48.0			49.6		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		36000	J	D	39000	J	D	27000	J	D

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

IN **Organic Data Validation, SDG** DSY-3

2. DATE OF DOCUMENT: 11/17/11 DOCUMENT CONTROL No.: C-Navy-11-11-4678W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Matteo							PDM	11/16/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4678W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-3
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Metals (Copper, Lead, Zinc):

20/Sediments/	DSY-SD-BB26-0012	DSY- SD-BB26-1224	DSY- SD-BB26-2448
	DSY-SD-BC28-0012	DSY-SD-BC28-1224	DSY-SD-BC28-2448
	DSY-SD-BC30-0012	DSY-SD-BC30-1224	DSY- SD-BC30-2448
	DSY-SD-BD26-0012	DSY- SD-BD26-1224	DSY-SD-BD26-2448
	DSY-SD-BG26-0012	DSY-SD-BG26-1224	DSY-SD-BG26-2448
	DSY-SD-BJ23-0012	DSY-SD-BJ23-1224	DSY-SD-BJ23-2448
	DSY-SD-DUP01-092111	DSY-SD-DUP02-092111	

Field Duplicate Pairs: DSY-SD-BD26-0012/DSY-SD-DUP01-092111
DSY-SD-BJ23-2448/DSY-SD-DUP02-092111

TOC:

7/Sediments/	DSY-SD-BB26-0012	DSY-SD-BC28-0012	DSY-SD-BC30-0012
	DSY-SD-BD26-0012	DSY-SD-BG26-0012	DSY-SD-BJ23-0012
	DSY-SD-DUP01-092111		

Field Duplicate Pair: DSY-SD-BD26-0012/DSY-SD-DUP01-092111

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the select metals and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.C-NAVY-10-11-4599W

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The metals and TOC data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
*	•	Holding Times
*	•	Calibration Verification
*	•	Laboratory Blank Analyses
N/A	•	ICP Interference Check Sample Results
	•	Matrix Spike Recoveries
*	•	Laboratory Duplicate Results
*	•	Laboratory Control Sample Results
*	•	Field Duplicate Precision
*	•	ICP Serial Dilution Results
*	•	Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Matrix Spike Recoveries

TOC

The following table summarizes the TOC results that recovered outside of the 75-125% recovery QC limits in the matrix spike/matrix spike duplicate (MS/MSD) analyses of samples DSY-SD-BJ23-0012:

Analyte	%Recovery MS/MSD	Affected Sample	Action	
			(+)	NDs
TOC	127/141	DSY-SD-BJ23-0012	J	

Although the percent recovery criteria were not met for TOC, the project accuracy goals are not impacted since there is no project action limit (PAL) established for TOC for the sediment samples. The positive TOC result in sample DSY-SD-BJ23-0012 is usable as an estimated value which may be biased high.

Metals

The following table summarizes the analyte that recovered outside of the 80-120% recovery QC limits in the matrix spike (MS) analysis of sample DSY-SD-BD26-0012:

Analyte	%Recovery	Action	
		(+)	NDs
Copper	57.6	J	

The percent recovery criterion was not met for copper; consequently, the project accuracy goals may be impacted for copper in the sediment samples. The positive copper results in the sediment samples are usable as estimated values that may be biased low.

Reporting Limits

All results for copper, lead, zinc and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Metals

The project goals with respect to accuracy were met for the metals data set with the following exception. The positive copper results in the sediment samples are qualified as estimated due to the low MS recovery; results may be biased low. Data usability for copper may be impacted.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the metals data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

TOC

The project goals with respect to accuracy were met for the TOC data set. The positive TOC result in sample DSY-SD-BJ23-0012 was qualified as estimated due to the high MS recovery; the result may be biased high. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB26-0012			DSY-SD-BB26-1224			DSY-SD-BB26-2448			DSY-SD-BC28-0012		
SDG: DSY-3	LAB_ID	SE6158-001			SE6158-002			SE6158-003			SE6158-004		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	47.9			60.7			61.4			60.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		110	J	D	108	J	D	92.4	J	D	69.3	J	D
LEAD		143			149			75.3			67.5		
ZINC		799			432			168			168		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC28-1224			DSY-SD-BC28-2448			DSY-SD-BC30-0012			DSY-SD-BC30-1224		
SDG: DSY-3	LAB_ID	SE6158-005			SE6158-006			SE6158-007			SE6158-008		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	67.2			78.0			43.1			58.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		35.8	J	D	2.5	J	D	159	J	D	67	J	D
LEAD		44.3			1.8			94.6			62.6		
ZINC		98.2			18.7			422			147		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BC30-2448			DSY-SD-BD26-0012			DSY-SD-BD26-1224			DSY-SD-BD26-2448		
SDG: DSY-3	LAB_ID	SE6158-009			SE6158-011			SE6158-012			SE6158-013		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	71.2			45.5			60.0			71.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		24.4	J	D	129	J	D	43.8	J	D	8	J	D
LEAD		25.4			134			50.9			11.2		
ZINC		69.6			301			122			40		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BG26-0012			DSY-SD-BG26-1224			DSY-SD-BG26-2448			DSY-SD-BJ23-0012		
SDG: DSY-3	LAB_ID	SE6158-014			SE6158-015			SE6158-016			SE6158-017		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	44.7			65.5			83.7			77.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		111	J	D	28	J	D	2.6	J	D	12.4	J	D
LEAD		91.4			32			1.8			13.3		
ZINC		250			78.7			17.7			48.7		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BJ23-1224			DSY-SD-BJ23-2448			DSY-SD-DUP01-092111			DSY-SD-DUP02-092111		
SDG: DSY-3	LAB_ID	SE6158-018			SE6158-019			SE6158-010			SE6158-020		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	76.8			82.9			45.6			83.5		
	DUP_OF							DSY-SD-BD26-0012			DSY-SD-BJ23-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		6.8	J	D	4.2	J	D	144	J	D	4.8	J	D
LEAD		6.7			2.2			134			2.2		
ZINC		38.4			32			323			26		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB26-0012			DSY-SD-BC28-0012			DSY-SD-BC30-0012			DSY-SD-BD26-0012		
SDG: DSY-3	LAB_ID	SE6158-1			SE6158-4			SE6158-7			SE6158-11		
FRACTION: MISC	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	47.9			60.9			43.1			45.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		51000			40000			45000			62000		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BG26-0012			DSY-SD-BJ23-0012			DSY-SD-DUP01-092111		
SDG: DSY-3	LAB_ID	SE6158-14			SE6158-17			SE6158-10		
FRACTION: MISC	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	44.7			77.2			45.6		
	DUP_OF							DSY-SD-BD26-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		45000			8000	J	D	48000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Inorganic Data Validation, SDG ___DSY-5_____

2. DATE OF DOCUMENT: 11/21/11 DOCUMENT CONTROL No.: C-Navy-11-11-4689W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/21/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4689W

Date: November 21, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-5
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

20/Sediments/	DSY-SD-AT16-0012	DSY-SD-AT16-1224	DSY-SD-AT16-2448
	DSY-SD-AT20-0012	DSY-SD-AT20-1224	DSY-SD-AT20-2448
	DSY-SD-AX06-0012	DSY-SD-AX06-1224	DSY-SD-AX06-2448
	DSY-SD-BB06-0012	DSY-SD-BB06-1224	DSY-SD-BB06-2448
	DSY-SD-BB10-0012	DSY-SD-BB10-1224	DSY-SD-BB10-2448
	DSY-SD-BF06-1224	DSY-SD-BF06-2448	DSY-SD-DUP04-092211
	DSY-SD-DUP05-092211	DSY-SD-DUP06-092211	

Field Duplicate Pairs: DSY-SD-BB02-2448 (in SDG DYS-4)/DSY-SD-DUP04-092211
DSY-SD-BB10-2448/DSY-SD-DUP05-092211
DSY-SD-AT16-2448/DSY-SD-DUP06-092211

TOC:

6/Sediments/	DSY-SD-AT16-0012	DSY-SD-AT20-0012	DSY-SD-AX06-0012
	DSY-SD-BB06-0012	DSY-SD-BB10-0012	DSY-SD-DUP05-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the lead and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The lead and TOC data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Holding Times
*	• Calibration Verification
*	• Laboratory Blank Analyses
*	• ICP Interference Check Sample Results
*	• Matrix Spike Recoveries
*	• Laboratory Duplicate Results
*	• Laboratory Control Sample Results
*	• Field Duplicate Precision
*	• ICP Serial Dilution Results
*	• Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Laboratory Data Completeness

The laboratory noted that the sample collection times for samples DSY-SD-BB10-1224 and DSY-SD-BB10-2448 were reversed on the bottles as compared to the chain-of-custody (COC) form. Likewise, the sample collection times for samples DSY-SD-AT20-1224 and DSY-SD-AT20-2448 were reversed on the bottles as compared to the COC. No other discrepancies were noted.

Sample DSY-SD-DUP05-092211 was analyzed for TOC at the direction of TtNUS. Sample aliquots were received for the TOC analysis, but this analysis was not requested on the COC. Field duplicate precision was not evaluated for TOC since the field duplicate pair of DSY-SD-DUP05-092211, sample DSY-SD-BB10-2448 was not analyzed for TOC.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Lead

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT16-1224			DSY-SD-AT16-2448			DSY-SD-AT20-0012		
SDG: DSY-5	LAB_ID	SE6160-017			SE6160-018			SE6160-019			SE6160-014		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	52.6			65.6			63.1			67.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		65.7			8.8			5.4			32.2		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT20-1224			DSY-SD-AT20-2448			DSY-SD-AX06-0012			DSY-SD-AX06-1224		
SDG: DSY-5	LAB_ID	SE6160-015			SE6160-016			SE6160-004			SE6160-005		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	68.0			66.4			52.2			65.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		5.8			5.2			51.7			13		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX06-2448			DSY-SD-BB06-0012			DSY-SD-BB06-1224			DSY-SD-BB06-2448		
SDG: DSY-5	LAB_ID	SE6160-006			SE6160-011			SE6160-012			SE6160-013		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	67.6			61.8			63.1			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		6			26.1			6.5			5.7		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-BB10-1224			DSY-SD-BB10-2448			DSY-SD-BF06-1224		
SDG: DSY-5	LAB_ID	SE6160-007			SE6160-008			SE6160-009			SE6160-002		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	68.2			57.1			64.6			72.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		30.2			7.9			6.3			5.1		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF06-2448			DSY-SD-DUP04-092211			DSY-SD-DUP05-092211			DSY-SD-DUP06-092211		
SDG: DSY-5	LAB_ID	SE6160-003			SE6160-001			SE6160-010			SE6160-020		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.5			63.1			59.6			61.7		
	DUP_OF				DSY-SD-BB02-2448			DSY-SD-BB10-2448			DSY-SD-AT16-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		5.5			5.4			5			6.8		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT20-0012			DSY-SD-AX06-0012			DSY-SD-BB06-0012		
SDG: DSY-5	LAB_ID	SE6160-17			SE6160-14			SE6160-4			SE6160-11		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	52.6			67.0			52.2			61.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		30000			19000			27000			22000		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-DUP05-092211		
SDG: DSY-5	LAB_ID	SE6160-7			SE6160-10		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	68.2			59.6		
	DUP_OF				DSY-SD-BB10-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		18000			22000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Inorganic Data Validation, SDG ___DSY-6_____

2. DATE OF DOCUMENT: 11/25/11 DOCUMENT CONTROL No.: C-Nary-11-11-4856W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/25/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4896W

Date: November 25, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-6
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

10/Sediments/ DSY-SD-AP20-0012 DSY- SD-AP20-1224 DSY- SD-AP20-2448
DSY-SD-AX20-0012 DSY-SD-AX20-1224 DSY-SD-AX20-2448
DSY-SD-AT24-0012 DSY-SD-AT24-1224 DSY- SD-AT24-2448
DSY-SD-DUP07-092211

Field Duplicate Pairs: DSY-SD-AT24-0012/DSY-SD-DUP07-092211

2/Rinsate Blanks/ DSY-SD-RB01-092111 DSY-SD-RB02-092211

TOC:

4/Sediments/ DSY-SD-AP20-0012 DSY-SD-AT24-0012 DSY-SD-AX20-0012
DSY-SD-DUP070092211

Field Duplicate Pairs: DSY-SD-AT24-0012/DSY-SD-DUP07-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the lead and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The lead analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The lead and TOC data were evaluated based on the following parameters:

- Laboratory Data Completeness

*	•	Holding Times
*	•	Calibration Verification
	•	Laboratory Blank Analyses
*	•	ICP Interference Check Sample Results
*	•	Matrix Spike Recoveries
	•	Laboratory Duplicate Results
*	•	Laboratory Control Sample Results
*	•	Field Duplicate Precision
*	•	ICP Serial Dilution Results
*	•	Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Laboratory Data Completeness

The laboratory verified the laboratory duplicate results for the lead analyses on November 22, 2011 because there is a big difference between the sample and the laboratory duplicate results.

Laboratory Blank Analyses

Lead

The following table summarizes the maximum levels of laboratory blank contamination and blank action levels applied to the lead samples:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)	Affected Samples
Lead	-1.403	7.0	DSY-SD-RB01-092111(RE), DSY-SD-RB02-092211(RE)

The non-detected lead results are estimated (UJ) in affected samples due to negative instrument drift as evidenced by the negative blank results.

Although negative instrument drift was noted for lead, the project accuracy goals are not impacted since there are no PALs established for the rinsate blank samples. The lead results in affected samples are usable as estimated values which may be biased low.

Laboratory Duplicate Results

Lead

The following table summarizes the analyte which was outside the 35% RPD QC limit in the analysis of the laboratory duplicate of sample DSY-SD-AP20-2448:

Analyte	Sample Result (mg/kg)	Lab Duplicate Result (mg/kg)	RPD	Action	
				(+)	NDs
Lead	6.52	511	195	J	

The laboratory duplicate RPD criterion was not met for lead; therefore, the project precision goals may be impacted. The positive lead results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Lead

The project goals with respect to accuracy were met for the lead data set. The non-detected lead result in samples DSY-SD-RB01-092111 and DSY-SD-RB02-092211 were qualified as estimated due to negative instrument drift; the results may be biased low. Although specific method criteria were not met in this instance, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision were met for the lead data set with the following exception. The positive lead results in all sediment samples are estimated due to poor laboratory duplicate precision. Data usability for lead may be impacted.

The project goals with respect to sensitivity and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to sensitivity and laboratory data completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AP20-0012			DSY-SD-AP20-1224			DSY-SD-AP20-2448			DSY-SD-AT24-0012		
SDG: DSY-6	LAB_ID	SE6161-001			SE6161-002			SE6161-003			SE6161-007		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	68.1			63.8			62.9			69.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		20	J	F	6.9	J	F	6.5	J	F	17.5	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT24-1224			DSY-SD-AT24-2448			DSY-SD-AX20-0012			DSY-SD-AX20-1224		
SDG: DSY-6	LAB_ID	SE6161-009			SE6161-010			SE6161-004			SE6161-005		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	74.2			74.8			66.4			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		6.1	J	F	4.4	J	F	41.6	J	F	5.2	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX20-2448			DSY-SD-DUP07-092211		
SDG: DSY-6	LAB_ID	SE6161-006			SE6161-008		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	69.6			65.2		
	DUP_OF				DSY-SD-AT24-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		5	J	F	23.9	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB01-092111			DSY-SD-RB02-092211		
SDG: DSY-6	LAB_ID	SE6161-011			SE6161-012		
FRACTION: M	SAMP_DATE	9/21/2011			9/22/2011		
MEDIA: WATER	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		4	UJ	O	4	UJ	O

PROJ_NO: 02747	NSAMPLE	DSY-SD-AP20-0012			DSY-SD-AT24-0012			DSY-SD-AX20-0012			DSY-SD-DUP07-092211		
SDG: DSY-6	LAB_ID	SE6161-1			SE6161-7			SE6161-4			SE6161-8		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	68.1			69.3			66.4			65.2		
	DUP_OF										DSY-SD-AT24-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		16000			14000			20000			18000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Inorganic Data Validation, SDG ___DSY-7_____

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: C-Navy-12-11-4907W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								12/9/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4907W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-7
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

20/Sediments/	DSY-SD-AK24-0012	DSY- SD-AK24-1224	DSY- SD-AK24-2448
	DSY-SD-AK26-0012	DSY-SD-AK26-1224	DSY-SD-AK26-2448
	DSY-SD-AK28-0012	DSY-SD-AK28-1224	DSY- SD-AK28-2448
	DSY-SD-AO30-0012	DSY- SD-AO30-1224	DSY-SD-AO30-2448
	DSY-SD-AT30-0012	DSY-SD-AT30-1224	DSY-SD-AT30-2448
	DSY-SD-AY30-0012	DSY-SD-AY30-1224	DSY-SD-AY30-2448
	DSY-SD-DUP08-092311	DSY-SD-DUP09-092311	

Field Duplicate Pairs: DSY-SD-AT30-1224/DSY-SD-DUP08-092311
DSY-SD-AK24-2448/DSY-SD-DUP09-092311

TOC:

6/Sediments/	DSY-SD-AK24-0012	DSY-SD-AK26-0012	DSY-SD-AK28-0012
	DSY-SD-AO30-0012	DSY-SD-AT30-0012	DSY-SD-AY30-0012

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the select metals and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 23, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The metals and TOC data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Holding Times
* • Calibration Verification
* • Laboratory Blank Analyses
* • ICP Interference Check Sample Results
  • Matrix Spike Recoveries
* • Laboratory Duplicate Results
* • Laboratory Control Sample Results
* • Field Duplicate Precision
* • ICP Serial Dilution Results
* • Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Matrix Spike Recoveries

TOC

The following table summarizes the TOC results that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS/MSD) analyses of sample DSY-SD-AX30-0012:

Analyte	%Recovery MS/MSD	Affected Sample	Action	
			(+)	NDs
TOC	149/137	DSY-SD-AX30-0012	J	

Although the percent recovery criteria were not met for TOC, the project accuracy goals are not impacted since there is no project action limit established for TOC for the sediment samples. The positive TOC result sample DSY-SD-AX30-0012 is usable as estimated value which may be biased high.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Lead

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

TOC

The project goals with respect to accuracy were met for the TOC data set. The positive TOC result sample DSY-SD-AY30-0012 was estimated due to the high MS recoveries; the results may be biased high. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to precision, sensitivity, and completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

	=	No qualifier attached to value (positive hit)
J	=	Value is estimated
U	=	Value is not detected
UJ	=	Value is not detected and estimated
R	=	Value (positive hit) is not usable
UR	=	Value was reported as ND but is not usable

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty below quantitation limit (< QL but ≥ MDL)
Q	=	Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK24-0012			DSY-SD-AK24-1224			DSY-SD-AK24-2448			DSY-SD-AK26-0012		
SDG: DSY-7	LAB_ID	SE6225-014			SE6225-015			SE6225-016			SE6225-011		
FRACTION: M	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	73.7			73.8			73.9			79.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		9.5			22.6			7.7			8.2		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK26-1224			DSY-SD-AK26-2448			DSY-SD-AK28-0012			DSY-SD-AK28-1224		
	LAB_ID	SE6225-012			SE6225-013			SE6225-018			SE6225-019		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	80.4			81.0			82.2			78.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		6.1			2.3			2.3			2		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK28-2448			DSY-SD-AO30-0012			DSY-SD-AO30-1224			DSY-SD-AO30-2448		
	LAB_ID	SE6225-020			SE6225-008			SE6225-009			SE6225-010		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.5			77.1			80.8			82.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		1.8			13			2.6			2.1		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT30-0012			DSY-SD-AT30-1224			DSY-SD-AT30-2448			DSY-SD-AY30-0012		
	LAB_ID	SE6225-004			SE6225-005			SE6225-006			SE6225-001		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	81.0			81.9			81.9			80.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		35			2.9			4.6			5.1		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AY30-1224			DSY-SD-AY30-2448			DSY-SD-DUP08-092311			DSY-SD-DUP09-092311		
	LAB_ID	SE6225-002			SE6225-003			SE6225-007			SE6225-017		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	82.8			84.5			83.4			73.9		
	DUP_OF							DSY-SD-AY30-2448			DSY-SD-AK24-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		2.2			4.1			3.1			7.9		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK24-0012			DSY-SD-AK26-0012			DSY-SD-AK28-0012			DSY-SD-AO30-0012		
	LAB_ID	SE6225-14			SE6225-11			SE6225-18			SE6225-8		
	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	73.7			79.1			82.2			77.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		8200			7000			1200			3800		

PROJ_NO: 02747 SDG: DSY-7 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT30-0012			DSY-SD-AY30-0012		
	LAB_ID	SE6225-4			SE6225-1		
	SAMP_DATE	9/23/2011			9/23/2011		
	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	81.0			80.9		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		3000			1700	J	D

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

IN **Organic Data Validation, SDG** DSY-8

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: C-Navy-12-11-4905.0

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Matteo							[illegible]	11-29-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4905W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-8
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Lead:

19/Sediments/	DSY-SD-AK30-0012	DSY-SD-AK30-1224	DSY-SD-AK30-2448
	DSY-SD-AI28-0012	DSY-SD-AI28-1224	DSY-SD-AI28-2448
	DSY-SD-AI30-0012	DSY-SD-AI30-1224	DSY-SD-AI30-2448
	DSY-SD-AG28-0012	DSY-SD-AG28-1224	DSY-SD-AG28-2448
	DSY-SD-AG24-0012	DSY-SD-AG24-1224	DSY-SD-AG24-2448
	DSY-SD-AI24-0012	DSY-SD-AI24-1224	DSY-SD-AI24-2448
	DSY-SD-DUP10-092611		

Field Duplicate Pair: DSY-SD-AG28-2448/DSY-SD-DUP10-092611

1/Rinsate Blank/ DSY-SD-RB03-092311

TOC:

6/Sediments/	DSY-SD-AK30-0012	DSY-SD-AI28-0012	DSY-SD-AI30-0012
	DSY-SD-AG28-0012	DSY-SD-AG24-0012	DSY-SD-AI24-0012

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the lead and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 23 to 26, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to the USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The lead and TOC data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Holding Times
*	• Calibration Verification
*	• Laboratory Blank Analyses
*	• ICP Interference Check Sample Results
*	• Matrix Spike Recoveries
*	• Laboratory Duplicate Results
*	• Laboratory Control Sample Results
*	• Field Duplicate Precision
*	• ICP Serial Dilution Results
*	• Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Laboratory Data Completeness

The analyses required for sample DSY-SD-AG28-1224 were not marked on the chain-of-custody (COC) form. The samples were logged for the correct analyses based on the sample containers received.

Reporting Limits

All results for lead and TOC were reported as positive values above the LOQs in the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Lead

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the lead data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG24-0012			DSY-SD-AG24-1224			DSY-SD-AG24-2448			DSY-SD-AG28-0012		
	LAB_ID	SE6226-015			SE6226-016			SE6226-017			SE6226-011		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.3			64.5			65.5			36.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		69.9			7.2			10.2			66.1		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG28-1224			DSY-SD-AG28-2448			DSY-SD-AI24-0012			DSY-SD-AI24-1224		
	LAB_ID	SE6226-012			SE6226-013			SE6226-018			SE6226-019		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	39.8			60.0			38.9			66.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		106			76.3			91.5			78.3		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI24-2448			DSY-SD-AI28-0012			DSY-SD-AI28-1224			DSY-SD-AI28-2448		
	LAB_ID	SE6226-020			SE6226-004			SE6226-005			SE6226-006		
	SAMP_DATE	9/26/2011			9/23/2011			9/23/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	78.9			37.1			40.1			42.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		5.7			56.1			95			114		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-0012			DSY-SD-AI30-1224			DSY-SD-AI30-2448			DSY-SD-AK30-0012		
	LAB_ID	SE6226-008			SE6226-009			SE6226-010			SE6226-001		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	80.5			80.6			83.1			74.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		20.9			24.9			8.7			80.1		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AK30-1224			DSY-SD-AK30-2448			DSY-SD-DUP10-092611		
	LAB_ID	SE6226-002			SE6226-003			SE6226-014		
	SAMP_DATE	9/23/2011			9/23/2011			9/26/2011		
	QC_TYPE	NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	79.7			81.7			62.9		
	DUP_OF							DSY-SD-AG28-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LEAD		12.1			3.2			52.2		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: M MEDIA: WATER	NSAMPLE	DSY-SD-RB03-092311		
	LAB_ID	SE6226-007		
	SAMP_DATE	9/23/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
LEAD		4	U	

PROJ_NO: 02747 SDG: DSY-8 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG24-0012_201109			DSY-SD-AG28-0012_201109			DSY-SD-AI24-0012_201109			DSY-SD-AI28-0012_201109		
	LAB_ID	SE6226-15			SE6226-11			SE6226-18			SE6226-4		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/23/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	48.3			36.7			38.9			37.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		28000			38000			44000			36000		

PROJ_NO: 02747 SDG: DSY-8 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-0012_201109			DSY-SD-AK30-0012_201109		
	LAB_ID	SE6226-8			SE6226-1		
	SAMP_DATE	9/26/2011			9/23/2011		
	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	80.5			74.7		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		2200			8200		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Inorganic Data Validation, SDG ___DSY-4_____

2. DATE OF DOCUMENT: 11/17/11 DOCUMENT CONTROL No.: C-Navy-11-11-4680W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/17/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4680W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG DYS-4
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Metals (Copper, Lead and/or Zinc):

20/Sediments/	DSY-SD-BB02-0012	DSY- SD-BB02-1224	DSY- SD-BB02-2448
	DSY-SD-BE28-0012	DSY-SD-BE28-1224	DSY-SD-BE28-2448
	DSY-SD-BE30-0012	DSY-SD-BE30-1224	DSY- SD-BE30-2448
	DSY-SD-BF06-0012	DSY- SD-BF23-0012	DSY-SD-BF23-1224
	DSY-SD-BF23-2448	DSY-SD-BG28-0012	DSY-SD-BG28-1224
	DSY-SD-BG28-2448	DSY-SD-BI26-0012	DSY-SD-BI26-1224
	DSY-SD-BI26-2448	DSY-SD-DUP03-092111	

Field Duplicate Pair: DSY-SD-BI26-1224/DSY-SD-DUP03-092111

TOC:

7/Sediments/	DSY-SD-BB02-0012	DSY-SD-BE28-0012	DSY-SD-BE30-0012
	DSY-SD-BF06-0012	DSY-SD-BF23-0012	DSY-SD-BG28-0012
	DSY-SD-BI26-0012		

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the select metals and total organic carbon (TOC) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011. C-NAVY-10-11-4599W

The metals analysis was performed according to USEPA SW-846 Method 6010C and the TOC analysis was performed according to USEPA Region II Lloyd Kahn procedure. The Tier II data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, Inorganic Data Validation Functional Guidelines, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The metals and TOC data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
*	•	Holding Times
*	•	Calibration Verification
*	•	Laboratory Blank Analyses
*	•	ICP Interference Check Sample Results
	•	Matrix Spike Recoveries
	•	Laboratory Duplicate Results
*	•	Laboratory Control Sample Results
*	•	Field Duplicate Precision
*	•	ICP Serial Dilution Results
*	•	Reporting Limits

* - All quality control criteria were met for this parameter.
NA - None provided in this data set.

Matrix Spike Recoveries

TOC

The following table summarizes the TOC results that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS/MSD) analyses of sample DSY-SD-BG28-0012:

Analyte	%Recovery MS/MSD	Affected Sample	Action	
			(+)	NDs
TOC	130/127	DSY-SD-BG28-0012	J	

Although the percent recovery criteria were not met for TOC, the project accuracy goals are not impacted since there is no project action limit established for TOC for the sediment samples. The positive TOC result sample DSY-SD-BG28-0012 is usable as estimated value which may be biased high.

The following table summarizes the TOC results that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS/MSD) analyses of sample DSY-SD-BF23-0012:

Analyte	%Recovery MS/MSD	Affected Sample	Action	
			(+)	NDs
TOC	148/134	DSY-SD-BF23-0012	J	

Although the percent recovery criteria were not met for TOC, the project accuracy goals are not impacted since there is no project action limit established for TOC for the sediment samples. The positive TOC result sample DSY-SD-BF23-0012 is usable as estimated value which may be biased high.

Laboratory Duplicate Results

Metals

The following table summarizes the analytes which were outside the 35% RPD QC limit in the analysis of the laboratory duplicate of sample DSY-SD-BG28-0012:

Analyte	RPD	Action	
		(+)	NDs
Copper	83	J	
Lead	41	J	
Zinc	36	J	

The laboratory duplicate RPD criterion was not met for copper, lead, and zinc; therefore, the project precision goals may be impacted. The positive copper, lead, and zinc results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

All results for copper, lead, zinc and TOC were reported as positive values above the LOQs.

Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

Metals

The project goals with respect to precision were met for the metals data set with the following exception. The positive copper, lead, and zinc results in all sediment samples are estimated due to laboratory duplicate imprecision. Data usability for copper, lead, and zinc may be impacted.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the metals data set. Data usability was not impacted with regards to accuracy, sensitivity, and completeness.

TOC

The project goals with respect to accuracy were met for the TOC data set. The positive TOC result samples DSY-SD-BG28-0012 and DSY-SD-BF23-0012 were estimated due to the high MS recoveries; the results may be biased high. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the TOC data set. Data usability was not impacted with regards to precision, sensitivity, and completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BB02-1224			DSY-SD-BB02-2448			DSY-SD-BE28-0012		
SDG: DSY-4	LAB_ID	SE6159-017			SE6159-018			SE6159-019			SE6159-011		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	54.0			64.9			63.0			38.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER											91.8	J	F
LEAD		45	J	F	28.5	J	F	6.7	J	F	80.4	J	F
ZINC											246	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-BE28-1224			DSY-SD-BE28-2448			DSY-SD-BE30-0012			DSY-SD-BE30-1224		
SDG: DSY-4	LAB_ID	SE6159-012			SE6159-013			SE6159-008			SE6159-009		
FRACTION: M	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	65.2			81.0			57.2			71.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		63.9	J	F	3	J	F	113	J	F	25.2	J	F
LEAD		50.6	J	F	2	J	F	173	J	F	61.7	J	F
ZINC		136	J	F	20.5	J	F	354	J	F	82.9	J	F

PROJ_NO: 02747 SDG: DSY-4 FRACTION: M MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BE30-2448			DSY-SD-BF06-0012			DSY-SD-BF23-0012			DSY-SD-BF23-1224		
	LAB_ID	SE6159-010			SE6159-020			SE6159-014			SE6159-015		
	SAMP_DATE	9/21/2011			9/22/2011			9/22/2011			9/22/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	75.1			68.0			75.6			76.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		8.3	J	F				13.4	J	F	4.2	J	F
LEAD		9.5	J	F	14.9	J	F	14.5	J	F	4	J	F
ZINC		46.6	J	F				55.9	J	F	29.4	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-2448			DSY-SD-BG28-0012			DSY-SD-BG28-1224			DSY-SD-BG28-2448		
SDG: DSY-4	LAB_ID	SE6159-016			SE6159-001			SE6159-002			SE6159-003		
FRACTION: M	SAMP_DATE	9/22/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	81.7			70.7			77.0			82.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		3	J	F	29.6	J	F	6.5	J	F	4.8	J	F
LEAD		2.6	J	F	28.8	J	F	7.3	J	F	4.3	J	F
ZINC		26.1	J	F	108	J	F	42.2	J	F	32.6	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-BI26-0012			DSY-SD-BI26-1224			DSY-SD-BI26-2448			DSY-SD-DUP03-092111		
SDG: DSY-4	LAB_ID	SE6159-004			SE6159-005			SE6159-006			SE6159-007		
FRACTION: M	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	60.9			74.4			86.8			75.0		
	DUP_OF										DSY-SD-BI26-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
COPPER		41.1	J	F	20.1	J	F	8.5	J	F	25	J	F
LEAD		39.7	J	F	28.1	J	F	4.6	J	F	33	J	F
ZINC		139	J	F	70.2	J	F	32.8	J	F	78.8	J	F

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BE28-0012			DSY-SD-BE30-0012			DSY-SD-BF06-0012		
SDG: DSY-4	LAB_ID	SE6159-17			SE6159-11			SE6159-8			SE6159-20		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	54.0			38.7			57.2			68.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		30000			50000			36000			18000		

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-0012			DSY-SD-BG28-0012			DSY-SD-BI26-0012		
SDG: DSY-4	LAB_ID	SE6159-14			SE6159-1			SE6159-4		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	75.6			70.7			60.9		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		9400	J	D	16000	J	D	21000		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG D5Y-15

2. DATE OF DOCUMENT: 12/10/11 DOCUMENT CONTROL No.: C-Navy-12-11-4930W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Paula Di Matteo							PDM	12-7-11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4930W

Date: December 13, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG DYS-15
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

PAH/PCB:

20/Sediments/	DSY-SD-K05-0012	DSY-SD-K05-1224	DSY-SD-K05-2448
	DSY-SD-K09-0012	DSY-SD-K09-1224	DSY-SD-K09-2448
	DSY-SD-K13-0012	DSY-SD-K13-1224	DSY-SD-K13-2448
	DSY-SD-K17-0012	DSY-SD-K17-1224	DSY-SD-K17-2448
	DSY-SD-K21-0012	DSY-SD-K21-1224	DSY-SD-K21-2448
	DSY-SD-Y03-0012	DSY-SD-Y03-1224	DSY-SD-Y03-2448
	DSY-SD-DUP21-100311		
	DSY-SD-DUP22-100311		

Field Duplicate Pairs: DSY-SD-K09-0012/DSY-SD-DUP21-100311
DSY-SD-Y03-2448/DSY-SD-DUP22-100311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbon (PAH) and polychlorinated biphenyl (PCB) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The PAH analysis was performed according to USEPA SW-846 Method 8270C in the full scan mode. Benzo(a)pyrene analysis was performed in selective ion monitoring (SIM) mode. The PCB analysis was performed according to USEPA SW-846 Method 8082.

The PAH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

*	•	Laboratory Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
*	•	Surrogate Compounds
	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
	•	Compound Identification/Quantitation
	•	Limits of Detection

* All criteria were met for this parameter
N/A Not available for this SDG

Preservation and Technical Holding Times

PAH

The original extract for all the sediment samples were lost during the GPC cleanup procedure and re-extraction was required. The re-extraction of these samples was performed 8 days beyond the 14-day extraction holding time criterion except for sample DSY-SD-K21-2448 which was re-extracted 21 days beyond the extraction holding time criterion. The non-detected PAH results for all sediment samples were qualified as estimated (J, UJ) due to possible sample degradation.

The extraction holding criterion was not met for the sediment samples; consequently, the project accuracy goals for benzo(a)pyrene and the total HMW PAHs may be impacted. The positive and non-detected results in the sediment samples are usable as estimated values, which may be biased low.

Initial and Continuing Calibrations

PAH

The following table summarizes the compounds that failed to meet the continuing calibration (CC) %D criteria of <20%:

Compound	%RSD	Action		Affected Samples
		(+)	NDs	
Pyrene	21.8	J	UJ	DSY-SD-K21-0012, DSY-SD-K21-1224, DSY-SD-K13-2448, DSY-SD-Y03-0012, DSY-SD-Y03-1224, DSY-SD-Y03-2448, DSY-SD-K17-2448, DSY-SD-DUP22-100311

Although the %D was outside of the QC limits for pyrene, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limit (PAL) established for total PAHs. The positive and non-detected pyrene results in the affected samples are usable as estimated values.

PCB

The following table summarizes the Aroclor result that did not meet the CC criterion of %D <20% for both analytical columns:

Compound	%D Columns 1/2	Action*		Affected Sample
		(+)	NDs	
Aroclor 1254	27.4/31.4	J	UJ	DSY-SD-K05-2448, DSY-SD-K17-0012, DSY-SD-K13-1224, DSY-SD-K13-2448

Although the %D was outside of the QC limits for Aroclor 1254, the project accuracy goals are not impacted since the affected sample results are much lower than the PAL established for total PCBs in the sediment samples. The non-detected Aroclor 1254 result in the affected samples are usable as estimated values.

Internal Standards

PAH

The following table summarizes the PAH internal standards that failed to meet the acceptance criteria:

Internal Standard	IS Area	Acceptable Range	Action		Affected Samples
			(+)	NDs	
Perylene-d12	164381	196795-787180		UJ	DSY-SD-K09-0012
	189068			UJ	DSY-SD-DUP21-100311
	147063			UJ	DSY-SD-K05-0012
	192159			UJ	DSY-SD-K05-2448
	57615		J	UJ	DSY-SD-K13-0012
	96215			UJ	DSY-SD-K13-1224
	196095			UJ	DSY-SD-K17-0012
	165588			UJ	DSY-SD-K17-1224
	170741		J	UJ	DSY-SD-K21-1224
Chrysene-d12	145237	325277-1301108	J	UJ	DSY-SD-K13-0012
	257046		J	UJ	DSY-SD-K13-1224

The internal standard areas for perylene-d_{12} and chrysene-d_{12} failed to meet the acceptable range for the samples listed above. All positive and non-detected results for the compounds associated with the failing internal standards are estimated (J, UJ) in the affected samples. The PAHs associated with chrysene-d_{12} are: pyrene, benzo(a)anthracene, and chrysene. The PAHs associated with perylene-d_{12} are: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)-pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene. It should be noted that the benzo(a)pyrene results were reported from the SIM analyses in which the internal standard criteria were met.

The QC criteria were not met for the internal standard areas for perylene-d_{12} and chrysene-d_{12} for the samples listed above; consequently, the project accuracy goals for the total HMW PAHs may be impacted. The positive and non-detected results in the affected samples are usable as estimated values.

Compound Identification/Quantitation

PCBs

The %RPD between the results of analytical columns 1 and 2 that exceeded the 40% RPD QC criterion are summarized below:

Sample	Analyte	%RPD	Action (+)
DSY-SD-K17-0012	Aroclor 1254	82	J

Although the analyte quantitation relative percent differences exceeded the 40% RPD QC limit for the sample listed above, the project accuracy goals are not impacted since the affected sample result is much lower than the PAL established for total PCBs in the sediment samples. The positive Aroclor 1254 result in sample DSY-SD-K17-0012 is usable as an estimated value.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the method detection limit (MDL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

PAH

All the samples were analyzed for PAHs by GC/MS in the full scan range. Samples with benzo(a)pyrene results below the LOQ were re-analyzed in the SIM mode to obtain lower reporting limits. The PALs for benzo(a)pyrene and total HMWPAHs were met.

PCB

The total Aroclor PAL was met.

Total PCBs are calculated from the sum of all positive hits in a sample. If all results in a sample are non-detect, the total PCBs result is reported as "LOD (U)" where the LOD is the sum of the LODs of the individual Aroclors.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded

quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. All the results for the sediment samples were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. Several PAH results were qualified as estimated in select samples due to poor internal standard area responses for perylene-d_{12} and chrysene-d_{12}. The data usability for benzo(a)pyrene and the total HMW PAHs may be impacted. In addition, the positive and non-detected pyrene results were qualified as estimated in select samples due to instrument calibration variability. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PAH data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

PCB

The project goals with respect to accuracy were met for the PCB data set. The positive Aroclor 1254 result in sample DSY-SD-K17-0012 was qualified as estimated due to the RPD between the results from the two analytical columns exceeding 40%. Aroclor 1254 results were also estimated in select samples due to instrument calibration variability. Although specific method criteria were not met in these instances, the affected results are usable as estimated values.

The project goals with respect to precision, sensitivity, and laboratory data completeness were met for the PCB data set. Data usability was not impacted with regards to precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: DSY-15 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-DUP22-100311			DSY-SD-K05-0012			DSY-SD-K05-1224		
	LAB_ID	SE6443-4			SE6443-17			SE6443-5			SE6443-6		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.1			65.0			60.1			78.3		
	DUP_OF	DSY-SD-K09-0012			DSY-SD-Y03-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	UJ	H	370	UJ	H	410	UJ	H	310	UJ	H
BENZO(B)FLUORANTHENE		350	UJ	HN	370	UJ	H	410	UJ	HN	310	UJ	H
BENZO(G,H,I)PERYLENE		350	UJ	HN	370	UJ	H	410	UJ	HN	310	UJ	H
BENZO(K)FLUORANTHENE		350	UJ	HN	370	UJ	H	410	UJ	HN	310	UJ	H
CHRYSENE		350	UJ	H	370	UJ	H	410	UJ	H	310	UJ	H
DIBENZO(A,H)ANTHRACENE		350	UJ	HN	370	UJ	H	410	UJ	HN	310	UJ	H
FLUORANTHENE		350	UJ	H	370	UJ	H	410	UJ	H	310	UJ	H
INDENO(1,2,3-CD)PYRENE		350	UJ	HN	370	UJ	H	410	UJ	HN	310	UJ	H
PYRENE		350	UJ	H	370	UJ	CH	410	J	HP	310	UJ	H

PROJ_NO: 02747 SDG: DSY-15 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K05-2448			DSY-SD-K09-0012			DSY-SD-K09-1224			DSY-SD-K09-2448		
	LAB_ID	SE6443-7			SE6443-1			SE6443-2			SE6443-3		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.1			73.7			72.0			75.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		320	UJ	H	330	UJ	H	340	UJ	H	320	UJ	H
BENZO(B)FLUORANTHENE		320	UJ	HN	330	UJ	HN	340	UJ	H	320	UJ	H
BENZO(G,H,I)PERYLENE		320	UJ	HN	330	UJ	HN	340	UJ	H	320	UJ	H
BENZO(K)FLUORANTHENE		320	UJ	HN	330	UJ	HN	340	UJ	H	320	UJ	H
CHRYSENE		320	UJ	H	330	UJ	H	340	UJ	H	320	UJ	H
DIBENZO(A,H)ANTHRACENE		320	UJ	HN	330	UJ	HN	340	UJ	H	320	UJ	H
FLUORANTHENE		320	UJ	H	330	UJ	H	340	UJ	H	320	UJ	H
INDENO(1,2,3-CD)PYRENE		320	UJ	HN	330	UJ	HN	340	UJ	H	320	UJ	H
PYRENE		320	UJ	H	330	UJ	H	340	UJ	H	320	UJ	H

PROJ_NO: 02747 SDG: DSY-15 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K13-0012			DSY-SD-K13-1224			DSY-SD-K13-2448			DSY-SD-K17-0012		
	LAB_ID	SE6443-8			SE6443-9			SE6443-10			SE6443-11		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.9			74.7			75.5			34.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		270	J	HNP	320	UJ	HN	320	UJ	H	680	UJ	H
BENZO(B)FLUORANTHENE		440	UJ	HN	320	UJ	HN	320	UJ	H	680	UJ	HN
BENZO(G,H,I)PERYLENE		440	UJ	HN	320	UJ	HN	320	UJ	H	680	UJ	HN
BENZO(K)FLUORANTHENE		440	UJ	HN	320	UJ	HN	320	UJ	H	680	UJ	HN
CHRYSENE		360	J	HNP	320	UJ	HN	320	UJ	H	260	UJ	H
DIBENZO(A,H)ANTHRACENE		440	UJ	HN	320	UJ	HN	320	UJ	H	680	UJ	HN
FLUORANTHENE		350	J	HP	320	UJ	H	320	UJ	H	680	UJ	H
INDENO(1,2,3-CD)PYRENE		440	UJ	HN	320	UJ	HN	320	UJ	H	680	UJ	HN
PYRENE		1800	J	HN	300	J	HNP	320	UJ	CH	560	J	HP

PROJ_NO: 02747	NSAMPLE	DSY-SD-K17-1224			DSY-SD-K17-2448			DSY-SD-K21-0012			DSY-SD-K21-1224		
SDG: DSY-15	LAB_ID	SE6443-12			SE6443-13			SE6443-18			SE6443-19		
FRACTION: OS	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.9			75.9			38.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		350	UJ	H	320	UJ	H	620	UJ	H	150	J	HP
BENZO(B)FLUORANTHENE		350	UJ	HN	320	UJ	H	620	UJ	H	400	UJ	HN
BENZO(G,H,I)PERYLENE		350	UJ	HN	320	UJ	H	620	UJ	H	400	UJ	HN
BENZO(K)FLUORANTHENE		350	UJ	HN	320	UJ	H	210	J	HP	140	J	HNP
CHRYSENE		350	UJ	H	320	UJ	H	620	UJ	H	180	J	HP
DIBENZO(A,H)ANTHRACENE		350	UJ	HN	320	UJ	H	620	UJ	H	400	UJ	HN
FLUORANTHENE		350	UJ	H	320	UJ	H	620	UJ	H	210	J	HP
INDENO(1,2,3-CD)PYRENE		350	UJ	HN	320	UJ	H	620	UJ	H	400	UJ	HN
PYRENE		350	UJ	H	320	UJ	CH	960	J	CH	580	J	CH

PROJ_NO: 02747 SDG: DSY-15 FRACTION: OS MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K21-2448			DSY-SD-Y03-0012			DSY-SD-Y03-1224			DSY-SD-Y03-2448		
	LAB_ID	SE6443-20			SE6443-14			SE6443-15			SE6443-16		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.4			57.8			62.9			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)ANTHRACENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
BENZO(B)FLUORANTHENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
BENZO(G,H,I)PERYLENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
BENZO(K)FLUORANTHENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
CHRYSENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
DIBENZO(A,H)ANTHRACENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
FLUORANTHENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
INDENO(1,2,3-CD)PYRENE		270	UJ	H	410	UJ	H	380	UJ	H	380	UJ	H
PYRENE		270	UJ	H	410	UJ	CH	380	UJ	CH	380	UJ	CH

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-DUP22-100311			DSY-SD-K05-0012			DSY-SD-K05-1224		
SDG: DSY-15	LAB_ID	SE6443-4			SE6443-17			SE6443-5			SE6443-6		
FRACTION: PAH	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.1			65.0			60.1			78.3		
	DUP_OF	DSY-SD-K09-0012			DSY-SD-Y03-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		22	J	HP	15	UJ	H	97	J	H	12	UJ	H

PROJ_NO: 02747 SDG: DSY-15 FRACTION: PAH MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K05-2448			DSY-SD-K09-0012			DSY-SD-K09-1224			DSY-SD-K09-2448		
	LAB_ID	SE6443-7			SE6443-1			SE6443-2			SE6443-3		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.1			73.7			72.0			75.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		13	UJ	H	35	J	H	14	UJ	H	13	UJ	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-K13-0012			DSY-SD-K13-1224			DSY-SD-K13-2448			DSY-SD-K17-0012		
SDG: DSY-15	LAB_ID	SE6443-8			SE6443-9			SE6443-10			SE6443-11		
FRACTION: PAH	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.9			74.7			75.5			34.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		160	J	H	37	J	H	13	UJ	H	160	J	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-K17-1224			DSY-SD-K17-2448			DSY-SD-K21-0012			DSY-SD-K21-1224		
SDG: DSY-15	LAB_ID	SE6443-12			SE6443-13			SE6443-18			SE6443-19		
FRACTION: PAH	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.9			75.9			38.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		24	J	HP	13	UJ	H	140	J	H	110	J	H

PROJ_NO: 02747	NSAMPLE	DSY-SD-K21-2448			DSY-SD-Y03-0012			DSY-SD-Y03-1224			DSY-SD-Y03-2448		
SDG: DSY-15	LAB_ID	SE6443-20			SE6443-14			SE6443-15			SE6443-16		
FRACTION: PAH	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.4			57.8			62.9			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZO(A)PYRENE		22	J	HP	38	J	H	15	UJ	H	7.2	J	HP

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-DUP22-100311			DSY-SD-K05-0012			DSY-SD-K05-1224		
SDG: DSY-15	LAB_ID	SE6443-4			SE6443-17			SE6443-5			SE6443-6		
FRACTION: PCB	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.1			65.0			60.1			78.3		
	DUP_OF	DSY-SD-K09-0012			DSY-SD-Y03-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.8	U		11	U		13	U		11	U	
AROCLOR-1221		9.8	U		11	U		13	U		11	U	
AROCLOR-1232		12	U		12	U		16	U		13	U	
AROCLOR-1242		9.8	U		11	U		13	U		11	U	
AROCLOR-1248		9.8	U		11	U		13	U		11	U	
AROCLOR-1254		47			11	U		240			11	U	
AROCLOR-1260		9.8	U		11	U		13	U		11	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-K05-2448			DSY-SD-K09-0012			DSY-SD-K09-1224			DSY-SD-K09-2448		
SDG: DSY-15	LAB_ID	SE6443-7			SE6443-1			SE6443-2			SE6443-3		
FRACTION: PCB	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.1			73.7			72.0			75.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.6	U		9.9	U		11	U		10	U	
AROCLOR-1221		9.6	U		9.9	U		11	U		10	U	
AROCLOR-1232		11	U		12	U		13	U		12	U	
AROCLOR-1242		9.6	U		9.9	U		11	U		10	U	
AROCLOR-1248		9.6	U		9.9	U		11	U		10	U	
AROCLOR-1254		9.6	UJ	C	46			11	U		10	U	
AROCLOR-1260		9.6	U		9.9	U		11	U		10	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-K13-0012			DSY-SD-K13-1224			DSY-SD-K13-2448			DSY-SD-K17-0012		
SDG: DSY-15	LAB_ID	SE6443-8DL			SE6443-9			SE6443-10			SE6443-11		
FRACTION: PCB	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.9			74.7			75.5			34.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		310	U		10	U		9	U		22	U	
AROCLOR-1221		310	U		10	U		9	U		22	U	
AROCLOR-1232		360	U		12	U		11	U		26	U	
AROCLOR-1242		310	U		10	U		9	U		22	U	
AROCLOR-1248		310	U		10	U		9	U		22	U	
AROCLOR-1254		17000			66	J	C	9	UJ	C	110	J	CU
AROCLOR-1260		310	U		10	U		9	U		22	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-K17-1224			DSY-SD-K17-2448			DSY-SD-K21-0012			DSY-SD-K21-1224		
SDG: DSY-15	LAB_ID	SE6443-12			SE6443-13			SE6443-18			SE6443-19		
FRACTION: PCB	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.9			75.9			38.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		9.5	U		19	U		13	U	
AROCLOR-1221		11	U		9.5	U		19	U		13	U	
AROCLOR-1232		13	U		11	U		22	U		16	U	
AROCLOR-1242		11	U		9.5	U		19	U		13	U	
AROCLOR-1248		11	U		9.5	U		19	U		13	U	
AROCLOR-1254		54			9.5	U		140			550		
AROCLOR-1260		11	U		9.5	U		19	U		13	U	

PROJ_NO: 02747 SDG: DSY-15 FRACTION: PCB MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K21-2448			DSY-SD-Y03-0012			DSY-SD-Y03-1224			DSY-SD-Y03-2448		
	LAB_ID	SE6443-20			SE6443-14			SE6443-15			SE6443-16		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.4			57.8			62.9			65.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		11	U		13	U		13	U		11	U	
AROCLOR-1221		11	U		13	U		13	U		11	U	
AROCLOR-1232		13	U		15	U		15	U		13	U	
AROCLOR-1242		11	U		13	U		13	U		11	U	
AROCLOR-1248		11	U		13	U		13	U		11	U	
AROCLOR-1254		11	U		13	U		13	U		11	U	
AROCLOR-1260		11	U		13	U		13	U		11	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment, NAVSTA Newport, Newport, Rhode Island

Tier II Organic Data Validation, SDG TN90

2. DATE OF DOCUMENT: November 1, 2011 DOCUMENT CONTROL No.: **C-NAVY-** 11-11-4645W

AUTHORS: **Ann Franke** TtNUS JOB CHARGE No.: **112G02747-SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Gurwell								10/27/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4645W

Date: November 1, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TN90
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-BB26-0012	DSY- SD-BB26-1224	DSY- SD-BB26-2448
	DSY-SD-BC28-0012	DSY-SD-BC28-1224	DSY-SD-BC28-2448
	DSY-SD-BC30-0012	DSY-SD-BC30-1224	DSY- SD-BC30-2448
	DSY-SD-BD26-0012	DSY- SD-BD26-1224	DSY-SD-BD26-2448
	DSY-SD-BG26-0012	DSY-SD-BG26-1224	DSY-SD-BG26-2448
	DSY-SD-BJ23-0012	DSY-SD-BJ23-1224	DSY-SD-BJ23-2448
	DSY-SD-DUP01-092111	DSY-SD-DUP02-092111	

Field Duplicate Pairs: DSY-SD-BD26-0012/DSY-SD-DUP01-092111
DSY-SD-BJ23-2448/DSY-SD-DUP02-092111

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds

* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory noted that the jar for sample DSY-SD-BC28-0012 was received broken but sealed in a bag with other sample jars. The bag contained water but the sample was intact in the jar. The laboratory transferred the sample, without the water from the bag, to a clean container.

The laboratory also noted that the chain-of-custody form did not contain the date and time that the samples were relinquished by the field sampler.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TN90 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BB26-0012			DSY-SD-BB26-1224			DSY-SD-BB26-2448			DSY-SD-BC28-0012		
	LAB_ID	11-20980-TN90A			11-20981-TN90B			11-20982-TN90C			11-20983-TN90D		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.5			57.3			59.5			50.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.2			0.7	U		0.68	U		14		

PROJ_NO: 02747 SDG: TN90 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BC28-1224			DSY-SD-BC28-2448			DSY-SD-BC30-0012			DSY-SD-BC30-1224DL		
	LAB_ID	11-20984-TN90E			11-20985-TN90F			11-20986-TN90G			11-20987-TN90HDL		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.5			81.5			42.6			61.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.61	U		20			3.8	J	P

PROJ_NO: 02747 SDG: TN90 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BC30-2448			DSY-SD-BD26-0012			DSY-SD-BD26-1224			DSY-SD-BD26-2448		
	LAB_ID	11-20988-TN90I			11-20990-TN90K			11-20991-TN90L			11-20992-TN90M		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.8			44.6			64.4			74.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		10			0.69	U		0.69	U	

PROJ_NO: 02747 SDG: TN90 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BG26-0012			DSY-SD-BG26-1224			DSY-SD-BG26-2448			DSY-SD-BJ23-0012		
	LAB_ID	11-20993-TN90N			11-20994-TN90O			11-20995-TN90P			11-20996-TN90Q		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	45.0			69.5			82.4			77.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		12			0.66	U		0.61	U		13		

PROJ_NO: 02747 SDG: TN90 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BJ23-1224			DSY-SD-BJ23-2448			DSY-SD-DUP01-092111			DSY-SD-DUP02-092111		
	LAB_ID	11-20997-TN90R			11-20998-TN90S			11-20989-TN90J			11-20999-TN90T		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.0			85.4			46.3			83.3		
	DUP_OF							DSY-SD-BD26-0012			DSY-SD-BJ23-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.67	U		0.69	U		7.5			0.69	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TN95

2. DATE OF DOCUMENT: November 8, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4657W

AUTHORS: Ann Franke TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/7/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4657W

Date: November 8, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy)

Subject: Tier II Organic Data Validation, SDG TN95
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-BG28-0012	DSY-SD-BG28-1224	DSY-SD-BG28-2448
	DSY-SD-BI26-0012	DSY-SD-BI26-1224	DSY-SD-BI26-2448
	DSY-SD-BE30-0012	DSY-SD-BE30-1224	DSY-SD-BE30-2448
	DSY-SD-BE28-0012	DSY-SD-BE28-1224	DSY-SD-BE28-2448
	DSY-SD-BF23-0012	DSY-SD-BF23-1224	DSY-SD-BF23-2448
	DSY-SD-BB02-0012	DSY-SD-BB02-1224	DSY-SD-BB02-2448
	DSY-SD-BF06-0012	DSY-SD-DUP03-092111	

Field Duplicate Pairs: DSY-SD-BI26-1224/DSY-SD-DUP03-092111
and DSY-SD-BB02-2448/DSY-SD-DUP04-092211 (in SDG TN97)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds

* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory logged in sample DSY-SD-BE28-1224 as "DSY-BE28-1224", and the data package contains the incorrect sample ID. The data validator corrected the sample ID in the database and data summary tables. The laboratory was not contacted.

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 25, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory noted that the chain-of-custody form did not contain the date and time that the samples were relinquished by the field sampler.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all positive results for this SDG are above the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB02-0012			DSY-SD-BB02-1224			DSY-SD-BB02-2448			DSY-SD-BE28-0012		
SDG: TN95	LAB_ID	11-21017-TN95Q			11-21018-TN95R			11-21019-TN95S			11-21011-TN95K		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.4			62.3			60.9			39.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.64	U		0.65	U		13		

PROJ_NO: 02747 SDG: TN95 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BE28-1224			DSY-SD-BE28-2448			DSY-SD-BE30-0012			DSY-SD-BE30-1224		
	LAB_ID	11-21012-TN95L			11-21013-TN95M			11-21008-TN95H			11-21009-TN95I		
	SAMP_DATE	9/22/2011			9/22/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.2			80.6			52.0			72.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		7.6			0.64	U		15			0.72	U	

PROJ_NO: 02747 SDG: TN95 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BE30-2448			DSY-SD-BF06-0012			DSY-SD-BF23-0012			DSY-SD-BF23-1224		
	LAB_ID	11-21010-TN95J			11-21020-TN95T			11-21014-TN95N			11-21015-TN95O		
	SAMP_DATE	9/21/2011			9/22/2011			9/22/2011			9/22/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	75.0			68.0			70.8			75.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.66	U		1.9			0.68	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BF23-2448			DSY-SD-BG28-0012			DSY-SD-BG28-1224			DSY-SD-BG28-2448		
SDG: TN95	LAB_ID	11-21016-TN95P			11-21001-TN95A			11-21002-TN95B			11-21003-TN95C		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/21/2011			9/21/2011			9/21/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.8			67.6			78.6			82.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		2.5			0.66	U		0.62	U	

PROJ_NO: 02747 SDG: TN95 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BI26-0012			DSY-SD-BI26-1224			DSY-SD-BI26-2448			DSY-SD-DUP03-092111		
	LAB_ID	11-21004-TN95D			11-21005-TN95E			11-21006-TN95F			11-21007-TN95G		
	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	60.1			71.9			86.4			71.6		
	DUP_OF										DSY-SD-BI26-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		4.6			0.72	U		0.68	U		0.71	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TN97

2. DATE OF DOCUMENT: November 8, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4658W

AUTHORS: Ann Frankel TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/7/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4658W

Date: November 8, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TN97
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-BF06-1224	DSY-SD-BF06-2448	DSY-SD-AX06-0012
	DSY-SD-AX06-1224	DSY-SD-AX06-2448	DSY-SD-BB10-0012
	DSY-SD-BB10-1224	DSY-SD-BB10-2448	DSY-SD-BB06-0012
	DSY-SD-BB06-1224	DSY-SD-BB06-2448	DSY-SD-AT20-0012
	DSY-SD-AT20-1224	DSY-SD-AT20-2448	DSY-SD-AT16-0012
	DSY-SD-AT16-1224	DSY-SD-AT16-2448	DSY-SD-DUP04-092211
	DSY-SD-DUP05-092211		DSY-SD-DUP06-092211

Field Duplicate Pairs:
DSY-SD-BB02-2448 (in SDG TN95)/DSY-SD-DUP04-092211
DSY-SD-BB10-2448/DSY-SD-DUP05-092211
DSY-SD-AT16-2448/DSY-SD-DUP06-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 22, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- * Initial and Continuing Calibrations

*	•	Blanks
*	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory noted that the jars for sample DSY-SD-BB10-2448 and DSY-SD-BB06-1224 were received broken but sealed in a bag with other sample jars. The bag contained water but the samples were intact in the jars. The laboratory transferred the sediment sample to a clean container.

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 25, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory noted that the chain-of-custody form did not contain the date and time that the samples were relinquished by the field sampler.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, the positive result for this SDG is above the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT16-0012			DSY-SD-AT16-1224			DSY-SD-AT16-2448			DSY-SD-AT20-0012		
SDG: TN97	LAB_ID	11-21045-TN97Q			11-21046-TN97R			11-21047-TN97S			11-21042-TN97N		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	49.4			66.0			60.7			61.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.2			0.68	U		0.66	U		0.65	U	

PROJ_NO: 02747 SDG: TN97 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AT20-1224			DSY-SD-AT20-2448			DSY-SD-AX06-0012			DSY-SD-AX06-1224		
	LAB_ID	11-21043-TN97O			11-21044-TN97P			11-21032-TN97D			11-21033-TN97E		
	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.1			66.6			50.7			63.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		0.68	U		0.72	U		0.71	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX06-2448			DSY-SD-BB06-0012			DSY-SD-BB06-1224			DSY-SD-BB06-2448		
SDG: TN97	LAB_ID	11-21034-TN97F			11-21039-TN97K			11-21040-TN97L			11-21041-TN97M		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	61.7			58.4			63.2			61.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		0.69	U		0.71	U		0.65	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-BB10-0012			DSY-SD-BB10-1224			DSY-SD-BB10-2448			DSY-SD-BF06-1224		
SDG: TN97	LAB_ID	11-21035-TN97G			11-21036-TN97H			11-21037-TN97I			11-21030-TN97B		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	62.3			65.9			66.9			69.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.7	U		0.67	U		0.66	U	

PROJ_NO: 02747 SDG: TN97 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-BF06-2448			DSY-SD-DUP04-092211			DSY-SD-DUP05-092211			DSY-SD-DUP06-092211		
	LAB_ID	11-21031-TN97C			11-21029-TN97A			11-21038-TN97J			11-21048-TN97T		
	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
	QC_TYPE	NM			FD			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.0			61.7			57.7			61.2		
	DUP_OF				DSY-SD-BB02-2448			DSY-SD-BB10-2448			DSY-SD-AT16-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.64	U		0.65	U		0.69	U		0.65	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TO02

2. DATE OF DOCUMENT: 10/31/11 DOCUMENT CONTROL No.: C-Navy-10-11-4639W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	10/31/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-4639W

Date: October 31, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG TO02
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

18/Sediments/ DSY-SD-AO30-0012 DSY- SD-AP20-0012 DSY- SD-AP20-1224
DSY-SD-AP20-2448 DSY-SD-AT24-0012 DSY-SD-AT24-1224
DSY-SD-AT24-2448 DSY-SD-AT30-0012 DSY-SD-AT30-1224
DSY-SD-AT30-2448 DSY-SD-AX20-0012 DSY-SD-AX20-1224
DSY-SD-AX20-2448 DSY-SD-AY30-0012 DSY-SD-AY30-1224
DSY-SD-AY30-2448 DSY-SD-DUP07-092211
DSY-SD-DUP08-092311

Field Duplicate Pairs: DSY-SD-AT24-0012/DSY-SD-DUP07-092211
DSY-SD-AT30-1224/DSY-SD-DUP08-092311

2/Rinsate Blanks/ DSY-SD-RB01-092111 DSY-SD-RB02-092211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 21-23, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations

* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory also noted that the chain-of-custody form did not contain the date and time that the samples were relinquished by the field sampler.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package, using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all results for this SDG are non-detected. Non-detected results for the aqueous samples were reported at the DL. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AO30-0012			DSY-SD-AP20-0012			DSY-SD-AP20-1224			DSY-SD-AP20-2448		
SDG: TO02	LAB_ID	11-21078-TO02R			11-21061-TO02A			11-21062-TO02B			11-21063-TO02C		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/22/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.1			65.9			63.3			61.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.68	U		0.72	U		0.65	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT24-0012			DSY-SD-AT24-1224			DSY-SD-AT24-2448			DSY-SD-AT30-0012		
SDG: TO02	LAB_ID	11-21067-TO02G			11-21068-TO02H			11-21069-TO02I			11-21074-TO02N		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.7			73.0			73.0			80.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		0.7	U		0.69	U		0.65	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AT30-1224			DSY-SD-AT30-2448			DSY-SD-AX20-0012			DSY-SD-AX20-1224		
SDG: TO02	LAB_ID	11-21075-TO02O			11-21076-TO02P			11-21064-TO02D			11-21065-TO02E		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011			9/22/2011			9/22/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	87.1			83.2			68.8			71.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.61	U		0.66	U		0.7	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AX20-2448			DSY-SD-AY30-0012			DSY-SD-AY30-1224			DSY-SD-AY30-2448		
SDG: TO02	LAB_ID	11-21066-TO02F			11-21071-TO02K			11-21072-TO02L			11-21073-TO02M		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.6			82.1			82.0			83.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.62	U		0.62	U		0.71	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP07-092211			DSY-SD-DUP08-092311		
SDG: TO02	LAB_ID	11-21070-TO02J			11-21077-TO02Q		
FRACTION: MISC	SAMP_DATE	9/22/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	63.4			83.3		
	DUP_OF	DSY-SD-AT24-0012			DSY-SD-AT30-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.71	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB01-092111			DSY-SD-RB02-092211		
SDG: TO02	LAB_ID	11-21079-TO02S			11-21080-TO02T		
FRACTION: MISC	SAMP_DATE	9/21/2011			9/22/2011		
MEDIA: WATER	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TO19_____

2. DATE OF DOCUMENT: 10/31/11 DOCUMENT CONTROL No.: C-Nary-10-11-4641 W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747** – SA.DV

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								10/31/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE:_____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-4641W

Date: October 31, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TO19
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

18/Sediments/	DSY-SD-AI28-0012	DSY- SD-AI28-1224	DSY- SD-AI28-2448
	DSY-SD-AK24-0012	DSY-SD-AK24-1224	DSY-SD-AK24-2448
	DSY-SD-AK26-0012	DSY-SD-AK26-1224	DSY-SD-AK26-2448
	DSY-SD-AK28-0012	DSY-SD-AK28-1224	DSY-SD-AK28-2448
	DSY-SD-AK30-0012	DSY-SD-AK30-1224	DSY-SD-AK30-2448
	DSY-SD-AO30-1224	DSY-SD-AO30-2448	
	DSY-SD-DUP09-092311		

Field Duplicate Pair: DSY-SD-AK24-2448/DSY-SD-DUP09-092311

1/Rinsate Blank/DSY-SD-RB03-092311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyl tin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 23, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)

*	•	Initial and Continuing Calibrations
*	•	Blanks
*	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand. Also provided were Forms associated with the rinsate blank sample for which the Laboratory Job # was corrected.

The laboratory also noted that the chain-of-custody form did not contain the date and time that the samples were relinquished by the field sampler.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package, using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AI28-0012			DSY-SD-AI28-1224			DSY-SD-AI28-2448			DSY-SD-AK24-0012		
SDG: TO19	LAB_ID	11-21170-TO19P			11-21171-TO19Q			11-21172-TO19R			11-21160-TO19F		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	37.0			40.7			43.0			73.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		12			24			0.97	J		0.68	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK24-1224			DSY-SD-AK24-2448			DSY-SD-AK26-0012			DSY-SD-AK26-1224		
SDG: TO19	LAB_ID	11-21162-TO19H			11-21161-TO19G			11-21157-TO19C			11-21158-TO19D		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.3			74.8			77.7			79.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.68	U		0.66	U		0.66	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK26-2448			DSY-SD-AK28-0012			DSY-SD-AK28-1224			DSY-SD-AK28-2448		
SDG: TO19	LAB_ID	11-21159-TO19E			11-21163-TO19I			11-21164-TO19J			11-21166-TO19L		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.9			81.8			80.0			81.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.64	U		0.66	U		0.64	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AK30-0012			DSY-SD-AK30-1224			DSY-SD-AK30-2448			DSY-SD-AO30-1224		
SDG: TO19	LAB_ID	11-21167-TO19M			11-21168-TO19N			11-21169-TO19O			11-21155-TO19A		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011			9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.0			78.6			82.1			78.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		13			0.64	U		0.61	U		0.67	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AO30-2448			DSY-SD-DUP09-092311		
SDG: TO19	LAB_ID	11-21156-TO19B			11-21165-TO19K		
FRACTION: MISC	SAMP_DATE	9/23/2011			9/23/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	81.1			73.9		
	DUP_OF				DSY-SD-AK24-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.64	U		0.68	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB03-092311		
SDG: TO19	LAB_ID	11-21173-TO19S		
FRACTION: MISC	SAMP_DATE	9/23/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TO27_____

2. DATE OF DOCUMENT: 10/31/11 DOCUMENT CONTROL No.: R-Navy-10-11-4642W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Gutzmann								10/31/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-4642W

Date: October 31, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TO27
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

10/Sediments/	DSY-SD-AG24-0012	DSY- SD-AG24-1224	DSY- SD-AG24-2448
	DSY-SD-AG28-0012	DSY-SD-AG28-1224	DSY-SD-AG28-2448
	DSY-SD-AI30-0012	DSY-SD-AI30-1224	DSY-SD-AI30-2448
	DSY-SD-DUP10-092611		

Field Duplicate Pair: DSY-SD-AG28-2448/DSY-SD-DUP10-092611

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyl tin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 26, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate

* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package, using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG24-0012			DSY-SD-AG24-1224			DSY-SD-AG24-2448			DSY-SD-AG28-0012		
SDG: TO27	LAB_ID	11-21223-TO27H			11-21224-TO27I			11-21225-TO27J			11-21219-TO27D		
FRACTION: MISC	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.9			70.4			68.5			38.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.9			0.63	U		0.67	U		7.4		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG28-1224			DSY-SD-AG28-2448			DSY-SD-AI30-0012			DSY-SD-AI30-1224		
SDG: TO27	LAB_ID	11-21220-TO27E			11-21221-TO27F			11-21216-TO27A			11-21217-TO27B		
FRACTION: MISC	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	40.2			58.1			82.2			79.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.8			0.72	J	P	16			0.96	J	P

PROJ_NO: 02747 SDG: TO27 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AI30-2448			DSY-SD-DUP10-092611		
	LAB_ID	11-21218-TO27C			11-21222-TO27G		
	SAMP_DATE	9/26/2011			9/26/2011		
	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	84.2			56.9		
	DUP_OF				DSY-SD-AG28-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.7	U		0.88	J	P

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TO28_____

2. DATE OF DOCUMENT: 11/01/11 DOCUMENT CONTROL No.: C-Navy-11-11-4643W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/01/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4643W

Date: November 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TO28
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

16/Sediments/	DSY-SD-AC24-0012	DSY- SD-AC24-1224	DSY- SD-AC24-2448
	DSY-SD-AE24-0012	DSY-SD-AE24-1224	DSY-SD-AE24-2448
	DSY-SD-AG26-0012	DSY-SD-AG26-1224	DSY-SD-AG26-2448
	DSY-SD-AI24-0012	DSY-SD-AI24-1224	DSY-SD-AI24-2448
	DSY-SD-AI26-0012	DSY-SD-AI26-1224	DSY-SD-AI26-2448
	DSY-SD-DUP11-092611		

Field Duplicate Pair: DSY-SD-AG26-0012/DSY-SD-DUP11-092611

1/Rinsate blank/ DSY-SD-RB04-092611

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 26, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks

* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

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UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC24-0012			DSY-SD-AC24-1224			DSY-SD-AC24-2448			DSY-SD-AE24-0012		
SDG: TO28	LAB_ID	11-21236-TO28K			11-21237-TO28L			11-21238-TO28M			11-21239-TO28N		
FRACTION: MISC	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.1			61.3			78.8			37.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		14			0.67	J	P	0.65	U		9.3		

PROJ_NO: 02747 SDG: TO28 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AE24-1224			DSY-SD-AE24-2448			DSY-SD-AG26-0012			DSY-SD-AG26-1224		
	LAB_ID	11-21240-TO28O			11-21241-TO28P			11-21232-TO28G			11-21233-TO28H		
	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	55.4			77.6			38.9			43.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.68	U		11			1.4	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-AG26-2448			DSY-SD-AI24-0012			DSY-SD-AI24-1224			DSY-SD-AI24-2448		
SDG: TO28	LAB_ID	11-21234-TO28I			11-21226-TO28A			11-21227-TO28B			11-21228-TO28C		
FRACTION: MISC	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.5			39.8			72.2			80.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		9.8			0.72	U		0.64	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AI26-0012			DSY-SD-AI26-1224			DSY-SD-AI26-2448			DSY-SD-DUP11-092611		
SDG: TO28	LAB_ID	11-21229-TO28D			11-21230-TO28E			11-21231-TO28F			11-21235-TO28J		
FRACTION: MISC	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.5			40.3			59.0			37.8		
	DUP_OF										DSY-SD-AG26-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		4.6			9.3			0.69	U		17		

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB04-092611		
SDG: TO28	LAB_ID	11-21242-TO28Q		
FRACTION: MISC	SAMP_DATE	9/26/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TP – 22

2. DATE OF DOCUMENT: 11/3/11 DOCUMENT CONTROL No.: C-Navy-11-11-46458W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	11/1/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4648W

Date: November 03, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG TP22
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-AC26-0012	DSY- SD-AC26-1224	DSY- SD-AC26-2448
	DSY-SD-AC28-0012	DSY- SD-AC28-1224	DSY- SD-AC28-2448
	DSY-SD-AC30-0012	DSY- SD-AC30-1224	DSY- SD-AC30-2448
	DSY-SD-AD05-0012	DSY-SD-AE26-0012	DSY- SD-AE26-1224
	DSY- SD-AE26-2448	DSY-SD-AE28-0012	DSY- SD-AE28-1224
	DSY- SD-AE28-2448	DSY-SD-AE30-0012	DSY- SD-AE30-1224
	DSY-SD-DUP13-092811		
	DSY-SD-DUP14-092811		

Field Duplicate Pairs: DSY-SD-AC26-2448/DSY-SD-DUP13-092811
DSY-SD-AC28-0012/DSY-SD-DUP14-092811

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 28 and 29, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks

* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
  • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

  * All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Field Duplicates

The field duplicate pair DSY-SD-AC28-0012/DSY-SD-DUP14-092811 exceeded the relative percent difference QC criterion of 50% for tributyltin:

Analyte	DSY-SD-AC28-0012 ug/Kg	DSY-SD-DUP14-092811 ug/Kg	RPD	Action	
				(+)	NDs
Tributyltin (as tin)	69	8.8	154	J	

The positive tributyltin results in samples DSY-SD-AC28-0012 and DSY-SD-DUP14-092811 are estimated (J). Although the field duplicate relative percent difference for tributyltin (reported as tin) exceeded the QC criterion; the project precision goals are not impacted since the affected results are much lower than the project action limit of 228 ug/Kg for this contaminant. The positive tributyltin results in samples DSY-SD-AC28-0012 and DSY-SD-DUP14-092811 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to precision were met for the tributyltin data set. Tributyltin was qualified as estimated in samples DSY-SD-AC28-0012 and DSY-SD-DUP14-092811 due to poor field duplicate precision. Although specific QC criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC26-0012			DSY-SD-AC26-1224			DSY-SD-AC26-2448			DSY-SD-AC28-0012		
SDG: TP22	LAB_ID	11-21849-TP22A			11-21850-TP22B			11-21851-TP22C			11-21859-TP22K		
FRACTION: MISC	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.5			41.4			83.2			38.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		8.3			0.68	U		0.62	U		69	J	G

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC28-1224			DSY-SD-AC28-2448DL			DSY-SD-AC30-0012			DSY-SD-AC30-1224		
SDG: TP22	LAB_ID	11-21860-TP22L			11-21861-TP22MDL			11-21865-TP22Q			11-21866-TP22R		
FRACTION: MISC	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.0			44.9			32.4			39.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		16			6.8	U		5.9			23		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AC30-2448			DSY-SD-AD05-0012			DSY-SD-AE26-0012			DSY-SD-AE26-1224DL		
SDG: TP22	LAB_ID	11-21867-TP22S			11-21868-TP22T			11-21856-TP22H			11-21857-TP22IDL		
FRACTION: MISC	SAMP_DATE	9/28/2011			9/29/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	46.2			33.8			37.1			39.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		3.4			1.8			160		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE26-2448			DSY-SD-AE28-0012			DSY-SD-AE28-1224			DSY-SD-AE28-2448		
SDG: TP22	LAB_ID	11-21858-TP22J			11-21853-TP22E			11-21854-TP22F			11-21855-TP22G		
FRACTION: MISC	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	48.0			31.9			37.8			75.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		7.8			0.95	J	P	49			22		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AE30-0012			DSY-SD-AE30-1224			DSY-SD-DUP13-092811			DSY-SD-DUP14-092811		
SDG: TP22	LAB_ID	11-21863-TP22O			11-21864-TP22P			11-21852-TP22D			11-21862-TP22N		
FRACTION: MISC	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	80.1			86.7			78.6			38.0		
	DUP_OF							DSY-SD-AC26-2448			DSY-SD-AC28-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.64	U		0.64	U		0.66	U		8.8	J	G

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP23_____

2. DATE OF DOCUMENT: 11/01/11 DOCUMENT CONTROL No.: Navy-11-11-4642W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/01/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4642W

Date: November 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP23
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

12/Sediments/	DSY-SD-AB15-0012	DSY- SD-AB15-1224	DSY- SD-AB15-2448
	DSY-SD-AD05-1224	DSY-SD-AD05-2448	DSY-SD-AD13-0012
	DSY-SD-AD13-1224	DSY-SD-AD13-2448	DSY-SD-AD17-0012
	DSY-SD-AD17-1224	DSY-SD-AD17-2448	DSY-SD-DUP15-092911

Field Duplicate Pair: DSY-SD-AD13-2448/DSY-SD-DUP15-092911

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 29, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates

* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AB15-0012			DSY-SD-AB15-1224			DSY-SD-AB15-2448DL			DSY-SD-AD05-1224		
SDG: TP23	LAB_ID	11-21889-TP23J			11-21890-TP23K			11-21891-TP23LDL			11-21880-TP23A		
FRACTION: MISC	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.3			29.3			37.7			41.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.7	U		4.3			160			18		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AD05-2448			DSY-SD-AD13-0012DL			DSY-SD-AD13-1224			DSY-SD-AD13-2448		
SDG: TP23	LAB_ID	11-21881-TP23B			11-21882-TP23CDL			11-21883-TP23D			11-21884-TP23E		
FRACTION: MISC	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	47.5			44.9			62.5			63.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		32			410			0.73	U		0.71	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-AD17-0012			DSY-SD-AD17-1224			DSY-SD-AD17-2448			DSY-SD-DUP15-092911		
SDG: TP23	LAB_ID	11-21885-TP23F			11-21886-TP23G			11-21887-TP23H			11-21888-TP23I		
FRACTION: MISC	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.6			41.5			64.9			64.4		
	DUP_OF										DSY-SD-AD13-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		15			0.71	U		0.7	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG T P_ 24

2. DATE OF DOCUMENT: 11/7/11 DOCUMENT CONTROL No.: C-Navy-11-11-4649w

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	11/4/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4649W

Date: November 07, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG TP24
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

15/Sediments/	DSY-SD-AB11-0012	DSY- SD-AB11-1224	DSY-SD-AB11-2448
	DSY-SD-AD01-0012	DSY- SD-AD01-1224	DSY-SD-AD01-2448
	DSY-SD-AD09-0012	DSY- SD-AD09-1224	DSY-SD-AD09-2448
	DSY-SD-AD21-0012	DSY- SD-AD21-1224	DSY-SD-AD21-2448
	DSY-SD-AG30-0012	DSY- SD-AG30-1224	DSY-SD-AG30-2436
1/Rinsate Blank/		DSY-SD-RB06-092911	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 28-29, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate

N/A	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand. Also provided were Forms associated with the rinsate blank sample for which the Laboratory Job # was corrected.

Sample DSY-SD-RB05-092811,was listed on the COC form but not included with the shipment of this group of samples. The containers for sample DSY-SD-RB05-092811 were received and reported with SDG TP46.

The COC form listed sample DSY-SD-AG30-2448; however, this sample was collected from the interval between 24 to 36 inches below grade, consequently, per request of the Field Operation Leader for this site, the sample ID in the summary date tables was corrected to DSY-SD-AG30-2436. The laboratory data show the sample with the wrong depth interval.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) are qualified as estimated (J) due to uncertainty below the LOQ. Non-detected results for the aqueous samples were reported at the DL. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables:	Data Validation Qualifiers and Codes Data Summary Tables
Enclosures:	Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-AB11-0012			DSY-SD-AB11-1224			DSY-SD-AB11-2448			DSY-SD-AD01-0012		
SDG: TP24	LAB_ID	11-21892-TP24A			11-21893-TP24B			11-21894-TP24C			11-21898-TP24G		
FRACTION: MISC	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	47.3			39.2			67.7			52.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.3	J	P	1.6			34			1.5		

PROJ_NO: 02747	NSAMPLE	DSY-SD-AD01-1224			DSY-SD-AD01-2448			DSY-SD-AD09-0012			DSY-SD-AD09-1224		
SDG: TP24	LAB_ID	11-21899-TP24H			11-21900-TP24I			11-21901-TP24J			11-21902-TP24K		
FRACTION: MISC	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.8			64.6			33.6			41.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.7	U		0.73	U		2.5		

PROJ_NO: 02747 SDG: TP24 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AD09-2448			DSY-SD-AD21-0012			DSY-SD-AD21-1224			DSY-SD-AD21-2448		
	LAB_ID	11-21903-TP24L			11-21895-TP24D			11-21896-TP24E			11-21897-TP24F		
	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	55.0			39.7			58.3			66.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.3	J	P	9.3			0.79	J	P	0.69	U	

PROJ_NO: 02747 SDG: TP24 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AG30-0012			DSY-SD-AG30-1224			DSY-SD-AG30-2436		
	LAB_ID	11-21904-TP24M			11-21905-TP24N			11-21906-TP24O		
	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.0			81.1			84.6		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.9			17			1.2	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB06-092911		
SDG: TP24	LAB_ID	11-21907-TP24P		
FRACTION: MISC	SAMP_DATE	9/29/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TP 44

2. DATE OF DOCUMENT: 11/7/11 DOCUMENT CONTROL No.: C-NAVY-11-11-4650W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	11/4/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4650W

Date: November 07, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG TP44
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

12/Sediments/	DSY-SD-O09-0012	DSY-SD-O09-1224	DSY-SD-O09-2448
	DSY-SD-O13-0012	DSY-SD-O13-1224	DSY-SD-O17-0012
	DSY-SD-O17-1224	DSY-SD-O17-2448	DSY-SD-S09-0012
	DSY-SD-S09-1224	DSY-SD-S09-2448	DSY-SD-DUP16-093011

Field Duplicate Pair: DSY-SD-S09-2448/DSY-SD-DUP16-093011

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates

* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all results for this SDG are above the LOQ. Non-detected results for the aqueous samples were reported at the DL. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP16-093011			DSY-SD-O09-0012			DSY-SD-O09-1224			DSY-SD-O09-2448		
SDG: TP44	LAB_ID	11-21996-TP44D			11-21997-TP44E			11-21998-TP44F			11-21999-TP44G		
FRACTION: MISC	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	64.8			51.7			67.7			71.9		
	DUP_OF	DSY-SD-S09-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		1.8			0.67	U		0.7	U	

PROJ_NO: 02747 SDG: TP44 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O13-0012			DSY-SD-O13-1224			DSY-SD-O17-0012			DSY-SD-O17-1224		
	LAB_ID	11-22003-TP44K			11-22004-TP44L			11-22000-TP44H			11-22001-TP44I		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	71.7			75.1			42.7			44.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.65	U		1.8			20		

PROJ_NO: 02747 SDG: TP44 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-O17-2448			DSY-SD-S09-0012			DSY-SD-S09-1224			DSY-SD-S09-2448		
	LAB_ID	11-22002-TP44J			11-21993-TP44A			11-21994-TP44B			11-21995-TP44C		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	66.7			49.6			63.5			64.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		1.6			0.71	U		0.68	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP45_____

2. DATE OF DOCUMENT: 11/7/11 DOCUMENT CONTROL No.: C-Navy-11-11-4651 N

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/7/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4651W

Date: November 07, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP45
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

12/Sediments/	DSY-SD-O13-2448	DSY- SD-S13-0012	DSY-SD-S13-1224
	DSY-SD-S13-2448	DSY- SD-W13-0012	DSY-SD-W13-1224
	DSY-SD-W13-2448	DSY- SD-W09-0012	DSY-SD-W09-1224
	DSY-SD-W09-2448	DSY- SD-DUP17-093011	
	DSY-SD-DUP18-093011		

Field Duplicates: DSY-SD-013-0012 (in SDG TP44)/DSY-SD-DUP17-093011 and DSY-SD-W13-1224/DSY-SD-DUP18-093011

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate

*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
*	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

On November 3, 2011 the laboratory was contacted to resubmit the missing raw data for the DFTTP tune associated with the continuing calibration analyzed on October 16, 2011. On November 3, 2011, the laboratory resubmitted the missing data.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however all the positive results in this SDG were above the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TP45 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP17-093011			DSY-SD-DUP18-093011			DSY-SD-O13-2448			DSY-SD-S13-0012		
	LAB_ID	11-22006-TP45B			11-22013-TP45I			11-22005-TP45A			11-22007-TP45C		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.2			65.0			76.1			44.5		
	DUP_OF	DSY-SD-013-0012			DSY-SD-W13-1224								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		0.69	U		0.69	U		3		

PROJ_NO: 02747 SDG: TP45 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S13-1224			DSY-SD-S13-2448			DSY-SD-W09-0012			DSY-SD-W09-1224		
	LAB_ID	11-22008-TP45D			11-22009-TP45E			11-22014-TP45J			11-22015-TP45K		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	46.1			64.5			44.4			51.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.7			0.66	U		9.3			0.71	U	

PROJ_NO: 02747 SDG: TP45 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W09-2448			DSY-SD-W13-0012			DSY-SD-W13-1224			DSY-SD-W13-2448		
	LAB_ID	11-22016-TP45L			11-22010-TP45F			11-22011-TP45G			11-22012-TP45H		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.2			59.1			65.7			68.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.7	U		5.1			0.7	U		0.67	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP46_____

2. DATE OF DOCUMENT: 11/7/11 DOCUMENT CONTROL No.: C-Nary-11-11-4652W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/7/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4652W

Date: November 07, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP46
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

17/Sediments/	DSY-SD-W17-0012	DSY- SD-W17-1224	DSY-SD-W17-2448
	DSY-SD-W21-0012	DSY- SD-W21-1224	DSY-SD-W21-2448
	DSY-SD-S21-0012	DSY- SD-S21-1224	DSY-SD-S21-2448
	DSY-SD-O21-0012	DSY- SD-O21-1224	DSY-SD-O21-2448
	DSY-SD-S17-0012	DSY-SD-S17-1224	DSY-SD-S17-2448
	DSY-SD-DUP19-093011	DSY-SD-DUP20-093011	

Field Duplicates: DSY-SD-W21-0012/DSY-SD-DUP19-093011 and
DSY-SD-S21-2448/DSY-SD-DUP20-093011

2/Rinsate blanks/DSY-SD-RB05-092811 DSY-SD-RB07-093011

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 30, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks

*	•	Surrogate Compounds
*	•	Internal Standards
N/A	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. The laboratory was contacted about this on October 25, 2011. On October 26, 2011, the laboratory resubmitted the form with the suffixes marked in by hand.

The laboratory noted that the rinsate blank DSY-SD-RB05-092811 was listed on the COC form from the previous shipment date 9/29/2011 but the sample containers were included in this shipment and reported in this SDG (TP46).

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Field Duplicates

The field duplicate pair DSY-SD-W21-0012 and DSY-SD-DUP19-093011 exceeded the relative percent difference QC criterion of 50% for TBT:

Analyte	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
TBT	12	39	106	J	

Although the field duplicate precision for TBT did not meet the QC criteria, the project precision goals are not impacted since the affected sample results are much lower than the project action limit. The positive TBT results in samples DSY-SD-W21-0012 and DSY-SD-093011 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results for the sediment and aqueous samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as

estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, sensitivity, and laboratory data completeness.

The project goals with respect to precision were met for the TBT data set. TBT was qualified as estimated in samples DSY-SD-W21-0012 and DSY-SD-DUP19-093011 due to field duplicate imprecision. Although specific QC criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP19-093011			DSY-SD-DUP20-093011			DSY-SD-O21-0012			DSY-SD-O21-1224		
SDG: TP46	LAB_ID	11-22023-TP46G			11-22027-TP46K			11-22028-TP46L			11-22029-TP46M		
FRACTION: MISC	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.3			64.6			43.5			42.7		
	DUP_OF	DSY-SD-W21-0012			DSY-SD-S21-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		39	J	G	0.71	U		1.1	J	P	5.3		

PROJ_NO: 02747	NSAMPLE	DSY-SD-O21-2448			DSY-SD-S17-0012			DSY-SD-S17-1224			DSY-SD-S17-2448		
SDG: TP46	LAB_ID	11-22030-TP46N			11-22031-TP46O			11-22032-TP46P			11-22033-TP46Q		
FRACTION: MISC	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	57.9			56.8			70.9			69.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.7	U		0.71	U		0.65	U		0.66	U	

PROJ_NO: 02747 SDG: TP46 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-S21-0012			DSY-SD-S21-1224			DSY-SD-S21-2448			DSY-SD-W17-0012		
	LAB_ID	11-22024-TP46H			11-22025-TP46I			11-22026-TP46J			11-22017-TP46A		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	44.0			64.4			67.7			40.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.3			0.71	U		0.67	U		43		

PROJ_NO: 02747 SDG: TP46 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W17-1224			DSY-SD-W17-2448			DSY-SD-W21-0012			DSY-SD-W21-1224DL		
	LAB_ID	11-22018-TP46B			11-22019-TP46C			11-22020-TP46D			11-22021-TP46EDL		
	SAMP_DATE	9/30/2011			9/30/2011			9/30/2011			9/30/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	55.0			64.8			24.9			55.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		0.71	U		12	J	G	78		

PROJ_NO: 02747	NSAMPLE	DSY-SD-W21-2448		
SDG: TP46	LAB_ID	11-22022-TP46F		
FRACTION: MISC	SAMP_DATE	9/30/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	65.7		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U	

PROJ_NO: 02747 SDG: TP46 FRACTION: MISC MEDIA: WATER	NSAMPLE	DSY-SD-RB05-092811			DSY-SD-RB07-093011		
	LAB_ID	11-22035-TP46S			11-22034-TP46R		
	SAMP_DATE	9/28/2011			9/30/2011		
	QC_TYPE	RB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP86_____

2. DATE OF DOCUMENT: 11/8/11 DOCUMENT CONTROL No.: C-Navy-11-11-4654W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4654W

Date: November 08, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP86
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

12/Sediments/	DSY-SD-K05-0012	DSY- SD-K05-1224	DSY-SD-K05-2448
	DSY-SD-K09-0012	DSY- SD-K09-1224	DSY-SD-K09-2448
	DSY-SD-K13-0012	DSY- SD-K13-1224	DSY-SD-K13-2448
	DSY-SD-K17-0012	DSY- SD-K17-1224	DSY-SD-DUP21-100311

Field Duplicates: DSY-SD-K09-0012/DSY-SD-DUP21-100311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates

* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Although the QC criteria were not met for the internal standard area for tetrapentyl tin for sample DSY-SD-K13-0012, the project accuracy goals are not impacted since the sample result is much lower than the project action limit. The positive TBT result in the affected sample is usable as an estimated value.

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TP86 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP21-100311			DSY-SD-K05-0012			DSY-SD-K05-1224			DSY-SD-K05-2448		
	LAB_ID	11-22200-TP86D			11-22201-TP86E			11-22202-TP86F			11-22203-TP86G		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	68.9			64.4			79.0			73.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.65	U		0.69	U		0.65	U		0.7	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-K09-0012			DSY-SD-K09-1224			DSY-SD-K09-2448			DSY-SD-K13-0012DL		
SDG: TP86	LAB_ID	11-22197-TP86A			11-22198-TP86B			11-22199-TP86C			11-22204-TP86HDL		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.0			73.1			76.8			49.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		0.69	U		0.68	U		3.4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-K13-1224			DSY-SD-K13-2448			DSY-SD-K17-0012			DSY-SD-K17-1224		
SDG: TP86	LAB_ID	11-22205-TP86I			11-22206-TP86J			11-22207-TP86K			11-22208-TP86L		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.3			75.4			35.5			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		0.68	U		0.69	U		0.7	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP87_____

2. DATE OF DOCUMENT: 11/8/11 DOCUMENT CONTROL No.: C-Nary-11-11- 4655W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Quezada								11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4655W

Date: November 08, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP87
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

12/Sediments/	DSY-SD-K17-2448	DSY- SD-Y03-0012	DSY-SD-Y03-1224
	DSY-SD-Y03-2448	DSY- SD-K21-0012	DSY-SD-K21-1224
	DSY-SD-K21-2448	DSY- SD-Y25-0012	DSY-SD-Y25-1224
	DSY-SD-Y25-2448	DSY- SD-DUP22-100311	
	DSY-SD-DUP23-100311		

Field Duplicates: DSY-SD-Y03-2448/DSY-SD-DUP22-100311 and
DSY-SD-Y25-2448/DSY-SD-DUP23-100311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
*	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Compounds
*	• Internal Standards
N/A	• Matrix Spike/Matrix Spike Duplicate

* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all positive results in this SDG are above the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TP87 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP22-100311			DSY-SD-DUP23-100311			DSY-SD-K17-2448			DSY-SD-K21-0012		
	LAB_ID	11-22216-TP87E			11-22223-TP87L			11-22212-TP87A			11-22217-TP87F		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.3			64.6			75.5			37.3		
	DUP_OF	DSY-SD-Y03-2448			DSY-SD-Y25-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.69	U		0.68	U		0.7	U	

PROJ_NO: 02747 SDG: TP87 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-K21-1224			DSY-SD-K21-2448			DSY-SD-Y03-0012			DSY-SD-Y03-1224		
	LAB_ID	11-22218-TP87G			11-22219-TP87H			11-22213-TP87B			11-22214-TP87C		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	54.9			74.4			55.8			61.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.67	U		0.69	U		0.73	U		0.66	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-Y03-2448			DSY-SD-Y25-0012			DSY-SD-Y25-1224DL			DSY-SD-Y25-2448		
SDG: TP87	LAB_ID	11-22215-TP87D			11-22220-TP87I			11-22221-TP87JDL			11-22222-TP87K		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	65.7			35.7			41.9			65.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		14			10			0.69	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TP88_____

2. DATE OF DOCUMENT: 11/8/11 DOCUMENT CONTROL No.: C-Nary-11-11-4657w

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman							[signature]	11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4657W

Date: November 08, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TP88
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

8/Sediments/	DSY-SD-Y26-0012	DSY- SD-Y26-1224	DSY-SD-Y26-2448
	DSY-SD-Y28-0012	DSY- SD-Y28-1224	DSY-SD-Y28-2448
	DSY-SD-Y30-0012	DSY- SD-Y30-1224	
1/Rinsate Blank/		DSY-SD-RB08-100311	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 3, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
*	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Compounds
*	• Internal Standards
*	• Matrix Spike/Matrix Spike Duplicate
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate
N/A	• Field Duplicates
*	• Analyte Identification/Quantitation

* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all positive results in this SDG were above the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-Y26-0012			DSY-SD-Y26-1224DL			DSY-SD-Y26-2448DL			DSY-SD-Y28-0012		
SDG: TP88	LAB_ID	11-22232-TP88A			11-22233-TP88BDL			11-22234-TP88CDL			11-22235-TP88D		
FRACTION: MISC	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.7			40.9			53.4			33.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		6.5			24			3.4	U		2.9		

PROJ_NO: 02747 SDG: TP88 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Y28-1224			DSY-SD-Y28-2448			DSY-SD-Y30-0012			DSY-SD-Y30-1224DL		
	LAB_ID	11-22236-TP88E			11-22237-TP88F			11-22238-TP88G			11-22239-TP88HDL		
	SAMP_DATE	10/3/2011			10/3/2011			10/3/2011			10/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.2			68.1			54.2			67.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		39			0.66	U		32			3.4	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB08-100311		
SDG: TP88	LAB_ID	11-22240-TP88I		
FRACTION: MISC	SAMP_DATE	10/3/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TQ02_____

2. DATE OF DOCUMENT: 11/8/11 DOCUMENT CONTROL No.: Q-Navy-11-11-4661W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Jenny Guzman								11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4661W

Date: November 08, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TQ02
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

10/Sediments/	DSY-SD-J24-0012	DSY- SD-J24-1224	DSY-SD-J26-0012
	DSY-SD-J26-1224	DSY- SD-J26-2448	DSY-SD-J28-0012
	DSY-SD-J28-1224	DSY- SD-J28-2448	DSY-SD-J30-0012
	DSY-SD-DUP24-100411		

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 4, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
*	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Compounds
*	• Internal Standards
N/A	• Matrix Spike/Matrix Spike Duplicate
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate
*	• Field Duplicates
*	• Analyte Identification/Quantitation
*	• Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TQ02 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP24-100411			DSY-SD-J24-0012			DSY-SD-J24-1224			DSY-SD-J26-0012		
	LAB_ID	11-22310-TQ02F			11-22305-TQ02A			11-22306-TQ02B			11-22307-TQ02C		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.5			65.3			69.7			34.4		
	DUP_OF	DSY-SD-J26-2448											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.71	U		0.7	U		0.66	U		0.71	U	

PROJ_NO: 02747 SDG: TQ02 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-J26-1224			DSY-SD-J26-2448			DSY-SD-J28-0012			DSY-SD-J28-1224		
	LAB_ID	11-22308-TQ02D			11-22309-TQ02E			11-22311-TQ02G			11-22312-TQ02H		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	41.2			62.5			39.2			40.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		6.9			0.73	U		5.2			1.2	J	P

PROJ_NO: 02747	NSAMPLE	DSY-SD-J28-2448			DSY-SD-J30-0012		
SDG: TQ02	LAB_ID	11-22313-TQ02I			11-22314-TQ02J		
FRACTION: MISC	SAMP_DATE	10/4/2011			10/4/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	65.4			33.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.77	J	P

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TQ03_____

2. DATE OF DOCUMENT: 11/8/11 DOCUMENT CONTROL No.: G-Nary-11-11-4662W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman							[signature]	11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4662W

Date: November 08, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TQ03
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

10/Sediments/	DSY-SD-J30-1224	DSY- SD-J30-2448	DSY-SD-L24-0012
	DSY-SD-L24-1224	DSY- SD-L24-2448	DSY-SD-L26-0012
	DSY-SD-L26-1224	DSY- SD-L26-2448	DSY-SD-L28-0012
	DSY-SD-L28-1224	DSY-SD-L28-2448	DSY-SD-L30-0012
	DSY-SD-L30-1224	DSY-SD-L30-2448	DSY-SD-DUP25-100411
1/Rinsate blank/		DSY-SD-RB09-100411	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 4, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate

* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TQ03 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP25-100411			DSY-SD-J30-1224			DSY-SD-J30-2448			DSY-SD-L24-0012		
	LAB_ID	11-22336-TQ03I			11-22328-TQ03A			11-22329-TQ03B			11-22340-TQ03M		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.8			19.4			76.8			39.9		
	DUP_OF	DSY-SD-L28-1224											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.64	U		2.3			0.66	U		2.6		

PROJ_NO: 02747 SDG: TQ03 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L24-1224			DSY-SD-L24-2448			DSY-SD-L26-0012			DSY-SD-L26-1224		
	LAB_ID	11-22341-TQ03N			11-22342-TQ03O			11-22337-TQ03J			11-22338-TQ03K		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	49.4			70.0			55.0			79.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U		0.65	U		7.5			0.64	U	

PROJ_NO: 02747 SDG: TQ03 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L26-2448			DSY-SD-L28-0012			DSY-SD-L28-1224			DSY-SD-L28-2448		
	LAB_ID	11-22339-TQ03L			11-22333-TQ03F			11-22334-TQ03G			11-22335-TQ03H		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.6			48.5			71.7			75.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U		0.77	J	P	0.71	U		0.68	U	

PROJ_NO: 02747 SDG: TQ03 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-L30-0012			DSY-SD-L30-1224			DSY-SD-L30-2448		
	LAB_ID	11-22330-TQ03C			11-22331-TQ03D			11-22332-TQ03E		
	SAMP_DATE	10/4/2011			10/4/2011			10/4/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	47.8			71.8			79.3		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.5			0.71	U		0.65	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB09-100411		
SDG: TQ03	LAB_ID	11-22343-TQ03P		
FRACTION: MISC	SAMP_DATE	10/4/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TQ44_____

2. DATE OF DOCUMENT: 11/10/11 DOCUMENT CONTROL No.: C-Nary-11-11-4664w

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/10/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4664W

Date: November 10, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TQ44
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-N24-0012	DSY- SD-N24-1224	DSY-SD-N24-2448
	DSY-SD-N26-0012	DSY- SD-N26-1224	DSY-SD-N26-2248
	DSY-SD-N28-0012	DSY- SD-N28-1224	DSY-SD-N28-2448
	DSY-SD-N30-0012	DSY-SD-N30-1224	DSY-SD-N30-2448
	DSY-SD-Q25-0012	DSY-SD-Q25-1224	DSY-SD-Q25-2448
	DSY-SD-W26-0012	DSY-SD-W26-1224	DSY-SD-W26-2448
	DSY-SD-DUP26-100511		DSY-SD-DUP27-010511

Field Duplicates: DSY-SD-N24-2448/DSY-SD-DUP26-100511 and
DSY-SD-W26-2448/DSY-SD-DUP27-100511

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 5, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds

* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
• Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

The laboratory listed the sample ID for sample DSY-SD-Q25-2448 as DSY-SD-Q25-2248; however, this sample was collected from the interval between 24 to 48 inches below grade, consequently, per request of the Field Operation Leader for this site, the sample ID in the summary date tables was corrected to DSY-SD-Q25-2448. The laboratory data show the sample with the wrong depth interval.

The laboratory listed the sample ID for sample DSY-SD-W26-2448 as DSY-SD-W26-2248; however, this sample was collected from the interval between 24 to 48 inches below grade, consequently, per request of the Field Operation Leader for this site, the sample ID in the summary date tables was corrected to DSY-SD-W26-2448. The laboratory data show the sample with the wrong depth interval.

Field Duplicates

The field duplicate pair DSY-SD-W26-2448 and DSY-SD-DUP27-100511 exceeded the relative percent difference QC criterion of 50% for TBT:

Analyte	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
TBT	1.7	8.6	133	J	

Although the field duplicate precision for TBT did not meet the QC criteria, the project precision goals are not impacted since the affected sample results are much lower than the project action limit. The positive TBT results in samples DSY-SD-W26-2448 and DSY-SD-DUP27-100511 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated

(J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, sensitivity, and laboratory data completeness.

The project goals with respect to precision were met for the TBT data set. TBT was qualified as estimated in samples DSY-SD-W26-2448 and DSY-SD-DUP27-100511 due to field duplicate imprecision. Although specific QC criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP26-100511			DSY-SD-DUP27-100511			DSY-SD-N24-0012			DSY-SD-N24-1224		
SDG: TQ44	LAB_ID	11-22571-TQ44D			11-22586-TQ44T			11-22568-TQ44A			11-22569-TQ44B		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	67.2			55.1			40.8			45.6		
	DUP_OF	DSY-SD-N24-2448			DSY-SD-W26-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U		8.6	J	G	3.3			3		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N24-2448			DSY-SD-N26-0012			DSY-SD-N26-1224			DSY-SD-N26-2248		
SDG: TQ44	LAB_ID	11-22570-TQ44C			11-22572-TQ44E			11-22573-TQ44F			11-22574-TQ44G		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.6			37.1			55.0			73.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		7.7			0.66	U		0.71	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-N28-0012			DSY-SD-N28-1224			DSY-SD-N28-2448			DSY-SD-N30-0012		
SDG: TQ44	LAB_ID	11-22575-TQ44H			11-22576-TQ44I			11-22577-TQ44J			11-22578-TQ44K		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	38.9			41.5			63.3			41.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		2.9			10			0.72	U		1.5		

PROJ_NO: 02747	NSAMPLE	DSY-SD-N30-1224			DSY-SD-N30-2448			DSY-SD-Q25-0012			DSY-SD-Q25-1224		
SDG: TQ44	LAB_ID	11-22579-TQ44L			11-22563-TQ44M			11-22580-TQ44N			11-22581-TQ44O		
FRACTION: MISC	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.2			69.6			44.7			70.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		8.6			0.61	U		3.8			0.62	U	

PROJ_NO: 02747 SDG: TQ44 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-Q25-2448			DSY-SD-W26-0012			DSY-SD-W26-1224			DSY-SD-W26-2448		
	LAB_ID	11-22582-TQ44P			11-22583-TQ44Q			11-22584-TQ44R			11-22585-TQ44S		
	SAMP_DATE	10/5/2011			10/5/2011			10/5/2011			10/5/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.8			38.3			40.7			68.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.66	U		16			8.8			1.7	J	G

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction # t on reverse for definition of Documents):

DV Memo to Stephen Parker, CTO WE61, Former Derecktor Shipyard Marine Sediment – Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tier II Tributyl Tin Data Validation, SDG ___TQ45_____

2. DATE OF DOCUMENT: 11/10/11 DOCUMENT CONTROL No.: C-Nary-11-11- 4665W

AUTHORS: **P.DiMattei** TtNUS JOB CHARGE No.: **112G02747.SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/10/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4665W

Date: November 10, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG TQ45
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

9/Sediments/	DSY-SD-Q29-0012	DSY- SD-Q29-1224	DSY-SD-Q29-2448
	DSY-SD-T25-0012	DSY- SD-T25-1224	DSY-SD-T25-2448
	DSY-SD-T29-0012	DSY- SD-T29-1224	DSY-SD-T29-2448
1/Rinsate blank/		DSY-SD-RB10-100511	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 5-6, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Laboratory Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
*	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Compounds
*	• Internal Standards
*	• Matrix Spike/Matrix Spike Duplicate
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate
N/A	• Field Duplicates
*	• Analyte Identification/Quantitation

* • Limits of Detection

* All criteria were met for this parameter.
N/A Not available for this SDG

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results for the sediment samples were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-Q29-0012			DSY-SD-Q29-1224			DSY-SD-Q29-2448			DSY-SD-T25-0012		
SDG: TQ45	LAB_ID	11-22768-TQ45I			11-22763-TQ45D			11-22764-TQ45E			11-22760-TQ45A		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/5/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	77.2			39.3			49.2			40.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.1	J	P	1.7			5.7			8.2		

PROJ_NO: 02747 SDG: TQ45 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-T25-1224			DSY-SD-T25-2448			DSY-SD-T29-0012			DSY-SD-T29-1224		
	LAB_ID	11-22761-TQ45B			11-22762-TQ45C			11-22765-TQ45F			11-22766-TQ45G		
	SAMP_DATE	10/5/2011			10/5/2011			10/6/2011			10/6/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	45.3			73.8			75.3			85.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.67	U		0.69	U		0.69	U		0.71	U	

PROJ_NO: 02747 SDG: TQ45 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-T29-2448		
	LAB_ID	11-22767-TQ45H		
	SAMP_DATE	10/6/2011		
	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	82.4		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.62	U	

PROJ_NO: 02747 SDG: TQ45 FRACTION: MISC MEDIA: WATER	NSAMPLE	DSY-SD-RB10-100511		
	LAB_ID	11-22769-TQ45J		
	SAMP_DATE	10/5/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TQ46

2. DATE OF DOCUMENT: November 8, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4659W

AUTHORS: Ann Frankie TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Percy Guzman								11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4659W

Date: November 8, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TQ46
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

10/Sediments/	DSY-SD-W24-0012	DSY-SD-W24-1224	DSY-SD-W24-2448
	DSY-SD-W30-0012	DSY-SD-W30-1224	DSY-SD-W30-2448
	DSY-SD-W28-0012	DSY-SD-W28-1224	DSY-SD-W28-2448
	DSY-SD-DUP28-100611		

Field Duplicate Pair: DSY-SD-W24-0012/DSY-SD-DUP28-100611

1/Rinsate blank/ DSY-SD-RB11-100611

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment and rinsate blank samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 6, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards

* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) would have been qualified as estimated (J) due to uncertainty below the LOQ; however, all positive results for this SDG are above the LOQ. The project action limit (PAL) is evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP28-100611			DSY-SD-W24-0012			DSY-SD-W24-1224			DSY-SD-W24-2448		
SDG: TQ46	LAB_ID	11-22848-TQ46D			11-22845-TQ46A			11-22846-TQ46B			11-22847-TQ46C		
FRACTION: MISC	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	40.2			40.5			65.5			80.2		
	DUP_OF	DSY-SD-W24-0012											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		16			14			0.69	U		0.65	U	

PROJ_NO: 02747 SDG: TQ46 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W28-0012			DSY-SD-W28-1224			DSY-SD-W28-2448			DSY-SD-W30-0012		
	LAB_ID	11-22852-TQ46H			11-22853-TQ46I			11-22854-TQ46J			11-22849-TQ46E		
	SAMP_DATE	10/6/2011			10/6/2011			10/6/2011			10/6/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	36.7			53.0			80.6			68.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		15			9.7			0.63	U		27		

PROJ_NO: 02747 SDG: TQ46 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-W30-1224			DSY-SD-W30-2448		
	LAB_ID	11-22850-TQ46F			11-22851-TQ46G		
	SAMP_DATE	10/6/2011			10/6/2011		
	QC_TYPE	NM			NM		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	83.7			83.3		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.72	U	

PROJ_NO: 02747 SDG: TQ46 FRACTION: MISC MEDIA: WATER	NSAMPLE	DSY-SD-RB11-100611		
	LAB_ID	11-22855-TQ46K		
	SAMP_DATE	10/6/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TQ 82

2. DATE OF DOCUMENT: 11/21/11 DOCUMENT CONTROL No.: C-Navy-11-11-4687 W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	11/17/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4687W

Date: November 21, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG TQ82
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

10/Sediments/	DSY-SD-C25-0012	DSY-SD-C25-1224	DSY-SD-C25-2448
	DSY-SD-C21-0012	DSY-SD-C21-1224	DSY-SD-C21-2448
	DSY-SD-18-0012	DSY-SD-18-1224	DSY-SD-18-2448
	DSY-SD-DUP29-100711		

Field Duplicate Pair: DSY-SD-C25-1224/DSY-SD-DUP29-100711

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 07, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate

* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory was contacted on November 17, 2011, because the Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. On November 17, 2011, the laboratory resubmitted the form with the suffixes displayed.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) are qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-18-0012			DSY-SD-18-1224			DSY-SD-18-2448			DSY-SD-C21-0012		
SDG: TQ82	LAB_ID	11-23023-TQ82H			11-23024-TQ82I			11-23025-TQ82J			11-23020-TQ82E		
FRACTION: MISC	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	78.2			82.5			88.8			68.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.67	U		0.62	U		0.67	U		0.66	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-C21-1224			DSY-SD-C21-2448			DSY-SD-C25-0012			DSY-SD-C25-1224		
SDG: TQ82	LAB_ID	11-23021-TQ82F			11-23022-TQ82G			11-23016-TQ82A			11-23017-TQ82B		
FRACTION: MISC	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	85.0			84.6			40.3			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.72	U		10			1.2	J	P

PROJ_NO: 02747 SDG: TQ82 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C25-2448			DSY-SD-DUP29-100711		
	LAB_ID	11-23018-TQ82C			11-23019-TQ82D		
	SAMP_DATE	10/7/2011			10/7/2011		
	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	78.3			72.8		
	DUP_OF				DSY-SD-C25-1224		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.67	U		1.4	J	P

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TQ83

2. DATE OF DOCUMENT: November 8, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4660W

AUTHORS: Ann Franke TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/8/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4660W

Date: November 8, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy)

Subject: Tier II Organic Data Validation, SDG TQ83
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

13/Sediments/	DSY-SD-C09-0012	DSY-SD-C09-1224	DSY-SD-C09-2448
	DSY-SD-C13-0012	DSY-SD-C13-1224	DSY-SD-C13-2448
	DSY-SD-C29-0012	DSY-SD-C29-1224	DSY-SD-C29-2448
	DSY-SD-C17-0012	DSY-SD-C17-1224	DSY-SD-C17-2448
	DSY-SD-DUP30-100711		

Field Duplicate Pair: DSY-SD-C09-2448/DSY-SD-DUP30-100711

1/Rinsate blank/ DSY-SD-RB12-100711

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment and rinsate blank samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 7, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- * Initial and Continuing Calibrations
- * Blanks
- * Surrogate Compounds

* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). The positive result below the limit of quantitation (LOQ) and above the detection limit (DL) is qualified as estimated (J) due to uncertainty below the LOQ. The project action limit (PAL) is evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results for the sediment samples. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-C09-0012			DSY-SD-C09-1224			DSY-SD-C09-2448			DSY-SD-C13-0012		
SDG: TQ83	LAB_ID	11-23026-TQ83A			11-23027-TQ83B			11-23028-TQ83C			11-23030-TQ83E		
FRACTION: MISC	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.9			79.3			76.3			66.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U		0.66	U		0.68	U		0.69	U	

PROJ_NO: 02747 SDG: TQ83 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C13-1224			DSY-SD-C13-2448			DSY-SD-C17-0012			DSY-SD-C17-1224		
	LAB_ID	11-23031-TQ83F			11-23032-TQ83G			11-23036-TQ83L			11-23037-TQ83M		
	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	79.9			78.3			76.3			83.2		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.64	U		0.66	U		0.67	U		0.62	U	

PROJ_NO: 02747 SDG: TQ83 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-C17-2448			DSY-SD-C29-0012			DSY-SD-C29-1224			DSY-SD-C29-2448		
	LAB_ID	11-23038-TQ83N			11-23033-TQ83I			11-23034-TQ83J			11-23035-TQ83K		
	SAMP_DATE	10/7/2011			10/7/2011			10/7/2011			10/7/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.3			45.6			52.0			75.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.72	U		0.85	J	P	0.7	U		0.69	U	

PROJ_NO: 02747 SDG: TQ83 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP30-100711		
	LAB_ID	11-23029-TQ83D		
	SAMP_DATE	10/7/2011		
	QC_TYPE	FD		
	UNITS	UG/KG		
	PCT_SOLIDS	76.6		
	DUP_OF	DSY-SD-C09-2448		
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.68	U	

PROJ_NO: 02747	NSAMPLE	DSY-SD-RB12-100711		
SDG: TQ83	LAB_ID	11-23039-TQ83O		
FRACTION: MISC	SAMP_DATE	10/7/2011		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG TS08

2. DATE OF DOCUMENT: November 17, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4682 W

AUTHORS: A. Franke TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/10/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4682W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TS08
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

20/Sediments/	DSY-SD-G01-0012	DSY-SD-G01-1224	DSY-SD-G01-2448
	DSY-SD-G05-0012	DSY-SD-G05-1224	DSY-SD-G05-2448
	DSY-SD-G09-0012	DSY-SD-G09-1224	DSY-SD-G09-2448
	DSY-SD-G13-0012	DSY-SD-G13-1224	DSY-SD-G13-2448
	DSY-SD-G17-0012	DSY-SD-G17-1224	DSY-SD-G17-2448
	DSY-SD-G21-0012	DSY-SD-G21-1224	DSY-SD-G21-2448
	DSY-SD-DUP31-101211		DSY-SD-DUP32-101211

Field Duplicate Pairs: DSY-SD-G05-2448/DSY-SD-DUP31-101211
and DSY-SD-G17-2448/DSY-SD-DUP32-101211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 12, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Compounds

* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory was contacted on November 9, 2011, because the Form 8 (Internal Standards) did not display the sample ID suffixes due to exceeded field length. On November 9, 2011, the laboratory resubmitted the form with the suffixes displayed.

The laboratory also was contacted because raw data pages for the method blank had the page numbers printed on the backs of the pages, and only the backs of the pages were displayed in the pdf on the CD. On November 9, 2011, the laboratory resubmitted the corrected pages.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) are qualified as estimated (J) due to uncertainty below the LOQ. Project action limits are evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LODs for all non-detected results.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP31-101211			DSY-SD-DUP32-101211			DSY-SD-G01-0012			DSY-SD-G01-1224		
SDG: TS08	LAB_ID	11-23490-TS08G			11-23500-TS08Q			11-23484-TS08A			11-23485-TS08B		
FRACTION: MISC	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			FD			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.5			31.5			34.3			35.0		
	DUP_OF	DSY-SD-G05-2448			DSY-SD-G17-2448								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		2.9			1.8			0.71	U		0.69	U	

PROJ_NO: 02747 SDG: TS08 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G01-2448			DSY-SD-G05-0012			DSY-SD-G05-1224			DSY-SD-G05-2448		
	LAB_ID	11-23486-TS08C			11-23487-TS08D			11-23488-TS08E			11-23489-TS08F		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.0			30.5			30.8			34.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.2	J	P	0.71	U		0.7	U		3		

PROJ_NO: 02747 SDG: TS08 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G09-0012			DSY-SD-G09-1224			DSY-SD-G09-2448			DSY-SD-G13-0012		
	LAB_ID	11-23491-TS08H			11-23492-TS08I			11-23493-TS08J			11-23494-TS08K		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.7			33.6			31.9			29.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.73	U		0.73	U		0.8	J	P	0.73	U	

PROJ_NO: 02747 SDG: TS08 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G13-1224			DSY-SD-G13-2448			DSY-SD-G17-0012			DSY-SD-G17-1224		
	LAB_ID	11-23495-TS08L			11-23496-TS08M			11-23497-TS08N			11-23498-TS08O		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	31.6			29.1			29.7			30.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.73	U		0.75	J	P	0.73	U		0.7	U	

PROJ_NO: 02747 SDG: TS08 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G17-2448			DSY-SD-G21-0012			DSY-SD-G21-1224			DSY-SD-G21-2448		
	LAB_ID	11-23499-TS08P			11-23501-TS08R			11-23502-TS08S			11-23503-TS08T		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.2			28.3			30.0			34.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		2.4			0.72	U		0.72	U		6.4		

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTO WE61, Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Tier II Organic Data Validation, SDG TS10

2. DATE OF DOCUMENT: November 21, 2011 DOCUMENT CONTROL No.: **C-NAVY-11-11-4688W**

AUTHORS: **Ann Franke** TtNUS JOB CHARGE No.: **112G02747-SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman							[signature]	11/21/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4688W

Date: November 21, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TS10
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

19/Sediments/	DSY-SD-AA01-0012	DSY-SD-AA01-1224	DSY-SD-AA01-2448
	DSY-SD-AA05-0012	DSY-SD-AA05-1224	DSY-SD-AA05-2448
	DSY-SD-AA09-0012	DSY-SD-AA09-1224	DSY-SD-AA09-2448
	DSY-SD-AA13-0012	DSY-SD-AA13-1224	DSY-SD-AA13-2448
	DSY-SD-AA17-0012	DSY-SD-AA17-1224	DSY-SD-AA17-2448
	DSY-SD-G25-0012	DSY-SD-G25-1224	DSY-SD-G25-2448
	DSY-SD-DUP33-101211		

Field Duplicate Pairs: DSY-SD-AA01-2448/DSY-SD-DUP33-101211

1/Rinsate blank/ DSY-SD-RB13-101211

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment and rinsate blank samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 12-13, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

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- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations
* • Blanks

* • Surrogate Compounds
* • Internal Standards
* • Matrix Spike/Matrix Spike Duplicate
* • Laboratory Control Sample/Laboratory Control Sample Duplicate
* • Field Duplicates
* • Analyte Identification/Quantitation
* • Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). The positive result below the limit of quantitation (LOQ) and above the detection limit (DL) is qualified as estimated (J) due to uncertainty below the LOQ. The PAL is evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LOD for all non-detected sediment sample results. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA01-0012			DSY-SD-AA01-1224			DSY-SD-AA01-2448			DSY-SD-AA05-0012		
	LAB_ID	11-23507-TS10D			11-23508-TS10E			11-23509-TS10F			11-23511-TS10H		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	30.4			32.4			34.5			39.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.69	U		0.71	U		0.7	U		1.7		

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA05-1224			DSY-SD-AA05-2448			DSY-SD-AA09-0012			DSY-SD-AA09-1224		
	LAB_ID	11-23512-TS10I			11-23513-TS10J			11-23514-TS10K			11-23515-TS10L		
	SAMP_DATE	10/12/2011			10/12/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.5			38.9			29.4			34.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		4.4			16			1.8			75		

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA09-2448			DSY-SD-AA13-0012			DSY-SD-AA13-1224			DSY-SD-AA13-2448DL		
	LAB_ID	11-23516-TS10M			11-23517-TS10N			11-23518-TS10O			11-23519-TS10PDL		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	39.9			31.5			31.2			33.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		42			1.5	J	P	8.4			240		

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA17-0012			DSY-SD-AA17-1224			DSY-SD-AA17-2448			DSY-SD-DUP33-101211		
	LAB_ID	11-23520-TS10Q			11-23521-TS10R			11-23522-TS10S			11-23510-TS10G		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/12/2011		
	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	42.4			32.3			35.0			34.0		
	DUP_OF										DSY-SD-AA01-2448		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		7.9			7.6			100			0.71	U	

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-G25-0012			DSY-SD-G25-1224			DSY-SD-G25-2448		
	LAB_ID	11-23504-TS10A			11-23505-TS10B			11-23506-TS10C		
	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011		
	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.7			35.8			45.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		2.7			44			1.9		

PROJ_NO: 02747 SDG: TS10 FRACTION: MISC MEDIA: WATER	NSAMPLE	DSY-SD-RB13-101211		
	LAB_ID	11-23523-TS10T		
	SAMP_DATE	10/12/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Organic Data Validation, SDG T511

2. DATE OF DOCUMENT: November 17, 2011 DOCUMENT CONTROL No.: C-NAVY-11-11-4683W

AUTHORS: A. Franke TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Lucy Guzman								11/10/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-11-11-4683W

Date: November 17, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann Franke (no copy) AF

Subject: Tier II Organic Data Validation, SDG TS11
Analytical Resources Incorporated
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Tributyltin (TBT) (as Tin):

15/Sediments/	DSY-SD-AA21-0012	DSY-SD-AA21-1224	DSY-SD-AA21-2448
	DSY-SD-AA24-0012	DSY-SD-AA24-1224	DSY-SD-AA24-2448
	DSY-SD-AA26-0012	DSY-SD-AA26-1224	DSY-SD-AA26-2448
	DSY-SD-AA28-0016	DSY-SD-AA30-0012	DSY-SD-AA30-1224
	DSY-SD-G29-0018	DSY-SD-DUP34-101311	
	DSY-SD-DUP35-101311		

Field Duplicate Pairs: DSY-SD-AA21-2448/DSY-SD-DUP34-101311 and DSY-SD-AA28-0016/DSY-SD-DUP35-101311

1/Rinsate blank/ DSY-SD-RB14-101311

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the tributyltin (TBT) (reported as tin) analytical data for the sediment and rinsate blank samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on October 13, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TBT analysis was performed according to the Krone method and SW-846 Method 8270D in the SIM mode. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. The tributyltin results are presented under the "MISC" fraction. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Laboratory Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations

*	•	Blanks
*	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
*	•	Analyte Identification/Quantitation
*	•	Limits of Detection

* All criteria were met for this parameter.

Laboratory Data Completeness

Sample DSY-SD-G29-00**18** was incorrectly listed on the sample bottle as DSY-SD-G29-00**12**, which is how the laboratory reported the sample. The ID on the chain-of-custody form (COC) was also listed incorrectly, as DSY-SD-G**30**-0018. The correct sample ID was provided by field operations leader (FOL) M. Horton. The data validator corrected the ID in the database and data summary tables to DSY-SD-G**29**-00**18**.

The COC listed sample DSY-SD-AA28-00**16**, but the sample bottle with the same date and time was labeled as DSY-SD-AA28-00**12**. The laboratory reported the sample using the ID on the bottle label. According to M. Horton, the COC ID is correct. The data validator corrected the ID in the database and data summary tables to DSY-SD-AA28-0016.

The laboratory labeled the analyte for the TBT analysis as "tin" in the electronic data deliverables and data package using the associated CAS number for metallic tin. In an e-mail dated October 27, 2011, the laboratory clarified that the reported tin results represent only the tin contained in TBT. The results of the TBT analysis were converted to micrograms of tin per kilogram of sediment sample. Thus, the results reported for "tin" are equivalent to results for "TBT (as tin)". The data summary tables and the data base present the analyte as "TBT (as tin)".

Field Duplicates

Field duplicate pair DSY-SD-AA21-2448/DSY-SD-DUP34-101311 exceeded the relative percent difference QC criterion of 50% for the following compound:

Affected samples: DSY-SD-AA21-2448, DSY-SD-DUP34-101311					
Analyte	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
TBT (as tin)	30	13	79.1	J	

Although the field duplicate precision for TBT did not meet the QC criteria, the project precision goals are not impacted since the affected sample results are much lower than the project action limit (PAL). The positive TBT results in samples DSY-SD-AA21-2448 and DSY-SD-DUP34-101311 are usable as estimated values for which the bias is indeterminate.

Limits of Detection

Non-detected results were reported at the limit of detection (LOD). The positive results below the limit of quantitation (LOQ) and above the detection limit (DL) are qualified as estimated (J) due to uncertainty below the LOQ. The PAL is evaluated for non-detected results only (reported at the LOD).

The TBT PAL was met by the LOD for the non-detected sediment sample result. There are no PALs established for the rinsate blank sample.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and laboratory data completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to precision were met for the TBT data set. TBT was qualified as estimated in samples DSY-SD-AA21-2448 and DSY-SD-DUP34-101311 due to poor field duplicate precision. Although specific QC criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to accuracy, sensitivity, and laboratory data completeness were met for the TBT data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory data completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747 SDG: TS11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA21-0012			DSY-SD-AA21-1224			DSY-SD-AA21-2448			DSY-SD-AA24-0012		
	LAB_ID	11-23527-TS11A			11-23528-TS11B			11-23529-TS11C			11-23531-TS11E		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	33.6			31.3			35.0			35.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		3.5			11			30	J	G	0.8	J	P

PROJ_NO: 02747 SDG: TS11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA24-1224			DSY-SD-AA24-2448			DSY-SD-AA26-0012			DSY-SD-AA26-1224		
	LAB_ID	11-23532-TS11F			11-23533-TS11G			11-23534-TS11H			11-23535-TS11I		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	30.7			34.9			45.8			47.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1	J	P	23			7.9			43		

PROJ_NO: 02747 SDG: TS11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-AA26-2448			DSY-SD-AA28-0016			DSY-SD-AA30-0012			DSY-SD-AA30-1224		
	LAB_ID	11-23536-TS11J			11-23537-TS11K			11-23539-TS11M			11-23540-TS11N		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	52.8			61.6			72.8			76.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		1.2	J	P	2.5			5.7			0.67	U	

PROJ_NO: 02747 SDG: TS11 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-DUP34-101311			DSY-SD-DUP35-101311			DSY-SD-G29-0018		
	LAB_ID	11-23530-TS11D			11-23538-TS11L			11-23541-TS11O		
	SAMP_DATE	10/13/2011			10/13/2011			10/13/2011		
	QC_TYPE	FD			FD			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	34.9			61.0			45.1		
	DUP_OF	DSY-SD-AA21-2448			DSY-SD-AA28-0016					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		13	J	G	1.3	J	P	6.6		

PROJ_NO: 02747 SDG: TS11 FRACTION: MISC MEDIA: WATER	NSAMPLE	DSY-SD-RB14-101311		
	LAB_ID	11-23542-TS11P		
	SAMP_DATE	10/13/2011		
	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRIBUTYLTIN (AS TIN)		0.018	U	

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Tier I **Data Validation, SDG** DSY-10 (grain size only)

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: C-Navy-12-11-4903W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Fraake							AF	11/30/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4903W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier I Data Validation, SDG DYS-10
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Grain Size:
11/Sediments/ DSY-SD-GP01-0012 DSY-SD-GP02-0012 DSY-SD-GP03-0012
DSY-SD-GP04-0012 DSY-SD-GP05-0012 DSY-SD-GP06-0012
DSY-SD-GP07-0012 DSY-SD-GP08-0012 DSY-SD-GP09-0012
DSY-SD-GP10-0012 DSY-SD-DUP12-092711

Field Duplicate Pair: DSY-SD-GP03-0012/DSY-SD-DUP12-092711

Tetra Tech NUS, Inc. (TtNUS) performed a Tier I data validation on grain size analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 27, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The grain size analysis was performed according to the ASTM D422 procedure. The analysis was subcontracted by Katahdin to Test America, Burlington, VT. Only data completeness is evaluated for Tier I data validation.

The sample results are presented in the enclosed data summary tables and graphs.

Laboratory Data Completeness

The grain size data for all the samples sent to the laboratory are complete.

Tables: Data Summary Tables
Grain Size Graphs and Tabulated Data

Enclosures: Data Completeness Worksheets

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP12-092711			DSY-SD-GP01-0012			DSY-SD-GP02-0012			DSY-SD-GP03-0012		
SDG: DSY-10	LAB_ID	200-7324-11			200-7324-1			200-7324-2			200-7324-3		
FRACTION: MISC	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	DSY-SD-GP03-0012											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		9.8			9.7			19.3			11.1		
HYDROMETER-0.001MM		8.4			8.3			16.6			9.7		
HYDROMETER-0.002MM		11.3			11.2			23.5			12.7		
HYDROMETER-0.0043MM		12.7			12.5			30.3			15.4		
HYDROMETER-0.0052MM		18.1			15.1			37			19.7		
HYDROMETER-0.006MM		45.4			34.9			42.4			48.2		
HYDROMETER-0.0074MM		57.8			42.8			47.8			59.1		
PERCENT CLAY		11.3			11.2			23.5			12.7		
PERCENT COARSE SAND		1			2.9			3.3			1.9		
PERCENT FINE SAND		19.2			37.6			16.5			19.6		
PERCENT GRAVEL		2.4			0.9			4.2			0.3		
PERCENT MEDIUM SAND		6.4			12.3			17.5			6.6		
PERCENT SAND		26.6			52.8			37.3			28.1		
PERCENT SILT		59.7			35.1			35			58.9		
SIEVE 1"		100			100			100			100		
SIEVE 1-1/2"		100			100			100			100		
SIEVE 2"		100			100			100			100		
SIEVE 3"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			100			100		
SIEVE NO. 004		97.6			99.1			95.8			99.7		
SIEVE NO. 010		96.6			96.2			92.5			97.8		
SIEVE NO. 020		95.2			93.8			86.2			96.3		
SIEVE NO. 040		90.2			83.9			75			91.2		
SIEVE NO. 060		81.7			61.2			67.4			82.4		
SIEVE NO. 080		78.8			52.8			65.5			79.4		
SIEVE NO. 100		77.4			50.3			64.5			78		
SIEVE NO. 200		71			46.3			58.5			71.6		

PROJ_NO: 02747 SDG: DSY-10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-GP04-0012			DSY-SD-GP05-0012			DSY-SD-GP06-0012			DSY-SD-GP07-0012		
	LAB_ID	200-7324-4			200-7324-5			200-7324-6			200-7324-7		
	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		13			15.3			7.6			12.1		
HYDROMETER-0.001MM		11.4			12.6			6.1			10.4		
HYDROMETER-0.002MM		14.9			21			9.3			12.4		
HYDROMETER-0.0043MM		14.9			25.1			11.1			14.4		
HYDROMETER-0.0052MM		21.5			30.6			12.5			24.6		
HYDROMETER-0.006MM		59.7			40.4			36.1			70.3		
HYDROMETER-0.0074MM		78.9			47.3			52.3			83.9		
PERCENT CLAY		14.9			21			9.3			12.4		
PERCENT COARSE SAND		0			0			2.1			1.4		
PERCENT FINE SAND		8.4			25.2			30.2			3.3		
PERCENT GRAVEL		0			0			2.4			3.3		
PERCENT MEDIUM SAND		3.1			2.5			4.2			3.3		
PERCENT SAND		11.5			27.7			36.5			8		
PERCENT SILT		73.6			51.3			51.8			76.3		
SIEVE 1"		100			100			100			100		
SIEVE 1-1/2"		100			100			100			100		
SIEVE 2"		100			100			100			100		
SIEVE 3"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			98.6			98		
SIEVE NO. 004		100			100			97.6			96.7		
SIEVE NO. 010		100			100			95.5			95.3		
SIEVE NO. 020		99.3			99.2			93.8			93.1		
SIEVE NO. 040		96.9			97.5			91.3			92		
SIEVE NO. 060		94.4			90.5			82.1			91.2		
SIEVE NO. 080		93			85.7			73.7			90.7		
SIEVE NO. 100		92			83			69.4			90.3		
SIEVE NO. 200		88.5			72.3			61.1			88.7		

PROJ_NO: 02747	NSAMPLE	DSY-SD-GP08-0012			DSY-SD-GP09-0012			DSY-SD-GP10-0012		
SDG: DSY-10	LAB_ID	200-7324-8			200-7324-9			200-7324-10		
FRACTION: MISC	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		13			11			7.5		
HYDROMETER-0.001MM		11.4			9.8			6.4		
HYDROMETER-0.002MM		14.9			16			8.7		
HYDROMETER-0.0043MM		14.9			18.4			10.8		
HYDROMETER-0.0052MM		19.9			23.2			15		
HYDROMETER-0.006MM		66.1			30.6			21.4		
HYDROMETER-0.0074MM		82.1			36.6			25.6		
PERCENT CLAY		14.9			16			8.7		
PERCENT COARSE SAND		0			0.6			2.6		
PERCENT FINE SAND		4.5			34.2			54.1		
PERCENT GRAVEL		0			0.3			0.4		
PERCENT MEDIUM SAND		1.7			0.9			6.8		
PERCENT SAND		6.2			35.7			63.5		
PERCENT SILT		78.9			48			27.4		
SIEVE 1"		100			100			100		
SIEVE 1-1/2"		100			100			100		
SIEVE 2"		100			100			100		
SIEVE 3"		100			100			100		
SIEVE 3/4"		100			100			100		
SIEVE 3/8"		100			100			100		
SIEVE NO. 004		100			99.7			99.6		
SIEVE NO. 010		100			99.1			97		
SIEVE NO. 020		99.3			98.8			94.2		
SIEVE NO. 040		98.3			98.2			90.2		
SIEVE NO. 060		97.3			97.3			72.6		
SIEVE NO. 080		96.6			95.4			61.5		
SIEVE NO. 100		96.1			91.7			53		
SIEVE NO. 200		93.8			64			36.1		

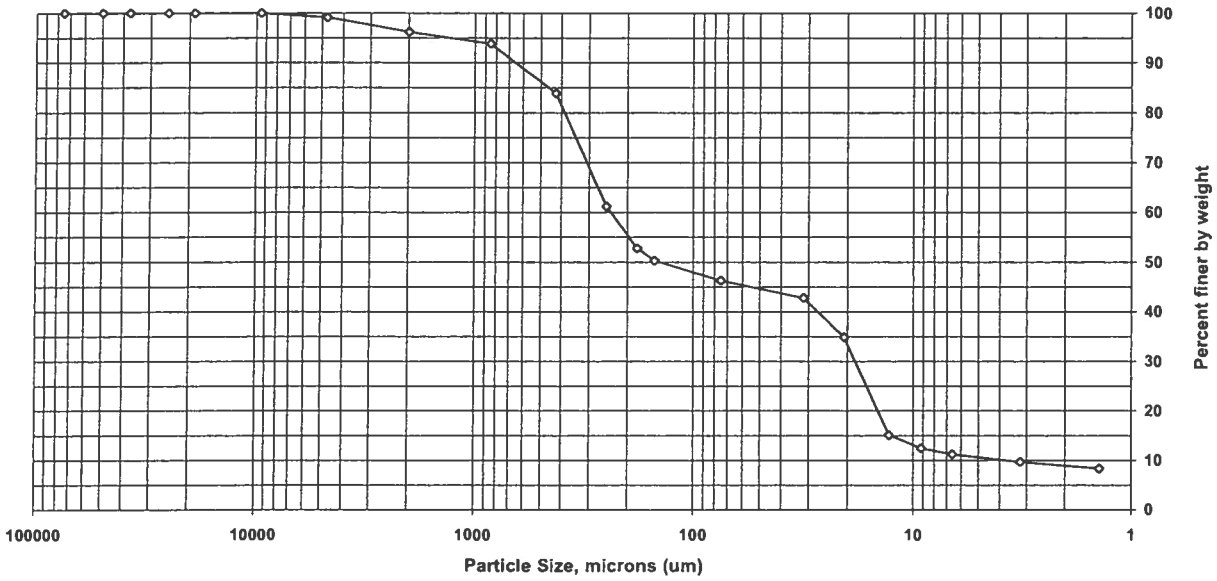
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP01-0012	**Percent Solids:**	52.5%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-1	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.1	0.9
#10	2000	96.2	2.9
#20	850	93.8	2.4
#40	425	83.9	9.9
#60	250	61.2	22.7
#80	180	52.8	8.4
#100	150	50.3	2.5
#200	75	46.3	4.0
Hyd1	31.6	42.8	3.5
Hyd2	20.7	34.9	7.9
Hyd3	12.9	15.1	19.8
Hyd4	9.2	12.5	2.6
Hyd5	6.6	11.2	1.3
Hyd6	3.2	9.7	1.6
Hyd7	1.4	8.3	1.3

Soil Classification	Percent of sample
Gravel	0.9
Sand	52.8
Coarse Sand	2.9
Medium Sand	12.3
Fine Sand	37.6
Silt	35.1
Clay	11.2

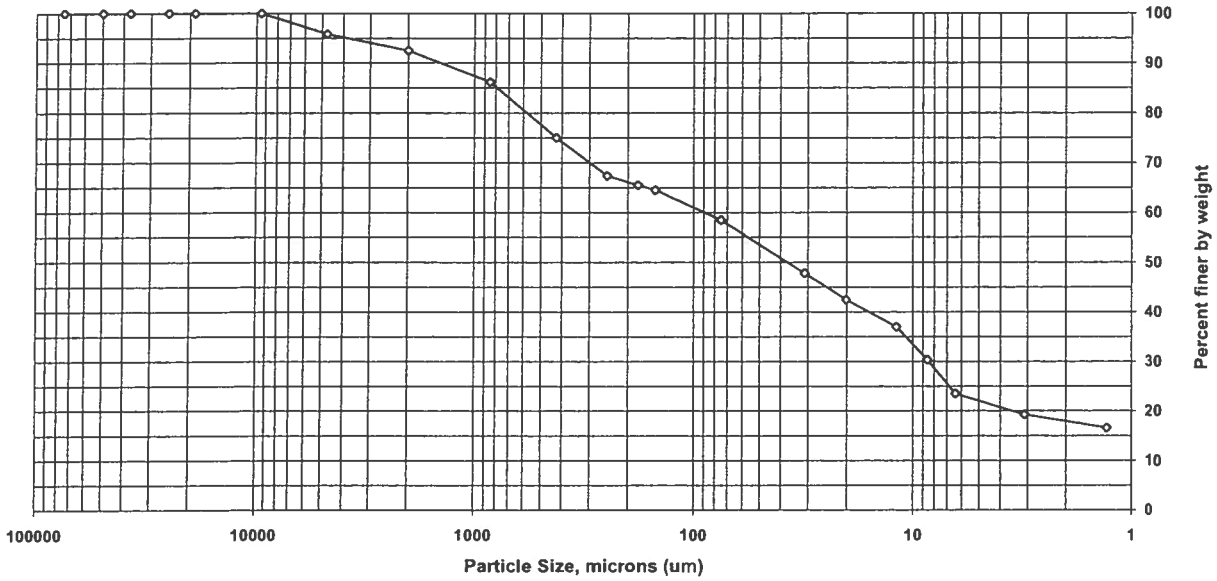
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP02-0012	**Percent Solids:**	57.1%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-2	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	95.8	4.2
#10	2000	92.5	3.3
#20	850	86.2	6.3
#40	425	75.0	11.2
#60	250	67.4	7.6
#80	180	65.5	1.9
#100	150	64.5	1.0
#200	75	58.5	6.0
Hyd1	31.1	47.8	10.7
Hyd2	20.1	42.4	5.4
Hyd3	11.9	37.0	5.4
Hyd4	8.6	30.3	6.7
Hyd5	6.4	23.5	6.8
Hyd6	3.1	19.3	4.2
Hyd7	1.3	16.6	2.7

Soil Classification	Percent of sample
Gravel	4.2
Sand	37.3
Coarse Sand	3.3
Medium Sand	17.5
Fine Sand	16.5
Silt	35.0
Clay	23.5

Particle Size of Soils by ASTM D422

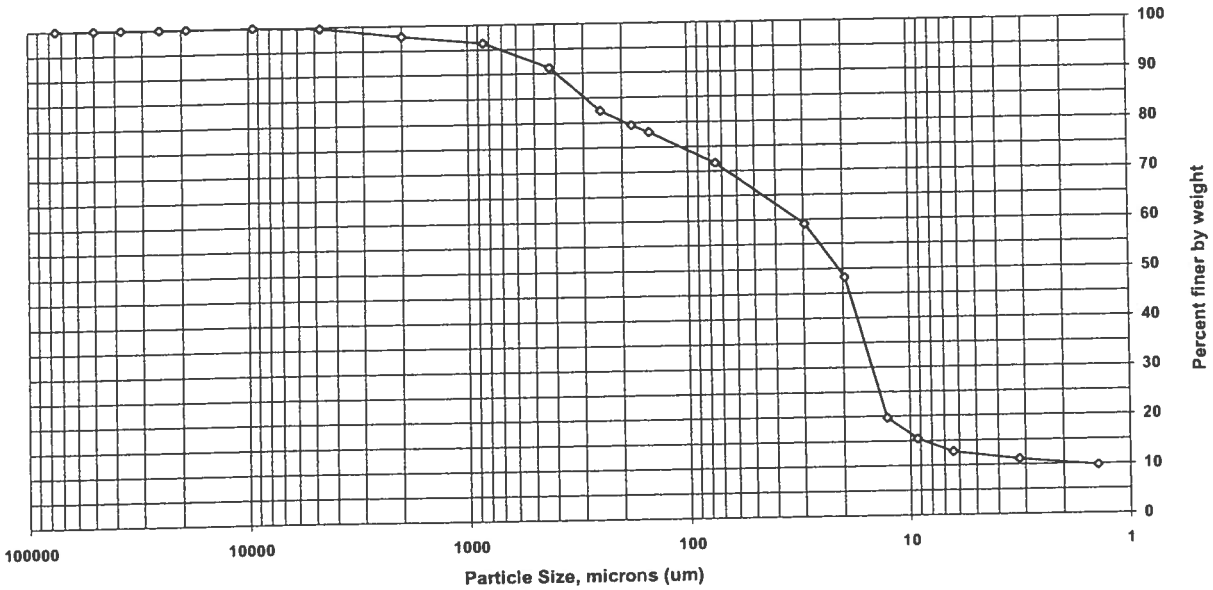
Sample ID: DSY-SD-GP03-0012
Lab ID: 200-7324-A-3

Percent Solids: 52.2%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.7	0.3
#10	2000	97.8	1.9
#20	850	96.3	1.5
#40	425	91.2	5.1
#60	250	82.4	8.8
#80	180	79.4	3.0
#100	150	78.0	1.4
#200	75	71.6	6.4
Hyd1	29.5	59.1	12.5
Hyd2	19.6	48.2	10.9
Hyd3	12.7	19.7	28.5
Hyd4	9.3	15.4	4.3
Hyd5	6.4	12.7	2.7
Hyd6	3.2	11.1	1.6
Hyd7	1.4	9.7	1.4

Soil Classification	Percent of sample
Gravel	0.3
Sand	28.1
Coarse Sand	1.9
Medium Sand	6.6
Fine Sand	19.6
Silt	58.9
Clay	12.7

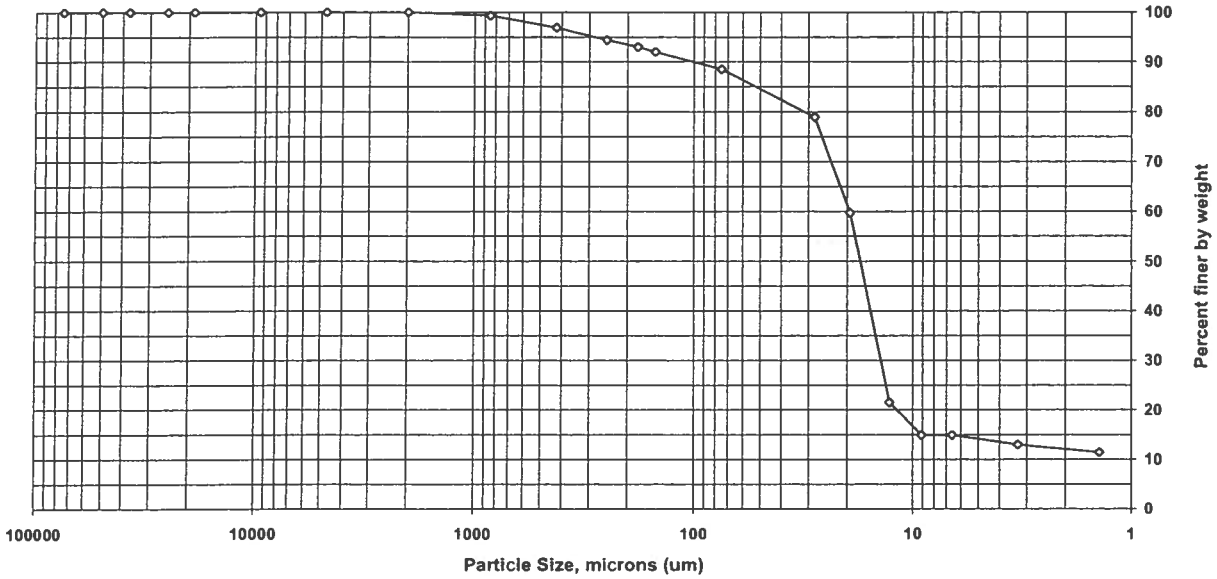
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP04-0012	**Percent Solids:**	36.1%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-4	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.3	0.7
#40	425	96.9	2.4
#60	250	94.4	2.5
#80	180	93.0	1.4
#100	150	92.0	1.0
#200	75	88.5	3.5
Hyd1	28.2	78.9	9.6
Hyd2	19.4	59.7	19.2
Hyd3	12.8	21.5	38.2
Hyd4	9.1	14.9	6.6
Hyd5	6.6	14.9	0.0
Hyd6	3.3	13.0	1.9
Hyd7	1.4	11.4	1.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	11.5
Coarse Sand	0.0
Medium Sand	3.1
Fine Sand	8.4
Silt	73.6
Clay	14.9

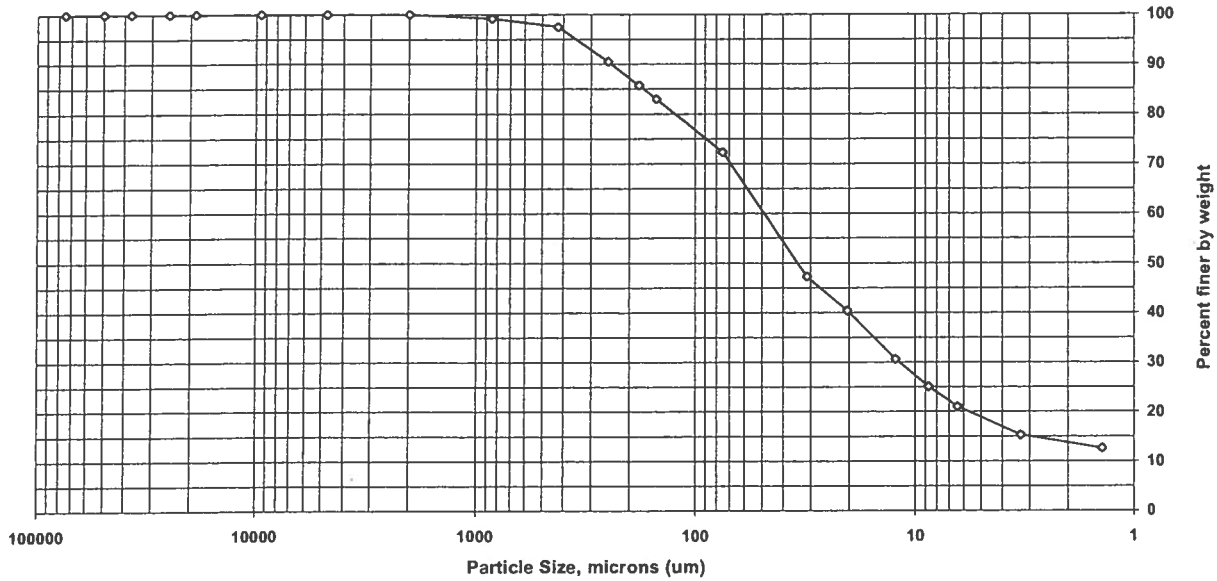
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP05-0012	**Percent Solids:**	60.8%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-5	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.2	0.8
#40	425	97.5	1.7
#60	250	90.5	7.0
#80	180	85.7	4.8
#100	150	83.0	2.7
#200	75	72.3	10.7
Hyd1	31.2	47.3	25.0
Hyd2	20.4	40.4	6.9
Hyd3	12.3	30.6	9.8
Hyd4	8.7	25.1	5.5
Hyd5	6.4	21.0	4.1
Hyd6	3.3	15.3	5.7
Hyd7	1.4	12.6	2.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	27.7
Coarse Sand	0.0
Medium Sand	2.5
Fine Sand	25.2
Silt	51.3
Clay	21.0

Particle Size of Soils by ASTM D422

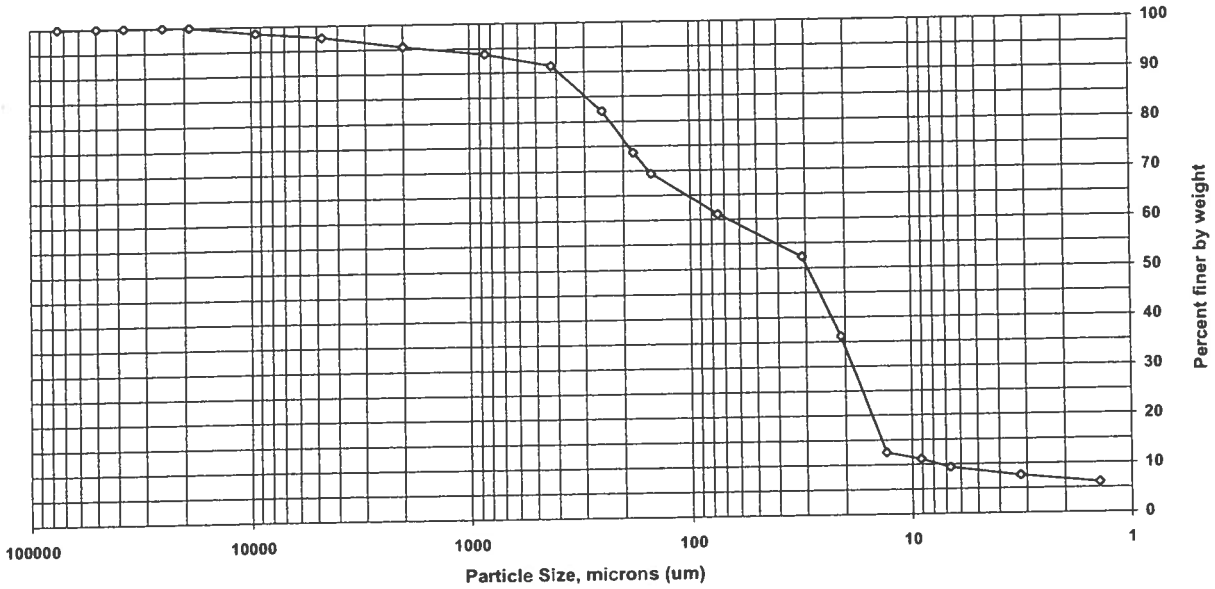
Sample ID: DSY-SD-GP06-0012
Lab ID: 200-7324-A-6

Percent Solids: 41.1%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.6	1.4
#4	4750	97.6	1.0
#10	2000	95.5	2.1
#20	850	93.8	1.7
#40	425	91.3	2.5
#60	250	82.1	9.2
#80	180	73.7	8.4
#100	150	69.4	4.3
#200	75	61.1	8.3
Hyd1	31.1	52.3	8.8
Hyd2	20.9	36.1	16.2
Hyd3	13.1	12.5	23.6
Hyd4	9.1	11.1	1.4
Hyd5	6.7	9.3	1.8
Hyd6	3.2	7.6	1.7
Hyd7	1.4	6.1	1.5

Soil Classification	Percent of sample
Gravel	2.4
Sand	36.5
Coarse Sand	2.1
Medium Sand	4.2
Fine Sand	30.2
Silt	51.8
Clay	9.3

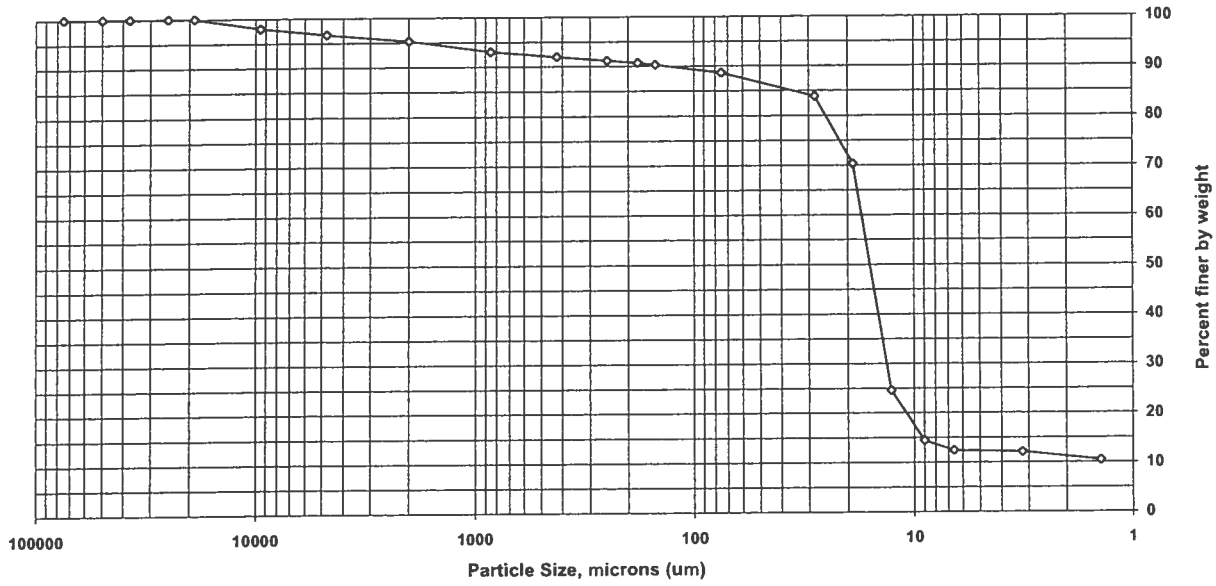
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP07-0012	**Percent Solids:**	34.3%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-7	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: shell

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.0	2.0
#4	4750	96.7	1.3
#10	2000	95.3	1.4
#20	850	93.1	2.2
#40	425	92.0	1.1
#60	250	91.2	0.8
#80	180	90.7	0.5
#100	150	90.3	0.4
#200	75	88.7	1.6
Hyd1	28.2	83.9	4.8
Hyd2	18.9	70.3	13.6
Hyd3	12.7	24.6	45.7
Hyd4	9	14.4	10.2
Hyd5	6.6	12.4	2.0
Hyd6	3.2	12.1	0.3
Hyd7	1.4	10.4	1.7

Soil Classification	Percent of sample
Gravel	3.3
Sand	8.0
Coarse Sand	1.4
Medium Sand	3.3
Fine Sand	3.3
Silt	76.3
Clay	12.4

Particle Size of Soils by ASTM D422

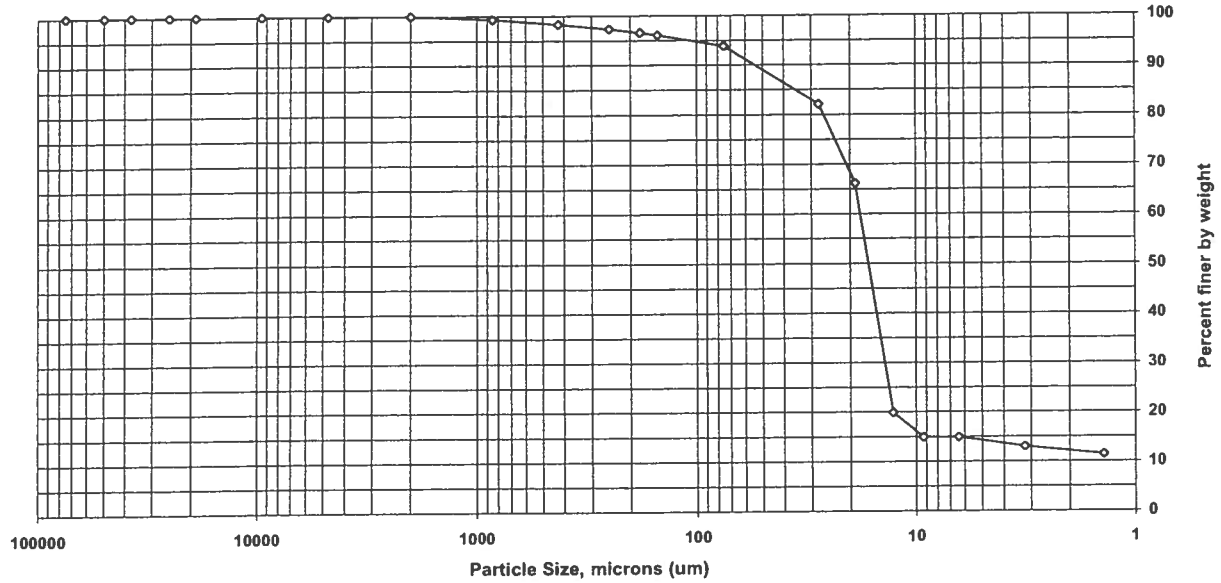
Sample ID: DSY-SD-GP08-0012
Lab ID: 200-7324-A-8

Percent Solids: 38.3%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): na

Non-soil material: na
Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.3	0.7
#40	425	98.3	1.0
#60	250	97.3	1.0
#80	180	96.6	0.7
#100	150	96.1	0.5
#200	75	93.8	2.3
Hyd1	27.8	82.1	11.7
Hyd2	18.9	66.1	16.0
Hyd3	12.8	19.9	46.2
Hyd4	9.3	14.9	5.0
Hyd5	6.4	14.9	0.0
Hyd6	3.2	13.0	1.9
Hyd7	1.4	11.4	1.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.2
Coarse Sand	0.0
Medium Sand	1.7
Fine Sand	4.5
Silt	78.9
Clay	14.9

Particle Size of Soils by ASTM D422

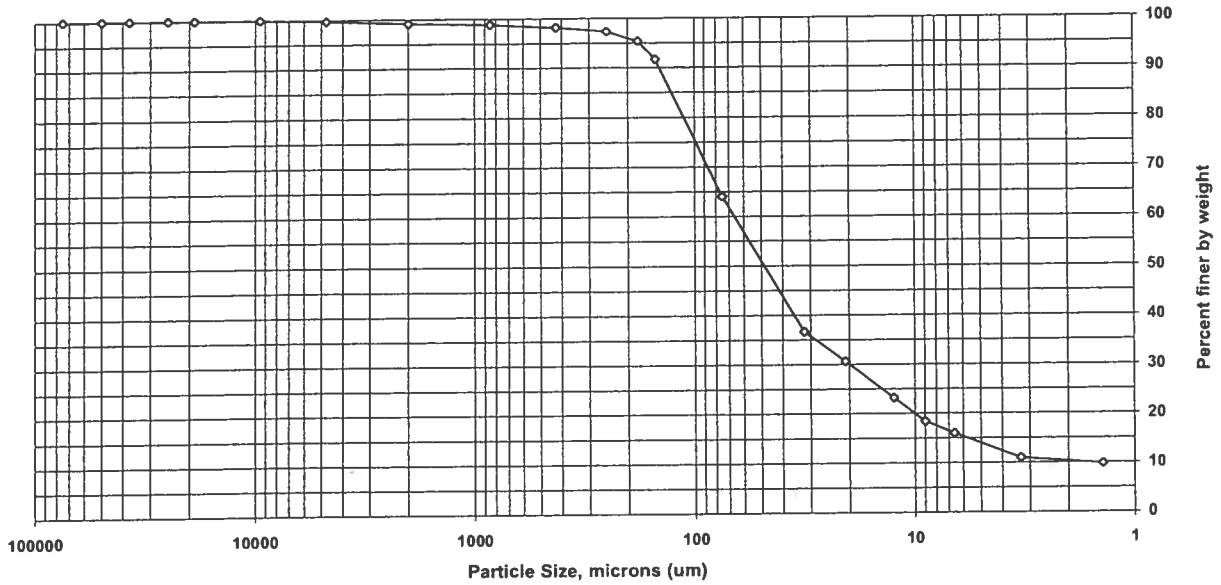
Sample ID: DSY-SD-GP09-0012
Lab ID: 200-7324-A-9

Percent Solids: 61.7%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.7	0.3
#10	2000	99.1	0.6
#20	850	98.8	0.3
#40	425	98.2	0.6
#60	250	97.3	0.9
#80	180	95.4	1.9
#100	150	91.7	3.7
#200	75	64.0	27.7
Hyd1	32	36.6	27.4
Hyd2	20.8	30.6	6.0
Hyd3	12.5	23.2	7.4
Hyd4	9	18.4	4.8
Hyd5	6.6	16.0	2.4
Hyd6	3.3	11.0	5.0
Hyd7	1.4	9.8	1.2

Soil Classification	Percent of sample
Gravel	0.3
Sand	35.7
Coarse Sand	0.6
Medium Sand	0.9
Fine Sand	34.2
Silt	48.0
Clay	16.0

Particle Size of Soils by ASTM D422

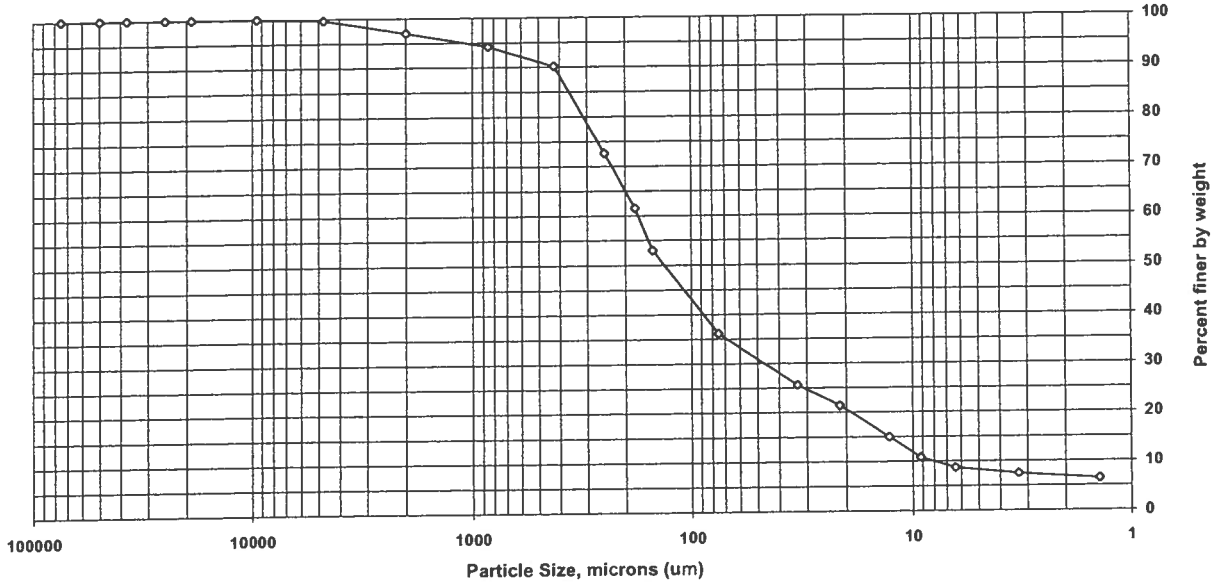
Sample ID: DSY-SD-GP10-0012
Lab ID: 200-7324-A-10

Percent Solids: 69.3%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.6	0.4
#10	2000	97.0	2.6
#20	850	94.2	2.8
#40	425	90.2	4.0
#60	250	72.6	17.6
#80	180	61.5	11.1
#100	150	53.0	8.5
#200	75	36.1	16.9
Hyd1	33.1	25.6	10.5
Hyd2	21.4	21.4	4.2
Hyd3	12.8	15.0	6.4
Hyd4	9.2	10.8	4.2
Hyd5	6.4	8.7	2.1
Hyd6	3.3	7.5	1.2
Hyd7	1.4	6.4	1.0

Soil Classification	Percent of sample
Gravel	0.4
Sand	63.5
Coarse Sand	2.6
Medium Sand	6.8
Fine Sand	54.1
Silt	27.4
Clay	8.7

Particle Size of Soils by ASTM D422

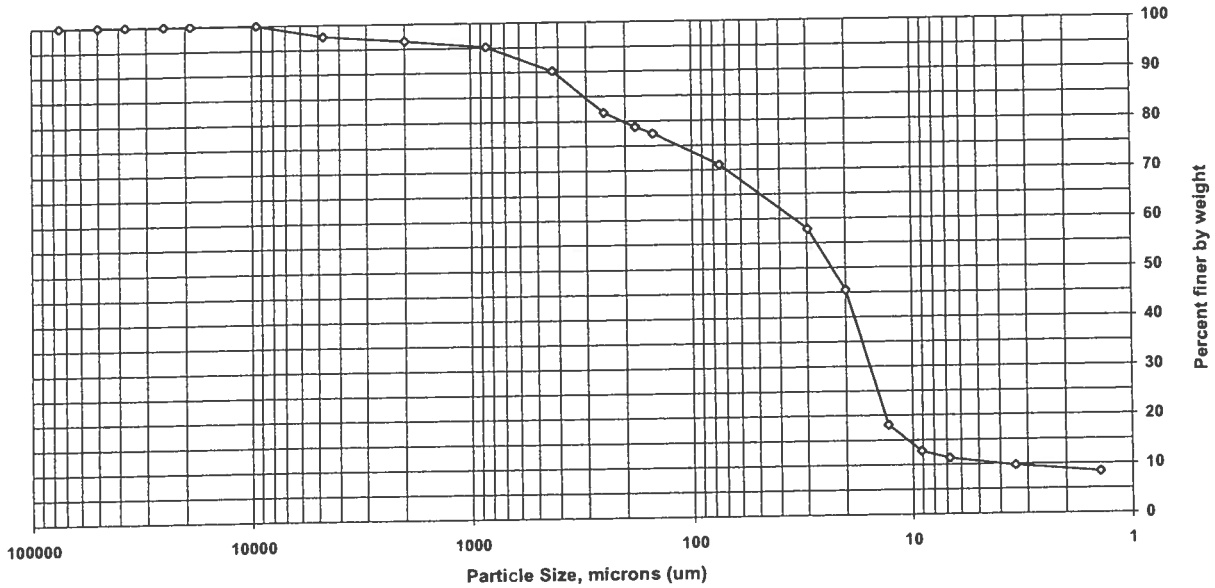
Sample ID: DSY-SD-DUP12-092711
Lab ID: 200-7324-A-11

Percent Solids: 54.8%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.6	2.4
#10	2000	96.6	1.0
#20	850	95.2	1.4
#40	425	90.2	5.0
#60	250	81.7	8.5
#80	180	78.8	2.9
#100	150	77.4	1.4
#200	75	71.0	6.4
Hyd1	29.7	57.8	13.2
Hyd2	20	45.4	12.4
Hyd3	12.9	18.1	27.3
Hyd4	9.1	12.7	5.4
Hyd5	6.8	11.3	1.4
Hyd6	3.4	9.8	1.6
Hyd7	1.4	8.4	1.4

Soil Classification	Percent of sample
Gravel	2.4
Sand	26.6
Coarse Sand	1.0
Medium Sand	6.4
Fine Sand	19.2
Silt	59.7
Clay	11.3

Particle Size of Soils by ASTM D422

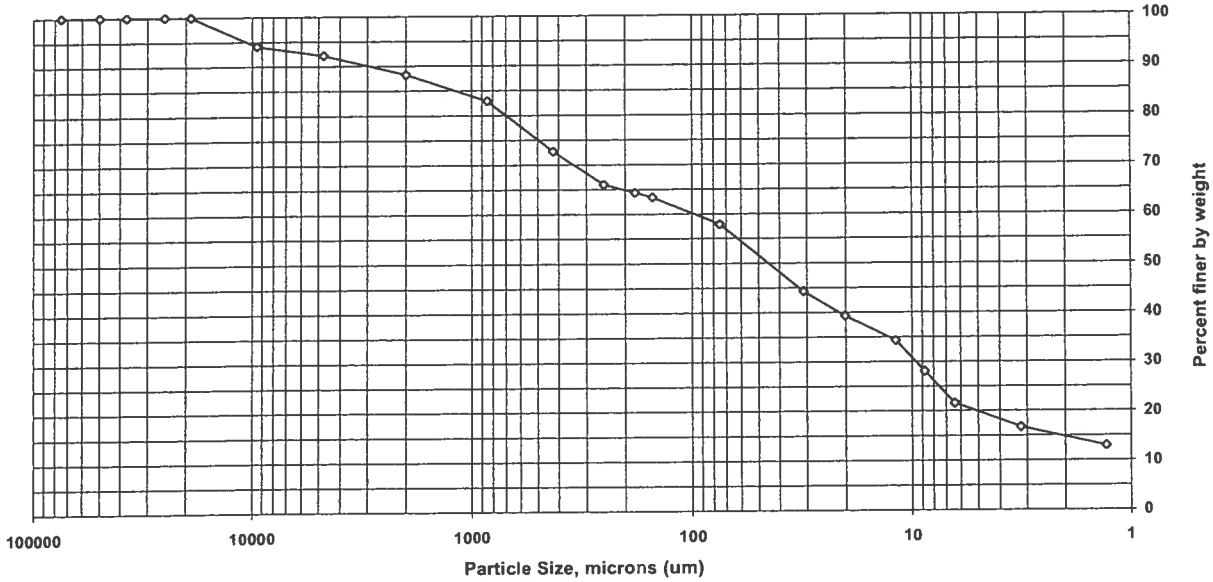
Sample ID: DSY-SD-GP02-0012
Lab ID: 200-7324-A-2DU

Percent Solids: 60.0%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.1	5.9
#4	4750	92.2	1.9
#10	2000	88.3	3.9
#20	850	82.9	5.4
#40	425	72.7	10.2
#60	250	66.0	6.7
#80	180	64.3	1.7
#100	150	63.4	0.9
#200	75	57.9	5.5
Hyd1	31.1	44.3	13.6
Hyd2	20.1	39.3	5.0
Hyd3	11.9	34.3	5.0
Hyd4	8.8	28.1	6.2
Hyd5	6.4	21.6	6.5
Hyd6	3.2	16.7	4.9
Hyd7	1.3	12.9	3.8

Soil Classification	Percent of sample
Gravel	7.8
Sand	34.3
Coarse Sand	3.9
Medium Sand	15.6
Fine Sand	14.8
Silt	36.3
Clay	21.6

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Building Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation. Naval Satation Newport, RI.

Tier II inorganic Data Validation, SDG DSY- 1

2. DATE OF DOCUMENT: 10/17/11 DOCUMENT CONTROL No.: C-Navy-10-11-4610w

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	10/16/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-4610W

Date: October 17, 2011 c: File G02747-4.10(w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DSY-1
Katahdin Analytical services, Inc.
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Total Suspended Solids:

22/Surface water/

DSY-SW-GP05-090111	DSY-SW-GP03-090111
DSY-SW-GP04-090111	DSY-SW-GP07-090111
DSY-SW-GP02-090111	DSY-SW-GP06-090111
DSY-SW-GP08-090111	DSY-SW-GP09-090111
DSY-SW-GP10-090111	DSY-SW-GP01-090111
DSY-SW-DUP01-090111	DSY-SW-GP07-090611
DSY-SW-GP08-090611	DSY-SW-GP09-090611
DSY-SW-GP05-090611	DSY-SW-GP01-090611
DSY-SW-GP02-090611	DSY-SW-GP04-090611
DSY-SW-GP10-090611	DSY-SW-GP06-090611
DSY-SW-GP03-090611	DSY-SW-DUP02-090611

Field duplicates: DSY-SW-GP10-090111/ DSY-SW-DUP01-090111
DSY-SW-GP09-090611/ DSY-SW-DUP02-090611

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the total suspended solids (TSS) analytical data for the samples in this SDG. These surface water samples were collected as part of the marine sediment data gaps investigation on September 1 and 6, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TSS analysis was performed according to the Standard Method 2540 D. The project specific criteria listed in the site SAP were applied for validation of the data. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Holding Times

* • Calibration Verification
* • Laboratory Blank Analyses
• Laboratory Duplicate Results
* • Laboratory Control Sample Results
• Field Duplicate Precision
* • Limits of Detection

* All quality control criteria were met for this parameter.

Laboratory Duplicate Results

The following table summarizes the TSS results which exceed the QC limits of relative percent difference (RPD) ≤ 20% and absolute difference ≤ LOQ (4 mg/L):

Sample Number	TSS Sample (mg/L)	TSS Duplicate (mg/L)	RPD	Absolute Difference	Action	
					(+)	NDs
DSY-SW-GP05-090111	19	24	24	5	J	
DSY-SW-GP07-090611	8.4	15	55	6.6	J	

The positive TSS results in all the surface water samples are estimated (J) due to poor laboratory duplicate precision.

Although the results of the laboratory duplicate analysis exceeded the QC limits, the project precision goals are not impacted since there are no project action limits (PALs) for this parameter. The positive TSS results for all the surface water samples are usable as estimated values for which the bias is indeterminate.

Field Duplicate Precision

The following table summarizes the TSS results which exceed the QC limits of RPD ≤ 30% and absolute difference ≤ 2x LOQ (8 mg/L) in the analysis of field duplicate pair DSY-SW-GP09-090611/ DSY-SW-DUP02-090611:

Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD	Absolute Difference	Action	
					(+)	NDs
TSS	35	12	98	23	J	

The positive TSS results in all the surface water samples are estimated (J) due to poor field duplicate precision.

Although the results of the field duplicate analysis exceeded the QC limits, the project precision goals are not impacted since there is no PAL for this parameter. The positive TSS results for all the surface water samples are usable as estimated values for which the bias is indeterminate.

Limits of Detection

One positive result (DSY-SW-GP01-090611) was below the limit of quantitation (LOQ) and above the method detection limit (MDL) and was, therefore, qualified as estimated (J) due to uncertainty below the LOQ. Project action limits would be evaluated for non-detected results only (reported at the limit of detection [LOD]); however, there are no PALs for TSS, and all surface water results for this SDG are reported as positive values.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to precision were met for the TSS data set. The positive TSS results were qualified as estimated in all the surface samples due to poor laboratory and field duplicate precision. Although specific QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values.

The project goals with respect to accuracy, sensitivity, and laboratory completeness were met for the TSS data set. Data usability was not impacted with regards to accuracy, sensitivity, and laboratory completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02747	NSAMPLE	DSY-SW-DUP01-090111			DSY-SW-DUP02-090611			DSY-SW-GP01-090111			DSY-SW-GP01-090611		
SDG: DSY-1	LAB_ID	SE5568-11			SE5596-11			SE5568-10			SE5596-5		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011			9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	FD			FD			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF	DSY-SW-GP10-090111			DSY-SW-GP09-090611								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		5.2	J	FG	12	J	FG	8	J	FG	2	J	FGP

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP02-090111			DSY-SW-GP02-090611			DSY-SW-GP03-090111			DSY-SW-GP03-090611		
SDG: DSY-1	LAB_ID	SE5568-5			SE5596-6			SE5568-2			SE5596-10		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011			9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		6.4	J	FG	6.8	J	FG	9.6	J	FG	7.6	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP04-090111			DSY-SW-GP04-090611			DSY-SW-GP05-090111			DSY-SW-GP05-090611		
SDG: DSY-1	LAB_ID	SE5568-3			SE5596-7			SE5568-1			SE5596-4		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011			9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		26	J	FG	6.4	J	FG	19	J	FG	5.6	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP06-090111			DSY-SW-GP06-090611			DSY-SW-GP07-090111			DSY-SW-GP07-090611		
SDG: DSY-1	LAB_ID	SE5568-6			SE5596-9			SE5568-4			SE5596-1		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011			9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		7.6	J	FG	4.4	J	FG	13	J	FG	8.4	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP08-090111			DSY-SW-GP08-090611			DSY-SW-GP09-090111			DSY-SW-GP09-090611		
SDG: DSY-1	LAB_ID	SE5568-7			SE5596-2			SE5568-8			SE5596-3		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011			9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		12	J	FG	9.2	J	FG	12	J	FG	35	J	FG

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP10-090111			DSY-SW-GP10-090611		
SDG: DSY-1	LAB_ID	SE5568-9			SE5596-8		
FRACTION: MISC	SAMP_DATE	9/1/2011			9/6/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		4.4	J	FG	8	J	FG

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61, Building Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation. Naval Satation Newport, RI.

Tier II inorganic Data Validation, SDG DSY- 2

2. DATE OF DOCUMENT: 10/17/11 DOCUMENT CONTROL No.: C-Navy-10-11-4611 W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Franke							AF	10/16/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-10-11-4611W

Date: October 17, 2011 c: File G02747-4.10(w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Inorganic Data Validation, SDG DSY-2
Katahdin Analytical services, Inc.
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Total Suspended Solids:

11/Surface water/	DSY-SW-GP01-091711	DSY-SW-GP02-091711
	DSY-SW-GP03-091711	DSY-SW-GP04-091711
	DSY-SW-GP05-091711	DSY-SW-GP06-091711
	DSY-SW-GP07-091711	DSY-SW-GP08-091711
	DSY-SW-GP09-091711	DSY-SW-GP10-091711
	DSY-SW-DUP03-091711	

Field duplicates: DSY-SW-GP04-091711/ DSY-SW-DUP03-091711

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the total suspended solids (TSS) analytical data for the samples in this SDG. These surface water samples were collected as part of the marine sediment data gaps investigation on September 17, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The TSS analysis was performed according to the Standard Method 2540 D. The project specific criteria listed in the site SAP were applied for validation of the data. The data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

* • Laboratory Data Completeness
* • Holding Times
* • Calibration Verification
* • Laboratory Blank Analyses
* • Laboratory Duplicate Results
* • Laboratory Control Sample Results
* • Field Duplicate Precision
* • Limits of Detection

* All quality control criteria were met for this parameter.

Limits of Detection

All surface water results are reported as positive values above the LOQ.

Analytical Data Usability Assessment

The data usability assessment was performed to determine if the analytical data reported by the laboratory for this SDG met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

This is a partial evaluation based on laboratory quality control (QC) and limited field information available at the time of the assessment. A comprehensive project data usability assessment will be performed later when all data are available.

The project goals with respect to accuracy, precision, sensitivity, and laboratory completeness were met for the TSS data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and laboratory completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

PROJ_NO: 02747	NSAMPLE	DSY-SW-DUP03-091711			DSY-SW-GP01-091711			DSY-SW-GP02-091711			DSY-SW-GP03-091711		
SDG: DSY-2	LAB_ID	SE5961-11			SE5961-1			SE5961-2			SE5961-3		
FRACTION: MISC	SAMP_DATE	9/17/2011			9/17/2011			9/17/2011			9/17/2011		
MEDIA: WATER	QC_TYPE	FD			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF	DSY-SW-GP04-091711											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		9.2			9			7.6			7.6		

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP04-091711			DSY-SW-GP05-091711			DSY-SW-GP06-091711			DSY-SW-GP07-091711		
SDG: DSY-2	LAB_ID	SE5961-4			SE5961-5			SE5961-6			SE5961-7		
FRACTION: MISC	SAMP_DATE	9/17/2011			9/17/2011			9/17/2011			9/17/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		6.4			36			8			18		

PROJ_NO: 02747	NSAMPLE	DSY-SW-GP08-091711			DSY-SW-GP09-091711			DSY-SW-GP10-091711		
SDG: DSY-2	LAB_ID	SE5961-8			SE5961-9			SE5961-10		
FRACTION: MISC	SAMP_DATE	9/17/2011			9/17/2011			9/17/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L		
	PCT_SOLIDS									
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL SUSPENDED SOLIDS		7.6			8			6		

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **S. PARKER** **DATE: JANUARY 17, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **RADIOCHEMISTRY DATA VALIDATION – POLONIUM-210**
NAVSTA NEWPORT
SAMPLE DELIVERY GROUP (SDG) – 288297

SAMPLES: 50/Sediment/

DYS-SD-GP01-0102	DYS-SD-GP01-0304	DYS-SD-GP01-0809
DYS-SD-GP01-1112	DYS-SD-GP01-1314	DYS-SD-GP01-1516
DYS-SD-GP01-2223	DYS-SD-GP01-2728	DYS-SD-GP02-0102
DYS-SD-GP02-0708	DYS-SD-GP02-1112	DYS-SD-GP02-1718
DYS-SD-GP03-0102	DYS-SD-GP03-0910	DYS-SD-GP03-1718
DYS-SD-GP03-2122	DYS-SD-GP04-0102	DYS-SD-GP04-0708
DYS-SD-GP04-1415	DYS-SD-GP04-2122	DYS-SD-GP05-0102
DYS-SD-GP05-0809	DYS-SD-GP05-1516	DYS-SD-GP05-2324
DYS-SD-GP06-0102	DYS-SD-GP06-0809	DYS-SD-GP06-1516
DYS-SD-GP06-2324	DYS-SD-GP07-0102	DYS-SD-GP07-0809
DYS-SD-GP07-1516	DYS-SD-GP07-2324	DYS-SD-GP08-0102
DYS-SD-GP08-0607	DYS-SD-GP08-1112	DYS-SD-GP08-1617
DYS-SD-GP08-2021	DYS-SD-GP08-2324	DYS-SD-GP09-0102
DYS-SD-GP09-0506	DYS-SD-GP09-1516	DYS-SD-GP09-2021
DYS-SD-GP09-2627	DYS-SD-GP10-0102	DYS-SD-GP10-0304
DYS-SD-GP10-0809	DYS-SD-GP10-1112	DYS-SD-GP10-1617
DYS-SD-GP10-2122	DYS-SD-GP10-2627	

Overview

The sample set for NAVSTA Newport, SDG 288297, consists of fifty (50) sedimentl environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for Polonium-210. The samples were collected by Tetra Tech on October 11 and 14, 2011 and analyzed by GEL Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. Polonium-210 analyses were conducted using method DOE EML HASL-300, Po-210-RC modified (alpha spectroscopy).

All samples in this SDG were validated to EPA Region I Tier II protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
* • Laboratory Method Blank Analyses
* • Matrix Spike Results
* • Laboratory Duplicate Results

* • Laboratory Control Sample Results
* • Tracer Recoveries
* • Detection Limits
* • Sample Quantitation

* - All quality control criteria were met for this parameter.

Notes

The uncertainty for the sample results are reported at 2–sigma (95% confidence). The EDD does not contain the uncertainty result.

All sample results, with the exception of DYS-SD-GP03-0910, DYS-SD-GP05-0809, DYS-SD-GP05-1516, DYS-SD-GP06-1516 and DYS-SD-GP10-1617, were below the 2-sigma uncertainty and were qualified as nondetected "U".

Sample results for DYS-SD-GP03-0910, DYS-SD-GP05-0809, DYS-SD-GP05-1516, DYS-SD-GP06-1516 and DYS-SD-GP10-1617 were above the 2-sigma error but below the minimal detectable activity (MDA) and were qualified as nondetected "U".

All tracer recoveries, laboratory control standard recoveries and matrix spike recoveries were within laboratory control limits.

All laboratory duplicate mean differences and relative percent differences were within quality control limits.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP01-0102			DYS-SD-GP01-0304			DYS-SD-GP01-0809			DYS-SD-GP01-1112		
SDG: 288297	LAB_ID	288297001			288297002			288297003			288297004		
FRACTION: RAD	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/11/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	43.9			75.0			83.3			83.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		1.29			0.243	U		0.0443	U		0.21	U	

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP01-1314			DYS-SD-GP01-1516			DYS-SD-GP01-2223			DYS-SD-GP01-2728		
SDG: 288297	LAB_ID	288297005			288297006			288297007			288297008		
FRACTION: RAD	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/11/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	77.6			79.8			83.0			60.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		0.357	U		0.201	U		0.0709	U		1.31		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP02-0102			DYS-SD-GP02-0708			DYS-SD-GP02-1112			DYS-SD-GP02-1718		
SDG: 288297	LAB_ID	288297009			288297010			288297011			288297012		
FRACTION: RAD	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/11/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	39.4			43.4			57.5			75.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		3.24			2.5			1.44			0.72		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP03-0102			DYS-SD-GP03-0910			DYS-SD-GP03-1718			DYS-SD-GP03-2122		
SDG: 288297	LAB_ID	288297013			288297014			288297015			288297016		
FRACTION: RAD	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/11/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	61.6			72.6			76.6			75.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		1.81			0.509	U		0.0627	U		0.449	U	

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP04-0102			DYS-SD-GP04-0708			DYS-SD-GP04-1415			DYS-SD-GP04-2122		
SDG: 288297	LAB_ID	288297017			288297018			288297019			288297020		
FRACTION: RAD	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/11/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	47.1			45.4			44.3			41.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		3.09			3.01			1.29			1.81		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP05-0102			DYS-SD-GP05-0809			DYS-SD-GP05-1516			DYS-SD-GP05-2324		
SDG: 288297	LAB_ID	288297021			288297022			288297023			288297024		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	53.6			65.6			81.7			62.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		1.97			0.19	U		0.193	U		1.01		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP06-0102			DYS-SD-GP06-0809			DYS-SD-GP06-1516			DYS-SD-GP06-2324		
SDG: 288297	LAB_ID	288297025			288297026			288297027			288297028		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	41.0			37.5			49.5			53.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		2.18			1.94			0.916	U		1.24		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP07-0102			DYS-SD-GP07-0809			DYS-SD-GP07-1516			DYS-SD-GP07-2324		
SDG: 288297	LAB_ID	288297029			288297030			288297031			288297032		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	40.3			43.9			63.7			67.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		2.76			1.49			0.382	U		0.176	U	

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP08-0102			DYS-SD-GP08-0607			DYS-SD-GP08-1112			DYS-SD-GP08-1617		
SDG: 288297	LAB_ID	288297033			288297038			288297034			288297035		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	38.5			44.5			38.6			41.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		4.79			2.62			2.4			2.03		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP08-2021			DYS-SD-GP08-2324			DYS-SD-GP09-0102			DYS-SD-GP09-0506		
SDG: 288297	LAB_ID	288297036			288297037			288297039			288297040		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	61.0			73.8			56.7			54.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		0.268	U		0.565			2.38			1.53		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP09-1516			DYS-SD-GP09-2021			DYS-SD-GP09-2627			DYS-SD-GP10-0102		
SDG: 288297	LAB_ID	288297041			288297042			288297043			288297044		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	70.6			67.2			63.5			43.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		0.0389	U		0.0706	U		0.233	U		1.41		

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP10-0304			DYS-SD-GP10-0809			DYS-SD-GP10-1112			DYS-SD-GP10-1617		
SDG: 288297	LAB_ID	288297045			288297046			288297047			288297048		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011			10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM			NM			NM		
	UNITS	PCI/G			PCI/G			PCI/G			PCI/G		
	PCT_SOLIDS	52.7			83.1			60.2			77.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		1.7			0.378	U		1.45			0.363	U	

PROJ_NO: 02747	NSAMPLE	DYS-SD-GP10-2122			DYS-SD-GP10-2627		
SDG: 288297	LAB_ID	288297049			288297050		
FRACTION: RAD	SAMP_DATE	10/14/2011			10/14/2011		
MEDIA: RAD	QC_TYPE	NM			NM		
	UNITS	PCI/G			PCI/G		
	PCT_SOLIDS	82.1			82.6		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
POLONIUM-210		0.042	U		0.145	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0102	Project:	TETR00221
Sample ID:	288297001	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.29	+/-0.675	0.491	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.6	(15%-125%)

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0304	Project:	TETR00221
Sample ID:	288297002	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.243	+/-0.388	0.703	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.8	(15%-125%)

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0809	Project:	TETR00221
Sample ID:	288297003	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0443	+/-0.176	0.472	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1112	Project:	TETR00221
Sample ID:	288297004	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.210	+/-0.321	0.562	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			57.3	(15%-125%)

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1314	Project:	TETR00221
Sample ID:	288297005	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:11		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.357	+/-0.371	0.509	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.1	(15%-125%)

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1516	Project:	TETR00221
Sample ID:	288297006	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:14		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.201	+/-0.250	0.349	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			83.6	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-2223	Project:	TETR00221
Sample ID:	288297007	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:17		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0709	+/-0.188	0.448	1.00	pCi/g		MXS2	11/01/11	1927	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			59.5	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-2728	Project:	TETR00221
Sample ID:	288297008	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:20		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.31	+/-0.755	0.795	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.2	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-0102	Project:	TETR00221
Sample ID:	288297009	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:30		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.24	+/-1.12	0.595	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			63.5	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-0708	Project:	TETR00221
Sample ID:	288297010	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:33		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.50	+/-0.961	0.521	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			61.2	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-1112	Project:	TETR00221
Sample ID:	288297011	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:36		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.44	+/-0.676	0.389	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			66.7	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-1718	Project:	TETR00221
Sample ID:	288297012	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:39		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		0.720	+/-0.533	0.590	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			53.0	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-0102	Project:	TETR00221
Sample ID:	288297013	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.81	+/-0.860	0.571	1.00	pCi/g		MXS2	11/01/11	0837	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			57.1	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-0910	Project:	TETR00221
Sample ID:	288297014	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.509	+/-0.494	0.665	1.00	pCi/g		MXS2	11/01/11	0837	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			54.8	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-1718	Project:	TETR00221
Sample ID:	288297015	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0627	+/-0.166	0.396	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			85.7	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-2122	Project:	TETR00221
Sample ID:	288297016	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.449	+/-0.557	0.780	1.00	pCi/g		MXS2	11/01/11	1927	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			38.5	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-0102	Project:	TETR00221
Sample ID:	288297017	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.09	+/-1.28	1.04	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			61.6	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-0708	Project:	TETR00221
Sample ID:	288297018	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.01	+/-1.27	1.32	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.6	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-1415	Project:	TETR00221
Sample ID:	288297019	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.29	+/-0.834	0.937	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			63.0	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-2122	Project:	TETR00221
Sample ID:	288297020	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.81	+/-0.803	0.656	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			76.2	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-0102	Project:	TETR00221
Sample ID:	288297021	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:30		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.97	+/-0.911	0.681	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.0	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-0809	Project:	TETR00221
Sample ID:	288297022	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:33		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.190	+/-0.329	0.615	1.00	pCi/g		LYS1	10/31/11	2224	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			59.0	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-1516	Project:	TETR00221
Sample ID:	288297023	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:36		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.193	+/-0.240	0.335	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.5	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-2324	Project:	TETR00221
Sample ID:	288297024	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:39		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.01	+/-0.644	0.497	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.0	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-0102	Project:	TETR00221
Sample ID:	288297025	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.18	+/-0.936	0.988	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			80.9	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-0809	Project:	TETR00221
Sample ID:	288297026	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.94	+/-0.998	0.966	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.0	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-1516	Project:	TETR00221
Sample ID:	288297027	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.916	+/-0.674	0.946	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			82.9	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-2324	Project:	TETR00221
Sample ID:	288297028	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.24	+/-0.675	0.666	1.00	pCi/g		LYS1	10/28/11	0913	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			77.5	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-0102	Project:	TETR00221
Sample ID:	288297029	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:20		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.76	+/-1.12	0.843	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			68.9	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-0809	Project:	TETR00221
Sample ID:	288297030	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:23		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.49	+/-0.784	0.710	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.2	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-1516	Project:	TETR00221
Sample ID:	288297031	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:26		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.382	+/-0.453	0.706	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			60.9	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-2324	Project:	TETR00221
Sample ID:	288297032	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:29		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.176	+/-0.305	0.570	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-0102	Project:	TETR00221
Sample ID:	288297033	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:40		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		4.79	+/-1.53	0.896	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			64.5	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-0607	Project:	TETR00221
Sample ID:	288297038	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:55		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.62	+/-0.868	0.408	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			80.3	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-1112	Project:	TETR00221
Sample ID:	288297034	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:43		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.40	+/-0.935	0.629	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.5	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-1617	Project:	TETR00221
Sample ID:	288297035	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:46		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.03	+/-0.842	0.534	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.3	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-2021	Project:	TETR00221
Sample ID:	288297036	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:49		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.268	+/-0.297	0.436	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.6	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-2324	Project:	TETR00221
Sample ID:	288297037	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:52		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		0.565	+/-0.435	0.474	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.2	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-0102	Project:	TETR00221
Sample ID:	288297039	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:15		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.38	+/-0.874	0.496	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			77.6	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-0506	Project:	TETR00221
Sample ID:	288297040	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:18		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.53	+/-0.606	0.450	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			79.1	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-1516	Project:	TETR00221
Sample ID:	288297041	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:21		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0389	+/-0.370	0.943	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			55.0	(15%-125%)

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-2021	Project:	TETR00221
Sample ID:	288297042	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:24		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0706	+/-0.187	0.445	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.2	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-2627	Project:	TETR00221
Sample ID:	288297043	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:27		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.233	+/-0.357	0.625	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			70.9	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0102	Project:	TETR00221
Sample ID:	288297044	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:40		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.41	+/-0.898	0.917	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.6	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0304	Project:	TETR00221
Sample ID:	288297045	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:43		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.70	+/-0.726	0.436	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0809	Project:	TETR00221
Sample ID:	288297046	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:46		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.378	+/-0.396	0.481	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-1112	Project:	TETR00221
Sample ID:	288297047	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:49		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.45	+/-0.842	0.593	1.00	pCi/g		HAKB	11/04/11	1059	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			49.8	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-1617	Project:	TETR00221
Sample ID:	288297048	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:52		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.363	+/-0.353	0.475	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.7	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-2122	Project:	TETR00221
Sample ID:	288297049	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:55		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.042	+/-0.167	0.448	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.8	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-2627	Project:	TETR00221
Sample ID:	288297050	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:58		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.145	+/-0.272	0.528	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.4	(15%-125%)

APPENDIX C
SUPPORT DOCUMENTATION

Receipt Narrative
for
Tetra Tech NUS, Inc.
SDG: 288297

November 07, 2011

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on October 18, 2011 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
288297001	DYS-SD-GP01-0102
288297002	DYS-SD-GP01-0304
288297003	DYS-SD-GP01-0809
288297004	DYS-SD-GP01-1112
288297005	DYS-SD-GP01-1314
288297006	DYS-SD-GP01-1516
288297007	DYS-SD-GP01-2223
288297008	DYS-SD-GP01-2728
288297009	DYS-SD-GP02-0102
288297010	DYS-SD-GP02-0708
288297011	DYS-SD-GP02-1112
288297012	DYS-SD-GP02-1718
288297013	DYS-SD-GP03-0102
288297014	DYS-SD-GP03-0910
288297015	DYS-SD-GP03-1718
288297016	DYS-SD-GP03-2122
288297017	DYS-SD-GP04-0102
288297018	DYS-SD-GP04-0708
288297019	DYS-SD-GP04-1415
288297020	DYS-SD-GP04-2122
288297021	DYS-SD-GP05-0102
288297022	DYS-SD-GP05-0809
288297023	DYS-SD-GP05-1516
288297024	DYS-SD-GP05-2324
288297025	DYS-SD-GP06-0102
288297026	DYS-SD-GP06-0809
288297027	DYS-SD-GP06-1516
288297028	DYS-SD-GP06-2324
288297029	DYS-SD-GP07-0102

288297030	DYS-SD-GP07-0809
288297031	DYS-SD-GP07-1516
288297032	DYS-SD-GP07-2324
288297033	DYS-SD-GP08-0102
288297034	DYS-SD-GP08-1112
288297035	DYS-SD-GP08-1617
288297036	DYS-SD-GP08-2021
288297037	DYS-SD-GP08-2324
288297038	DYS-SD-GP08-0607
288297039	DYS-SD-GP09-0102
288297040	DYS-SD-GP09-0506
288297041	DYS-SD-GP09-1516
288297042	DYS-SD-GP09-2021
288297043	DYS-SD-GP09-2627
288297044	DYS-SD-GP10-0102
288297045	DYS-SD-GP10-0304
288297046	DYS-SD-GP10-0809
288297047	DYS-SD-GP10-1112
288297048	DYS-SD-GP10-1617
288297049	DYS-SD-GP10-2122
288297050	DYS-SD-GP10-2627

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

Hope Taylor for
Ann Skradski
Project Manager

Radiochemistry Case Narrative
Tetra Tech NUS, Inc. (TETR)
SDG 288297

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1151771
Prep Batch Number:	1151704

Sample ID	Client ID
288297001	DYS-SD-GP01-0102
288297002	DYS-SD-GP01-0304
288297003	DYS-SD-GP01-0809
288297004	DYS-SD-GP01-1112
288297005	DYS-SD-GP01-1314
288297006	DYS-SD-GP01-1516
288297007	DYS-SD-GP01-2223
288297008	DYS-SD-GP01-2728
288297009	DYS-SD-GP02-0102
288297010	DYS-SD-GP02-0708
288297011	DYS-SD-GP02-1112
288297012	DYS-SD-GP02-1718
288297013	DYS-SD-GP03-0102
288297014	DYS-SD-GP03-0910
288297015	DYS-SD-GP03-1718
288297016	DYS-SD-GP03-2122
288297017	DYS-SD-GP04-0102
288297018	DYS-SD-GP04-0708
288297019	DYS-SD-GP04-1415
288297020	DYS-SD-GP04-2122
1202512206	Method Blank (MB)
1202512207	288297001(DYS-SD-GP01-0102) Sample Duplicate (DUP)
1202512208	288297001(DYS-SD-GP01-0102) Matrix Spike (MS)
1202512209	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 288297001 (DYS-SD-GP01-0102).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 288297016 (DYS-SD-GP03-2122) was recounted due to high MDC. The recount is reported. Sample 288297007 (DYS-SD-GP01-2223) was recounted due to a peak shift. The recount is reported. Samples 1202512207 (DYS-SD-GP01-0102), 288297004 (DYS-SD-GP01-1112), 288297007 (DYS-SD-GP01-2223), 288297010 (DYS-SD-GP02-0708), 288297012 (DYS-SD-GP02-1718), 288297013 (DYS-SD-GP03-0102) and 288297014 (DYS-SD-GP03-0910) were given additional clean-up steps and recounted in order to remove suspected interferences. The recounts are reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1151775
Prep Batch Number:	1151710

Sample ID	Client ID
288297021	DYS-SD-GP05-0102
288297022	DYS-SD-GP05-0809
288297023	DYS-SD-GP05-1516
288297024	DYS-SD-GP05-2324
288297025	DYS-SD-GP06-0102
288297026	DYS-SD-GP06-0809
288297027	DYS-SD-GP06-1516
288297028	DYS-SD-GP06-2324
288297029	DYS-SD-GP07-0102
288297030	DYS-SD-GP07-0809
288297031	DYS-SD-GP07-1516
288297032	DYS-SD-GP07-2324
288297033	DYS-SD-GP08-0102
288297034	DYS-SD-GP08-1112
288297035	DYS-SD-GP08-1617
288297036	DYS-SD-GP08-2021
288297037	DYS-SD-GP08-2324
288297038	DYS-SD-GP08-0607
288297039	DYS-SD-GP09-0102
288297040	DYS-SD-GP09-0506
1202512210	Method Blank (MB)
1202512211	288297021(DYS-SD-GP05-0102) Sample Duplicate (DUP)
1202512212	288297021(DYS-SD-GP05-0102) Matrix Spike (MS)
1202512213	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 288297021 (DYS-SD-GP05-0102).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 1202512211 (DYS-SD-GP05-0102) was recounted due to a peak shift. The recount is reported. Sample 288297022 (DYS-SD-GP05-0809) was given additional clean-up steps and recounted in order to remove suspected interferences. The recount is reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1156276
Prep Batch Number:	1151713

Sample ID	Client ID
288297041	DYS-SD-GP09-1516
288297042	DYS-SD-GP09-2021
288297043	DYS-SD-GP09-2627
288297044	DYS-SD-GP10-0102
288297045	DYS-SD-GP10-0304
288297046	DYS-SD-GP10-0809
288297047	DYS-SD-GP10-1112
288297048	DYS-SD-GP10-1617
288297049	DYS-SD-GP10-2122
288297050	DYS-SD-GP10-2627
1202523258	Method Blank (MB)
1202523259	288297042(DYS-SD-GP09-2021) Sample Duplicate (DUP)
1202523260	288297042(DYS-SD-GP09-2021) Matrix Spike (MS)
1202523261	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volumes in this batch.

Designated QC
The following sample was used for QC: 288297042 (DYS-SD-GP09-2021).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Samples were reprepped due to high recovery. The re-analysis is being reported. Sample 288297047 (DYS-SD-GP10-1112) was given additional clean-up steps and recounted in order to remove suspected interferences. The recount is reported. Sample 1202523258 (MB) was recounted due to suspected interference. The recount is being reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TETR038 Tetra Tech NUS, Inc.

Client SDG: 288297 GEL Work Order: 288297

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Kate Gellatly**

Date: 07 NOV 2011 **Title: Analyst I**

HOLDTIME

PROJ_NO 02747

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
288297	RAD	PCI/G	DYS-SD-GP02-1718	288297012	NM	10/11/2011	10/25/2011	10/31/2011	14	6	20
288297	RAD	PCI/G	DYS-SD-GP01-0102	288297001	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP05-1516	288297023	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP05-0809	288297022	NM	10/14/2011	10/21/2011	10/31/2011	7	10	17
288297	RAD	PCI/G	DYS-SD-GP05-0102	288297021	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP04-2122	288297020	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP04-1415	288297019	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP04-0708	288297018	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP04-0102	288297017	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP03-2122	288297016	NM	10/11/2011	10/25/2011	11/01/2011	14	7	21
288297	RAD	PCI/G	DYS-SD-GP03-1718	288297015	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP06-0102	288297025	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP03-0102	288297013	NM	10/11/2011	10/25/2011	11/01/2011	14	7	21
288297	RAD	PCI/G	DYS-SD-GP06-0809	288297026	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP02-1112	288297011	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP02-0708	288297010	NM	10/11/2011	10/25/2011	10/31/2011	14	6	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
288297	RAD	PCI/G	DYS-SD-GP02-0102	288297009	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP01-2728	288297008	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP01-2223	288297007	NM	10/11/2011	10/25/2011	11/01/2011	14	7	21
288297	RAD	PCI/G	DYS-SD-GP01-1516	288297006	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP01-1314	288297005	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP01-1112	288297004	NM	10/11/2011	10/25/2011	10/31/2011	14	6	20
288297	RAD	PCI/G	DYS-SD-GP01-0809	288297003	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP01-0304	288297002	NM	10/11/2011	10/25/2011	10/28/2011	14	3	17
288297	RAD	PCI/G	DYS-SD-GP03-0910	288297014	NM	10/11/2011	10/25/2011	11/01/2011	14	7	21
288297	RAD	PCI/G	DYS-SD-GP08-2021	288297036	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP10-2122	288297049	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP10-1617	288297048	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP10-1112	288297047	NM	10/14/2011	11/01/2011	11/04/2011	18	3	21
288297	RAD	PCI/G	DYS-SD-GP10-0809	288297046	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP10-0304	288297045	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP10-0102	288297044	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP09-2627	288297043	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP09-2021	288297042	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP09-1516	288297041	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
288297	RAD	PCI/G	DYS-SD-GP09-0506	288297040	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP05-2324	288297024	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP08-2324	288297037	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP10-2627	288297050	NM	10/14/2011	11/01/2011	11/03/2011	18	2	20
288297	RAD	PCI/G	DYS-SD-GP08-1617	288297035	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP08-1112	288297034	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP08-0607	288297038	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP08-0102	288297033	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP07-2324	288297032	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP07-1516	288297031	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP07-0809	288297030	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP07-0102	288297029	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP06-2324	288297028	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP06-1516	288297027	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14
288297	RAD	PCI/G	DYS-SD-GP09-0102	288297039	NM	10/14/2011	10/21/2011	10/28/2011	7	7	14

Page: 1 of 5
Project #: 112002747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number: 288297.1

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #: (978) 474-8400
Project/Site Name: CTO WE61 Fax #: (978) 474-8499
Address: 250 Andover St. Suite 200, Wilmington MA. 01887
Collected by: Michael Horton Send Results To: Steve Parker

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Pb-210	<-- Preservative Type (6)	Comments
DSY-SD-GP01-0102	10/11/11	1100			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP01-0304		1103						1	X		
DSY-SD-GP01-0809		1106						1	X		
DSY-SD-GP01-1112		1109						1	X		
DSY-SD-GP01-1314		1111						1	X		
DSY-SD-GP01-1516		1114						1	X		
DSY-SD-GP01-2223		1117						1	X		
DSY-SD-GP01-2728		1120						1	X		
DSY-SD-GP02-0102		1130						1	X		
DSY-SD-GP02-0708		1133						1	X		

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: Eastern / Central / Mountain / Pacific / Other ____

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		10/17/11	1000	FedEx		
2				Shanta Whitelo	10/18/11	9:45
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5 & 6 C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 2 of 3
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:
Project/Site Name: CTO WE 61 Fax #:
Address:
Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Po-210	<-- Preservative Type (6)
DSY-SD-GP02-1112	10/11/11	1136			SED			1	X	
DSY-SD-GP02-1718		1139						1	X	
DSY-SD-GP03-0102		1200						1	X	
DSY-SD-GP03-0910		1203	1200 container					1	X	
DSY-SD-GP03-1718		1206						1	X	
DSY-SD-GP03-2122		1209						1	X	
DSY-SD-GP04-0102		1300						1	X	
DSY-SD-GP04-0708		1303						1	X	
DSY-SD-GP04-1415		1306						1	X	
DSY-SD-GP04-2122	↓	1309			↓			1	X	

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	10/17/11	1000	1 FedEx		
2			2	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5&L ____ C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 3 of 5
Project #: 112609747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:
Project/Site Name: CTO WE 61 Fax #:
Address:
Collected by: [signature] Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PO-210	<-- Preservative Type (6)
DSY-SD-GP05-0102	10/14/11	0730			SED			1	X	
DSY-SD-GP05-0809		0733						1	X	
DSY-SD-GP05-1516		0736						1	X	
DSY-SD-GP05-2324		0739						1	X	
DSY-SD-GP06-0102		0900						1	X	
DSY-SD-GP06-0809		0903						1	X	
DSY-SD-GP06-1516		0906						1	X	
DSY-SD-GP06-2324		0909						1	X	
DSY-SD-GP07-0102		0920						1	X	
DSY-SD-GP07-0809		0923						1	X	

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	10/17/11	1000	1 FedEx		
2			2 [signature]	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - 3, *6010B/7470A* - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5 & 6 C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 4 of 5
Project #: 112G02747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:
Project/Site Name: CTO WE 61 Fax #:
Address:
Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Pb-210	<-- Preservative Type (6)
DSY-SD-GP07-1516	10/14/11	0926			SED			1	X	
DSY-SD-GP07-2324		0929						1	X	
DSY-SD-GP08-0102		0940						1	X	
DSY-SD-GP08-1112		0943						1	X	
DSY-SD-GP08-1617		0946						1	X	
DSY-SD-GP08-2021		0949						1	X	
DSY-SD-GP08-2324		0952						1	X	
DSY-SD-GP08-0607		0955						1	X	
DSY-SD-GP09-0102		1015						1	X	
DSY-SD-GP09-0506		1018						1	X	

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	10/17/11	1000	1 FedEx		
2			2	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5.6 C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 5 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #: SEE PAGE ONE

Project/Site Name: CTO WE 61

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PO-210	<-- Preservative Type (6)
DSY-SD-GP09-1516	10/14/11	1021			SED			1	X	Comments: Note: extra sample is required for sample specific QC
DSY-SD-GP09-2021		1024						1	X	
DSY-SD-GP09-2627		1027						1	X	
DSY-SD-GP10-0102		1040						1	X	
DSY-SD-GP10-0304		1043						1	X	
DSY-SD-GP10-0809		1046						1	X	
DSY-SD-GP10-1112		1049						1	X	
DSY-SD-GP10-1617		1052						1	X	
DSY-SD-GP10-2122		1055						1	X	
DSY-SD-GP10-2627	↓	1058			↓			1	X	

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone: Eastern Pacific Central Other ____ Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	10/17/11	1000	1 FedEx		
2			2	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: 5°C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

QC Summary

Report Date: November 7, 2011
Page 1 of 2

Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Dr.
Pittsburgh, Pennsylvania

Contact: Ms. Tobrena Sedlmyer

Workorder: 288297

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1151771										
QC1202512207 288297001 DUP										
Polonium-210		1.29		1.27	pCi/g	1.12		(0% - 100%)	MXS2	11/01/11 08:37
Uncertainty		+/-0.675		+/-0.634						
QC1202512209 LCS										
Polonium-210	13.1			13.6	pCi/g		104	(75%-125%)		10/28/11 15:05
Uncertainty				+/-2.24						
QC1202512206 MB										
Polonium-210			U	0.0472	pCi/g					10/28/11 15:05
Uncertainty				+/-0.253						
QC1202512208 288297001 MS										
Polonium-210	15.5	1.29		19.9	pCi/g		121	(75%-125%)		10/28/11 15:05
Uncertainty		+/-0.675		+/-2.90						
Batch 1151775										
QC1202512211 288297021 DUP										
Polonium-210		1.97		2.31	pCi/g	16.0		(0% - 100%)	LYS1	11/01/11 14:37
Uncertainty		+/-0.911		+/-0.828						
QC1202512213 LCS										
Polonium-210	13.8			16.7	pCi/g		121	(75%-125%)		10/28/11 15:04
Uncertainty				+/-1.97						
QC1202512210 MB										
Polonium-210			U	0.209	pCi/g					10/28/11 15:04
Uncertainty				+/-0.255						
QC1202512212 288297021 MS										
Polonium-210	17.4	1.97		20.0	pCi/g		103	(75%-125%)		10/28/11 15:04
Uncertainty		+/-0.911		+/-2.39						
Batch 1156276										
QC1202523259 288297042 DUP										
Polonium-210	U	0.0706	U	0.493	pCi/g	0.00			N/A HAKB	11/03/11 08:11
Uncertainty		+/-0.187		+/-0.479						
QC1202523261 LCS										
Polonium-210	9.65			9.71	pCi/g		101	(75%-125%)		11/03/11 08:11
Uncertainty				+/-1.54						
QC1202523258 MB										
Polonium-210			U	0.052	pCi/g					11/03/11 13:33
Uncertainty				+/-0.138						
QC1202523260 288297042 MS										
Polonium-210	16.2 U	0.0706		16.8	pCi/g		104	(75%-125%)		11/03/11 08:11
Uncertainty		+/-0.187		+/-2.58						

Notes:
The Qualifiers in this report are defined as follows:

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT Duplicates	JOB NUMBER		
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

Sample Dys-SD-GP01-0102

orig 1.29 ± 0.675 pCi/g at 1.96 sigma
1.29 ± 0.344 pCi/g at 1.0 sigma

Dup 1.27 ± 0.634 pCi/g at 1.96 sigma
1.27 ± 0.323 pCi/g at 1.0 sigma

mean diff $\frac{|1.29-1.27|}{\sqrt{(0.344)^2+(0.323)^2}}$ RPD $\frac{|1.29-1.27|}{1.28} \times 100$

$= 0.04$ $= 1.56\%$

Sample Dys-SD-GP05-0102

orig 1.97 ± 0.911 pCi/g at 1.96 sigma
1.97 ± 0.465 pCi/g at 1.0 sigma

Dup 2.31 ± 0.828 pCi/g at 1.96 sigma
2.31 ± 0.422 pCi/g at 1.0 sigma

mean diff $\frac{|1.97-2.31|}{\sqrt{(0.465)^2+(0.422)^2}}$ RPD $\frac{|1.97-2.31|}{2.14} \times 100$

$= 0.541$ $= 15.4\%$

Sample Dys-SD-GP09-2021
original result - nondetect
dup result - nondetect

Review of Alpha Spectrometer QA results (Daily checks) 28-OCT-2011 12:28:49.59

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ~~ASSURANCE~~ PARAMETERS

NOT USED

	Detector	Parameter	Flag
28-OCT-2011	13	PSENERGY-5000	Above
28-OCT-2011	23	PSENERGY-5000	Above
28-OCT-2011	31	PSFWHM-5000	Below
28-OCT-2011	31	PSCENTRD-5000	Below
28-OCT-2011	32	PSFWHM-5000	Below
28-OCT-2011	32	PSENERGY-5000	Above
28-OCT-2011	32	PSCENTRD-5000	Below
28-OCT-2011	32	PSCTSS-5000	Below
28-OCT-2011	34	PSFWHM-5000	Below
28-OCT-2011	34	PSENERGY-5000	Below
28-OCT-2011	34	PSCENTRD-5000	Below
28-OCT-2011	34	PSCTSS-5000	Below
28-OCT-2011	41	PSENERGY-5000	Above
28-OCT-2011	48	PSFWHM-5000	Below
28-OCT-2011	48	PSCENTRD-5000	Below
28-OCT-2011	48	PSCTSS-5000	Below
28-OCT-2011	69	PSENERGY-5000	Above
28-OCT-2011	70	PSFWHM-5000	Below
28-OCT-2011	70	PSENERGY-5000	Above
28-OCT-2011	70	PSCENTRD-5000	Above
28-OCT-2011	70	PSCTSS-5000	Below
28-OCT-2011	102	PSENERGY-5000	Above
28-OCT-2011	107	PSFWHM-5000	Above
28-OCT-2011	107	PSCTSS-5000	Below
28-OCT-2011	111	PSFWHM-5000	Below
28-OCT-2011	111	PSENERGY-5000	Above
28-OCT-2011	111	PSCTSS-5000	Below
28-OCT-2011	112	PSFWHM-5000	Below
28-OCT-2011	112	PSCENTRD-5000	Below
28-OCT-2011	112	PSCTSS-5000	Below
28-OCT-2011	165	PSFWHM-5000	Below
28-OCT-2011	165	PSCTSS-5000	Below
28-OCT-2011	191	PSFWHM-5000	Above

Contam calibs

The following detectors that may not have properly transfered to the QA file

28-OCT-2011	183	may not have run since 28-OCT-2011
28-OCT-2011	184	may not have run since 28-OCT-2011

} out of service

APPROVAL DATE: 10-28-2011 APPROVAL TIME: 1245

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

Report completed at 28-OCT-2011 12:34:52.38

Review of Alpha Spectrometer QA results (Daily checks) 31-OCT-2011 08:33:51.44

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
31-OCT-2011	13	PSENERGY-5000	Above
31-OCT-2011	23	PSFWHM-5000	Above
31-OCT-2011	23	PSENERGY-5000	Above
31-OCT-2011	31	PSFWHM-5000	Below
31-OCT-2011	31	PSCENTRD-5000	Below
31-OCT-2011	32	PSFWHM-5000	Below
31-OCT-2011	32	PSENERGY-5000	Above
31-OCT-2011	32	PSCENTRD-5000	Below
31-OCT-2011	32	PSCTSS-5000	Below
31-OCT-2011	34	PSFWHM-5000	Below
31-OCT-2011	34	PSENERGY-5000	Below
31-OCT-2011	34	PSCENTRD-5000	Below
31-OCT-2011	34	PSCTSS-5000	Below
31-OCT-2011	41	PSENERGY-5000	Above
31-OCT-2011	48	PSFWHM-5000	Below
31-OCT-2011	48	PSCENTRD-5000	Below
31-OCT-2011	48	PSCTSS-5000	Below
31-OCT-2011	69	PSENERGY-5000	Above
31-OCT-2011	70	PSFWHM-5000	Below
31-OCT-2011	70	PSENERGY-5000	Above
31-OCT-2011	70	PSCENTRD-5000	Above
31-OCT-2011	70	PSCTSS-5000	Below
31-OCT-2011	102	PSENERGY-5000	Above
31-OCT-2011	107	PSFWHM-5000	Above
31-OCT-2011	107	PSCTSS-5000	Below
31-OCT-2011	111	PSFWHM-5000	Below
31-OCT-2011	111	PSENERGY-5000	Above
31-OCT-2011	111	PSCTSS-5000	Below
31-OCT-2011	112	PSFWHM-5000	Below
31-OCT-2011	112	PSCENTRD-5000	Below
31-OCT-2011	112	PSCTSS-5000	Below
31-OCT-2011	165	PSFWHM-5000	Above
31-OCT-2011	165	PSENERGY-5000	Above
31-OCT-2011	165	PSCTSS-5000	Below

MD 10/31

31-OCT-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

31-OCT-2011	183	may not have run since 31-OCT-2011
31-OCT-2011	184	may not have run since 31-OCT-2011

APPROVAL DATE: 10/31/11 APPROVAL TIME: 9:55

APPROVED BY: MD PROCEDURE # GL-RAD-I-009

Report completed at 31-OCT-2011 08:36:26.20

Review of Alpha Spectrometer QA results (Daily checks) 1-NOV-2011 13:59:30.49

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag	
1-NOV-2011	13	PSENERGY-5000	Above	
1-NOV-2011	23	PSENERGY-5000	Above	
1-NOV-2011	27	PSENERGY-5000	Above	See NOTE 1
1-NOV-2011	31	PSFWHM-5000	Below	
1-NOV-2011	31	PSCENTRD-5000	Below	
1-NOV-2011	32	PSFWHM-5000	Below	
1-NOV-2011	32	PSENERGY-5000	Above	
1-NOV-2011	32	PSCENTRD-5000	Below	
1-NOV-2011	32	PSCTSS-5000	Below	
1-NOV-2011	34	PSFWHM-5000	Below	
1-NOV-2011	34	PSENERGY-5000	Below	
1-NOV-2011	34	PSCENTRD-5000	Below	
1-NOV-2011	34	PSCTSS-5000	Below	
1-NOV-2011	41	PSENERGY-5000	Above	
1-NOV-2011	48	PSFWHM-5000	Below	
1-NOV-2011	48	PSCENTRD-5000	Below	
1-NOV-2011	48	PSCTSS-5000	Below	
1-NOV-2011	69	PSENERGY-5000	Above	
1-NOV-2011	70	PSFWHM-5000	Below	
1-NOV-2011	70	PSENERGY-5000	Above	
1-NOV-2011	70	PSCENTRD-5000	Above	
1-NOV-2011	70	PSCTSS-5000	Below	
1-NOV-2011	102	PSENERGY-5000	Above	
1-NOV-2011	107	PSFWHM-5000	Above	
1-NOV-2011	107	PSCTSS-5000	Below	
1-NOV-2011	111	PSFWHM-5000	Below	
1-NOV-2011	111	PSENERGY-5000	Above	
1-NOV-2011	111	PSCTSS-5000	Below	
1-NOV-2011	112	PSFWHM-5000	Below	
1-NOV-2011	112	PSCENTRD-5000	Below	
1-NOV-2011	112	PSCTSS-5000	Below	
1-NOV-2011	165	PSFWHM-5000	Above	
1-NOV-2011	165	PSENERGY-5000	Above	

1-NOV-2011 191 PSFWHM-5000 Above

The following detectors that may not have properly transfered to the QA file

1-NOV-2011 183 may not have run since 1-NOV-2011
1-NOV-2011 184 may not have run since 1-NOV-2011
} out of service

APPROVAL DATE: 11-1-2011 APPROVAL TIME: 1415

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

Report completed at 1-NOV-2011 14:02:02.13

Note 1: Detector Daily passed on previous day. Sample results counted since last passing daily have been verified.
GD 11/1/11

Review of Alpha Spectrometer QA results (Daily checks) 3-NOV-2011 13:22:49.71

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
3-NOV-2011	13	PSENERGY-5000	Above
3-NOV-2011	23	PSENERGY-5000	Above
3-NOV-2011	27	PSENERGY-5000	Above
3-NOV-2011	31	PSFWHM-5000	Below
3-NOV-2011	31	PSCENTRD-5000	Below
3-NOV-2011	32	PSFWHM-5000	Below
3-NOV-2011	32	PSENERGY-5000	Above
3-NOV-2011	32	PSCENTRD-5000	Below
3-NOV-2011	32	PSCTSS-5000	Below
3-NOV-2011	34	PSFWHM-5000	Below
3-NOV-2011	34	PSENERGY-5000	Below
3-NOV-2011	34	PSCENTRD-5000	Below
3-NOV-2011	34	PSCTSS-5000	Below
3-NOV-2011	41	PSENERGY-5000	Above
3-NOV-2011	48	PSFWHM-5000	Below
3-NOV-2011	48	PSCENTRD-5000	Below
3-NOV-2011	48	PSCTSS-5000	Below
3-NOV-2011	69	PSENERGY-5000	Above
3-NOV-2011	70	PSFWHM-5000	Below
3-NOV-2011	70	PSENERGY-5000	Above
3-NOV-2011	70	PSCENTRD-5000	Above
3-NOV-2011	70	PSCTSS-5000	Below
3-NOV-2011	102	PSENERGY-5000	Above
3-NOV-2011	107	PSFWHM-5000	Above
3-NOV-2011	107	PSCTSS-5000	Below
3-NOV-2011	111	PSFWHM-5000	Below
3-NOV-2011	111	PSENERGY-5000	Above
3-NOV-2011	111	PSCTSS-5000	Below
3-NOV-2011	112	PSFWHM-5000	Below
3-NOV-2011	112	PSCENTRD-5000	Below
3-NOV-2011	112	PSCTSS-5000	Below
3-NOV-2011	165	PSFWHM-5000	Above
3-NOV-2011	165	PSENERGY-5000	Above

3-NOV-2011	165	PSCTSS-5000	Below
3-NOV-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

3-NOV-2011	183	may not have run since 3-NOV-2011
3-NOV-2011	184	may not have run since 3-NOV-2011

} out of service

APPROVAL DATE: 11-3-2011 APPROVAL TIME: 1345

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

Report completed at 3-NOV-2011 13:25:48.38

Review of Alpha Spectrometer QA results (Daily checks) 4-NOV-2011 18:32:07.88

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
4-NOV-2011	31	PSFWHM-5000	Below
4-NOV-2011	31	PSCENTRD-5000	Below
4-NOV-2011	32	PSFWHM-5000	Below
4-NOV-2011	32	PSENERGY-5000	Above
4-NOV-2011	32	PSCENTRD-5000	Below
4-NOV-2011	32	PSCTSS-5000	Below
4-NOV-2011	34	PSFWHM-5000	Below
4-NOV-2011	34	PSENERGY-5000	Below
4-NOV-2011	34	PSCENTRD-5000	Below
4-NOV-2011	34	PSCTSS-5000	Below
4-NOV-2011	41	PSENERGY-5000	Above
4-NOV-2011	48	PSFWHM-5000	Below
4-NOV-2011	48	PSCENTRD-5000	Below
4-NOV-2011	48	PSCTSS-5000	Below
4-NOV-2011	69	PSENERGY-5000	Above
4-NOV-2011	70	PSFWHM-5000	Below
4-NOV-2011	70	PSENERGY-5000	Above
4-NOV-2011	70	PSCENTRD-5000	Above
4-NOV-2011	70	PSCTSS-5000	Below
4-NOV-2011	102	PSENERGY-5000	Above
4-NOV-2011	107	PSFWHM-5000	Above
4-NOV-2011	107	PSCTSS-5000	Below
4-NOV-2011	111	PSFWHM-5000	Below
4-NOV-2011	111	PSENERGY-5000	Above
4-NOV-2011	111	PSCTSS-5000	Below
4-NOV-2011	112	PSFWHM-5000	Below
4-NOV-2011	112	PSCENTRD-5000	Below
4-NOV-2011	112	PSCTSS-5000	Below
4-NOV-2011	165	PSFWHM-5000	Above
4-NOV-2011	165	PSENERGY-5000	Above
4-NOV-2011	165	PSCTSS-5000	Below
4-NOV-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

4-NOV-2011	183	may not have run since 4-NOV-2011
4-NOV-2011	184	may not have run since 4-NOV-2011

} out of service

APPROVAL DATE: 11-4-2011 APPROVAL TIME: 1845

APPROVED BY: [signature] PROCEDURE # GL-RAD-I-009

Report completed at 4-NOV-2011 18:34:56.12

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1151771**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297001	SAMPLE	MXS2	1033	OCT-28-11 15:04:55	DONE		06-OCT-11 07:29
288297002	SAMPLE	MXS2	1036	OCT-28-11 15:04:55	DONE		06-OCT-11 07:30
288297003	SAMPLE	MXS2	1072	OCT-28-11 15:04:57	DONE		12-OCT-11 07:14
288297004	SAMPLE	MXS2	1073	OCT-28-11 15:04:57	DUSE		12-OCT-11 07:14
288297005	SAMPLE	MXS2	1074	OCT-28-11 15:04:57	DONE		12-OCT-11 07:14
288297006	SAMPLE	MXS2	1075	OCT-28-11 15:04:57	DONE		12-OCT-11 07:15
288297007	SAMPLE	MXS2	1076	OCT-28-11 15:04:57	DUSE		12-OCT-11 16:33
288297008	SAMPLE	MXS2	1089	OCT-28-11 15:04:59	DONE		12-OCT-11 07:21
288297009	SAMPLE	MXS2	1090	OCT-28-11 15:04:59	DONE		12-OCT-11 07:21
288297010	SAMPLE	MXS2	1091	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:22
288297011	SAMPLE	MXS2	1092	OCT-28-11 15:04:59	DONE		12-OCT-11 07:22
288297012	SAMPLE	MXS2	1093	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:22
288297013	SAMPLE	MXS2	1094	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:23
288297014	SAMPLE	MXS2	1113	OCT-28-11 15:05:17	DUSE		19-OCT-11 14:52
288297015	SAMPLE	MXS2	1114	OCT-28-11 15:05:18	DONE		19-OCT-11 14:53
288297016	SAMPLE	MXS2	1115	OCT-28-11 15:05:21	DUSE		19-OCT-11 14:53
288297017	SAMPLE	MXS2	1116	OCT-28-11 15:05:22	DONE		19-OCT-11 14:54
288297018	SAMPLE	MXS2	1117	OCT-28-11 15:05:25	DONE		19-OCT-11 14:55
288297019	SAMPLE	MXS2	1118	OCT-28-11 15:05:26	DONE		19-OCT-11 14:55
288297020	SAMPLE	MXS2	1119	OCT-28-11 15:05:28	DONE		19-OCT-11 14:55
1202512206	MB	MXS2	1120	OCT-28-11 15:05:30	DONE		19-OCT-11 14:56
1202512208	MS	MXS2	1122	OCT-28-11 15:05:34	DONE		19-OCT-11 14:56
1202512209	LCS	MXS2	1127	OCT-28-11 15:05:36	DONE		19-OCT-11 14:58
288297004	SAMPLE	MXS2	1038	OCT-31-11 22:24:25	DONE		06-OCT-11 07:31
288297007	SAMPLE	MXS2	1039	OCT-31-11 22:24:25	DUSE		06-OCT-11 07:47
288297010	SAMPLE	MXS2	1040	OCT-31-11 22:24:25	DONE		06-OCT-11 07:32
288297012	SAMPLE	MXS2	1042	OCT-31-11 22:24:25	DONE		06-OCT-11 07:33
288297013	SAMPLE	MXS2	1108	NOV-01-11 08:37:51	DONE		12-OCT-11 07:27
288297014	SAMPLE	MXS2	1109	NOV-01-11 08:37:51	DONE		12-OCT-11 07:28
1202512207	DUP	MXS2	1110	NOV-01-11 08:37:51	DONE		12-OCT-11 07:28
288297016	SAMPLE	MXS2	1033	NOV-01-11 19:27:15	DONE		06-OCT-11 07:29
288297007	SAMPLE	MXS2	1036	NOV-01-11 19:27:15	DONE		06-OCT-11 07:30

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1151775**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297024	SAMPLE	LYS1	1114	OCT-28-11 09:00:09	DONE		19-OCT-11 14:53
288297025	SAMPLE	LYS1	1115	OCT-28-11 09:00:12	DONE		19-OCT-11 14:53
288297026	SAMPLE	LYS1	1116	OCT-28-11 09:00:14	DONE		19-OCT-11 14:54
288297027	SAMPLE	LYS1	1117	OCT-28-11 09:00:16	DONE		19-OCT-11 14:55
288297029	SAMPLE	LYS1	1119	OCT-28-11 09:00:20	DONE		19-OCT-11 14:55
288297030	SAMPLE	LYS1	1120	OCT-28-11 09:00:22	DONE		19-OCT-11 14:56
288297031	SAMPLE	LYS1	1127	OCT-28-11 09:00:25	DONE		19-OCT-11 14:58
288297032	SAMPLE	LYS1	1128	OCT-28-11 09:00:27	DONE		19-OCT-11 14:58
288297033	SAMPLE	LYS1	1129	OCT-28-11 09:00:29	DONE		19-OCT-11 14:59
288297034	SAMPLE	LYS1	1130	OCT-28-11 09:00:31	DONE		19-OCT-11 14:59
288297021	SAMPLE	LYS1	1021	OCT-28-11 09:00:46	DONE		06-OCT-11 07:24
288297022	SAMPLE	LYS1	1022	OCT-28-11 09:00:46	DUSE		06-OCT-11 07:24
288297023	SAMPLE	LYS1	1024	OCT-28-11 09:00:46	DONE		06-OCT-11 07:26
288297028	SAMPLE	LYS1	1118	OCT-28-11 09:13:00	DONE		19-OCT-11 14:55
288297035	SAMPLE	LYS1	1026	OCT-28-11 15:04:54	DONE		06-OCT-11 07:26
288297036	SAMPLE	LYS1	1027	OCT-28-11 15:04:54	DONE		06-OCT-11 07:27
288297037	SAMPLE	LYS1	1028	OCT-28-11 15:04:54	DONE		06-OCT-11 07:27
288297038	SAMPLE	LYS1	1029	OCT-28-11 15:04:54	DONE		06-OCT-11 15:31
288297039	SAMPLE	LYS1	1030	OCT-28-11 15:04:54	DONE		06-OCT-11 07:28
288297040	SAMPLE	LYS1	1037	OCT-28-11 15:04:56	DONE		06-OCT-11 07:31
1202512210	MB	LYS1	1038	OCT-28-11 15:04:56	DONE		06-OCT-11 07:31
1202512212	MS	LYS1	1040	OCT-28-11 15:04:56	DONE		06-OCT-11 07:32
1202512213	LCS	LYS1	1042	OCT-28-11 15:04:56	DONE		06-OCT-11 07:33
288297022	SAMPLE	LYS1	1037	OCT-31-11 22:24:25	DONE		06-OCT-11 07:31
1202512211	DUP	LYS1	1029	NOV-01-11 14:37:19	DONE		06-OCT-11 15:31

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1156276**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297041	SAMPLE	HAKB	1123	NOV-03-11 08:10:51	DONE		19-OCT-11 14:58
288297042	SAMPLE	HAKB	1124	NOV-03-11 08:10:52	DONE		19-OCT-11 14:58
288297043	SAMPLE	HAKB	1125	NOV-03-11 08:10:54	DONE		19-OCT-11 14:58
288297044	SAMPLE	HAKB	1126	NOV-03-11 08:10:57	DONE		19-OCT-11 14:58
288297045	SAMPLE	HAKB	1127	NOV-03-11 08:10:58	DONE		19-OCT-11 14:58
288297046	SAMPLE	HAKB	1128	NOV-03-11 08:11:01	DONE		19-OCT-11 14:58
288297047	SAMPLE	HAKB	1129	NOV-03-11 08:11:02	DUSE		19-OCT-11 14:59
288297048	SAMPLE	HAKB	1130	NOV-03-11 08:11:05	DONE		19-OCT-11 14:59
288297049	SAMPLE	HAKB	1131	NOV-03-11 08:11:07	DONE		19-OCT-11 15:00
288297050	SAMPLE	HAKB	1132	NOV-03-11 08:11:09	DONE		19-OCT-11 15:00
1202523258	MB	HAKB	1133	NOV-03-11 08:11:11	DUSE		19-OCT-11 15:01
1202523259	DUP	HAKB	1134	NOV-03-11 08:11:13	DONE		19-OCT-11 15:01
1202523260	MS	HAKB	1135	NOV-03-11 08:11:15	DONE		19-OCT-11 15:01
1202523261	LCS	HAKB	1136	NOV-03-11 08:11:17	DONE		19-OCT-11 15:02
288297047	SAMPLE	HAKB	1127	NOV-03-11 13:33:02	DUSE		19-OCT-11 14:58
1202523258	MB	HAKB	1128	NOV-03-11 13:33:04	DONE		19-OCT-11 14:58
288297047	SAMPLE	HAKB	1135	NOV-04-11 10:59:49	DONE		19-OCT-11 15:01

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT	JOB NUMBER
Sample DYS-SD-6P05-0102	
SUBJECT	
BASED ON	DRAWING NUMBER
BY / CHECKED BY	APPROVED BY / DATE

Po-210 rep result 1.97 pCi/g

Net area 19.04
Count time 240 min
yield 0.73
Detector eff 0.264734
Sample Alq 0.101

$$\frac{\left(\frac{19.04}{240}\right)}{(2.22)(0.73)(0.264734)(0.101)} = 1.83 \text{ pCi/g}$$

Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

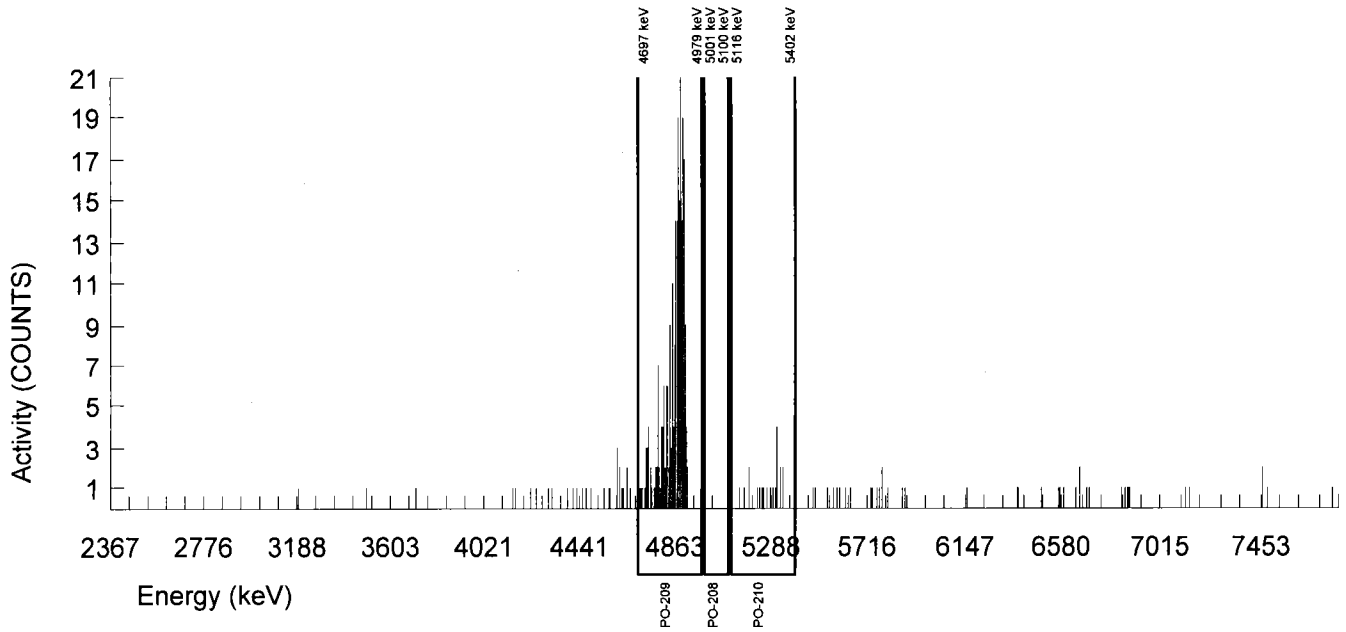
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 021	LIB FILE : PO
SAMPLE ID : S0288297021_PO	DETECTOR S/N : 795159	BKG FILE : B021.CNF;1297
SAMPLE QTY : 0.101 G +/-3.198 %	AVERAGE %EFFICIENCY : 26.4734	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7749	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:46	EFF FILE : W021.CNF;377
% YIELD : 73.0 +/-7.611 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER			MS/MSD			LCS/LCSD		
			ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D			1437-B	PO-210	1.8094E+01	1437-B	PO-210	1.8094E+01
NUCLIDE : PO-209								
NOMINAL : 5.3610E+00 dpm								
RESULTS : 3.9145E+00 dpm								

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.478	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.91E-01	2.91E-01	0.00E+00	1.90E-01
PO-209	4882.000	4862.974	55.490	248.000	248.000	0.000	0.0000	99.740	2.39E+01	5.07E+00	2.89E-01	0.00E+00	2.98E+00
PO-210	5304.380	5278.228	5.953	20.000	19.040	0.960	0.9798	100.000	1.97E+00	9.72E-01	6.81E-01	1.85E-01	9.11E-01



B3 GRAIN SIZE DATA

TETRA TECH NUS, INC. **RECORD OF REVIEW**

1. TITLE AS IT APPEARS ON THE DOCUMENT – (See instruction #1 on reverse for definition of Documents):

DV Memo to S. Parker, CTOWE61 Data Gaps Investigation at Naval Station Newport (NAVSTA), off-shore portions of Derecktor Shipyard, Site 19

Tier I **Data Validation, SDG** DSY-10 (grain size only)

2. DATE OF DOCUMENT: 12/1/11 DOCUMENT CONTROL No.: C-Navy-12-11-4903W

AUTHORS: **L. Guzman** TtNUS JOB CHARGE No.: **112G02747 SA.DV**

TYPE (DRAFT, DRAFT FINAL, FINAL): **Final** SUBMITTAL DATE:

3. REVIEWER AND STATUS REVIEWERS ASSIGNED BY: Date

Assigned Reviewer (See Instruction #3)	Disapproval		Approved with Suggestions		Reviewer Requires Final Verification		Approved By	
	Initials	(Date)	Initials	(Date)	Initials	(Date)	Initials	(Date)
a) Ann Fraake							AF	11/30/11
b)								
c)								
d)								

4. COMMENTS (Explain conditions and comments, or state where comments and edits are provided. Attach additional pages as needed):

5. AUTHOR COMMENTS/RESOLUTION:

6. APPROVAL FOR TRANSMITTAL:

_____ DATE: _____

See #7 on Reverse for Authority to Approve Transmittals

TETRA TECH NUS, INC **INTERNAL CORRESPONDENCE**

C-NAVY-12-11-4903W

Date: December 01, 2011 c: File G02747-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier I Data Validation, SDG DYS-10
Katahdin Analytical Services
CTO WE61, Former Derecktor Shipyard Marine Sediment, Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island

Grain Size:
11/Sediments/ DSY-SD-GP01-0012 DSY-SD-GP02-0012 DSY-SD-GP03-0012
DSY-SD-GP04-0012 DSY-SD-GP05-0012 DSY-SD-GP06-0012
DSY-SD-GP07-0012 DSY-SD-GP08-0012 DSY-SD-GP09-0012
DSY-SD-GP10-0012 DSY-SD-DUP12-092711

Field Duplicate Pair: DSY-SD-GP03-0012/DSY-SD-DUP12-092711

Tetra Tech NUS, Inc. (TtNUS) performed a Tier I data validation on grain size analytical data for the sediment samples in this SDG. These samples were collected as part of the marine sediment data gaps investigation on September 27, 2011. The sample collection and analysis were performed according to the Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, NAVSTA Newport, Newport, Rhode Island; dated August 2011.

The grain size analysis was performed according to the ASTM D422 procedure. The analysis was subcontracted by Katahdin to Test America, Burlington, VT. Only data completeness is evaluated for Tier I data validation.

The sample results are presented in the enclosed data summary tables and graphs.

Laboratory Data Completeness

The grain size data for all the samples sent to the laboratory are complete.

Tables: Data Summary Tables
Grain Size Graphs and Tabulated Data

Enclosures: Data Completeness Worksheets

PROJ_NO: 02747	NSAMPLE	DSY-SD-DUP12-092711			DSY-SD-GP01-0012			DSY-SD-GP02-0012			DSY-SD-GP03-0012		
SDG: DSY-10	LAB_ID	200-7324-11			200-7324-1			200-7324-2			200-7324-3		
FRACTION: MISC	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
MEDIA: SEDIMENT	QC_TYPE	FD			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF	DSY-SD-GP03-0012											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		9.8			9.7			19.3			11.1		
HYDROMETER-0.001MM		8.4			8.3			16.6			9.7		
HYDROMETER-0.002MM		11.3			11.2			23.5			12.7		
HYDROMETER-0.0043MM		12.7			12.5			30.3			15.4		
HYDROMETER-0.0052MM		18.1			15.1			37			19.7		
HYDROMETER-0.006MM		45.4			34.9			42.4			48.2		
HYDROMETER-0.0074MM		57.8			42.8			47.8			59.1		
PERCENT CLAY		11.3			11.2			23.5			12.7		
PERCENT COARSE SAND		1			2.9			3.3			1.9		
PERCENT FINE SAND		19.2			37.6			16.5			19.6		
PERCENT GRAVEL		2.4			0.9			4.2			0.3		
PERCENT MEDIUM SAND		6.4			12.3			17.5			6.6		
PERCENT SAND		26.6			52.8			37.3			28.1		
PERCENT SILT		59.7			35.1			35			58.9		
SIEVE 1"		100			100			100			100		
SIEVE 1-1/2"		100			100			100			100		
SIEVE 2"		100			100			100			100		
SIEVE 3"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			100			100		
SIEVE NO. 004		97.6			99.1			95.8			99.7		
SIEVE NO. 010		96.6			96.2			92.5			97.8		
SIEVE NO. 020		95.2			93.8			86.2			96.3		
SIEVE NO. 040		90.2			83.9			75			91.2		
SIEVE NO. 060		81.7			61.2			67.4			82.4		
SIEVE NO. 080		78.8			52.8			65.5			79.4		
SIEVE NO. 100		77.4			50.3			64.5			78		
SIEVE NO. 200		71			46.3			58.5			71.6		

PROJ_NO: 02747 SDG: DSY-10 FRACTION: MISC MEDIA: SEDIMENT	NSAMPLE	DSY-SD-GP04-0012			DSY-SD-GP05-0012			DSY-SD-GP06-0012			DSY-SD-GP07-0012		
	LAB_ID	200-7324-4			200-7324-5			200-7324-6			200-7324-7		
	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0			100.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		13			15.3			7.6			12.1		
HYDROMETER-0.001MM		11.4			12.6			6.1			10.4		
HYDROMETER-0.002MM		14.9			21			9.3			12.4		
HYDROMETER-0.0043MM		14.9			25.1			11.1			14.4		
HYDROMETER-0.0052MM		21.5			30.6			12.5			24.6		
HYDROMETER-0.006MM		59.7			40.4			36.1			70.3		
HYDROMETER-0.0074MM		78.9			47.3			52.3			83.9		
PERCENT CLAY		14.9			21			9.3			12.4		
PERCENT COARSE SAND		0			0			2.1			1.4		
PERCENT FINE SAND		8.4			25.2			30.2			3.3		
PERCENT GRAVEL		0			0			2.4			3.3		
PERCENT MEDIUM SAND		3.1			2.5			4.2			3.3		
PERCENT SAND		11.5			27.7			36.5			8		
PERCENT SILT		73.6			51.3			51.8			76.3		
SIEVE 1"		100			100			100			100		
SIEVE 1-1/2"		100			100			100			100		
SIEVE 2"		100			100			100			100		
SIEVE 3"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			98.6			98		
SIEVE NO. 004		100			100			97.6			96.7		
SIEVE NO. 010		100			100			95.5			95.3		
SIEVE NO. 020		99.3			99.2			93.8			93.1		
SIEVE NO. 040		96.9			97.5			91.3			92		
SIEVE NO. 060		94.4			90.5			82.1			91.2		
SIEVE NO. 080		93			85.7			73.7			90.7		
SIEVE NO. 100		92			83			69.4			90.3		
SIEVE NO. 200		88.5			72.3			61.1			88.7		

PROJ_NO: 02747	NSAMPLE	DSY-SD-GP08-0012			DSY-SD-GP09-0012			DSY-SD-GP10-0012		
SDG: DSY-10	LAB_ID	200-7324-8			200-7324-9			200-7324-10		
FRACTION: MISC	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM		
	UNITS	%			%			%		
	PCT_SOLIDS	100.0			100.0			100.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.0019MM		13			11			7.5		
HYDROMETER-0.001MM		11.4			9.8			6.4		
HYDROMETER-0.002MM		14.9			16			8.7		
HYDROMETER-0.0043MM		14.9			18.4			10.8		
HYDROMETER-0.0052MM		19.9			23.2			15		
HYDROMETER-0.006MM		66.1			30.6			21.4		
HYDROMETER-0.0074MM		82.1			36.6			25.6		
PERCENT CLAY		14.9			16			8.7		
PERCENT COARSE SAND		0			0.6			2.6		
PERCENT FINE SAND		4.5			34.2			54.1		
PERCENT GRAVEL		0			0.3			0.4		
PERCENT MEDIUM SAND		1.7			0.9			6.8		
PERCENT SAND		6.2			35.7			63.5		
PERCENT SILT		78.9			48			27.4		
SIEVE 1"		100			100			100		
SIEVE 1-1/2"		100			100			100		
SIEVE 2"		100			100			100		
SIEVE 3"		100			100			100		
SIEVE 3/4"		100			100			100		
SIEVE 3/8"		100			100			100		
SIEVE NO. 004		100			99.7			99.6		
SIEVE NO. 010		100			99.1			97		
SIEVE NO. 020		99.3			98.8			94.2		
SIEVE NO. 040		98.3			98.2			90.2		
SIEVE NO. 060		97.3			97.3			72.6		
SIEVE NO. 080		96.6			95.4			61.5		
SIEVE NO. 100		96.1			91.7			53		
SIEVE NO. 200		93.8			64			36.1		

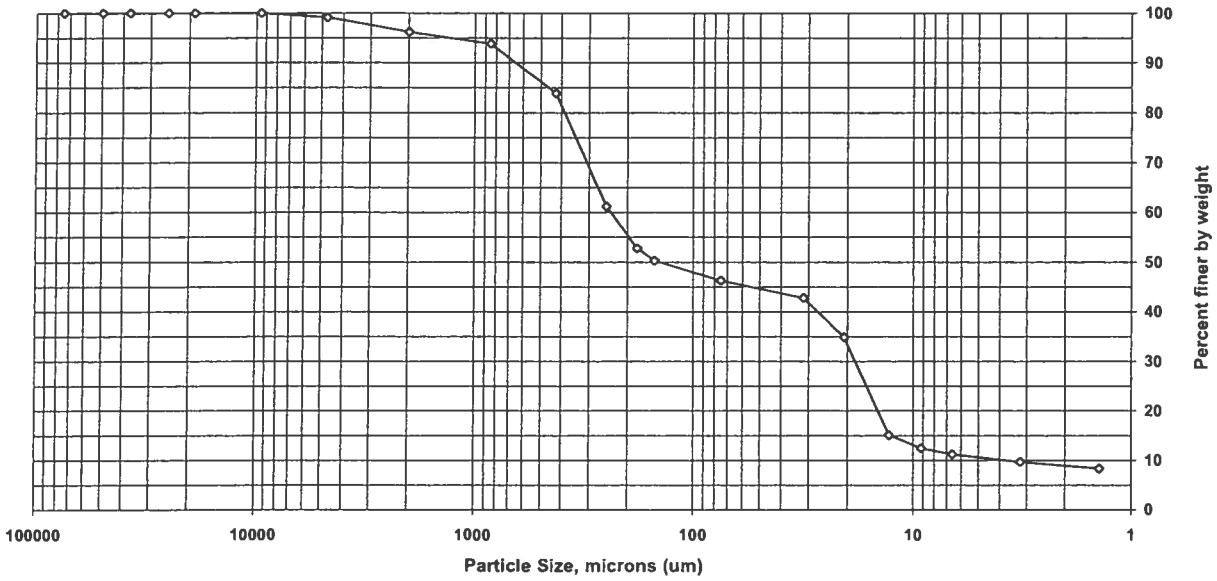
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP01-0012	**Percent Solids:**	52.5%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-1	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.1	0.9
#10	2000	96.2	2.9
#20	850	93.8	2.4
#40	425	83.9	9.9
#60	250	61.2	22.7
#80	180	52.8	8.4
#100	150	50.3	2.5
#200	75	46.3	4.0
Hyd1	31.6	42.8	3.5
Hyd2	20.7	34.9	7.9
Hyd3	12.9	15.1	19.8
Hyd4	9.2	12.5	2.6
Hyd5	6.6	11.2	1.3
Hyd6	3.2	9.7	1.6
Hyd7	1.4	8.3	1.3

Soil Classification	Percent of sample
Gravel	0.9
Sand	52.8
Coarse Sand	2.9
Medium Sand	12.3
Fine Sand	37.6
Silt	35.1
Clay	11.2

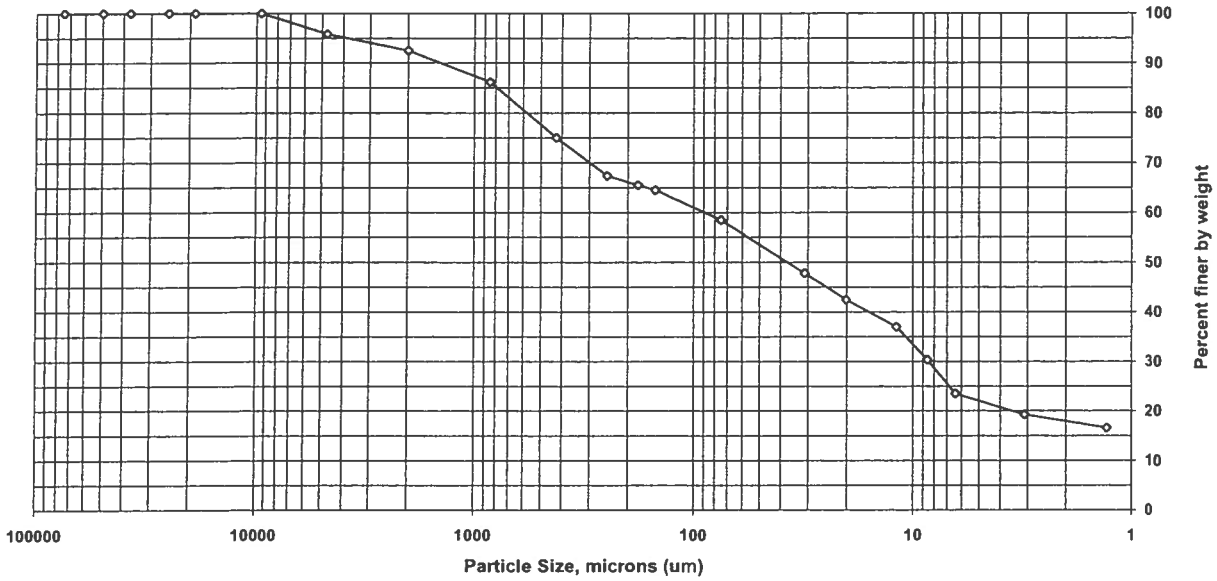
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP02-0012	**Percent Solids:**	57.1%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-2	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	95.8	4.2
#10	2000	92.5	3.3
#20	850	86.2	6.3
#40	425	75.0	11.2
#60	250	67.4	7.6
#80	180	65.5	1.9
#100	150	64.5	1.0
#200	75	58.5	6.0
Hyd1	31.1	47.8	10.7
Hyd2	20.1	42.4	5.4
Hyd3	11.9	37.0	5.4
Hyd4	8.6	30.3	6.7
Hyd5	6.4	23.5	6.8
Hyd6	3.1	19.3	4.2
Hyd7	1.3	16.6	2.7

Soil Classification	Percent of sample
Gravel	4.2
Sand	37.3
Coarse Sand	3.3
Medium Sand	17.5
Fine Sand	16.5
Silt	35.0
Clay	23.5

Particle Size of Soils by ASTM D422

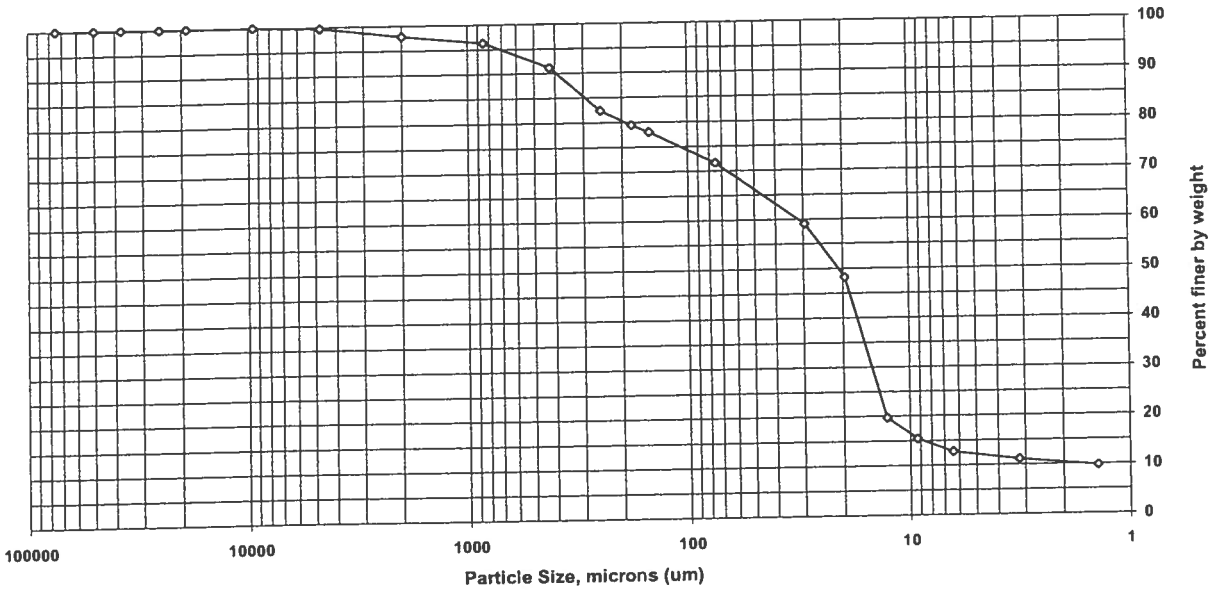
Sample ID: DSY-SD-GP03-0012
Lab ID: 200-7324-A-3

Percent Solids: 52.2%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.7	0.3
#10	2000	97.8	1.9
#20	850	96.3	1.5
#40	425	91.2	5.1
#60	250	82.4	8.8
#80	180	79.4	3.0
#100	150	78.0	1.4
#200	75	71.6	6.4
Hyd1	29.5	59.1	12.5
Hyd2	19.6	48.2	10.9
Hyd3	12.7	19.7	28.5
Hyd4	9.3	15.4	4.3
Hyd5	6.4	12.7	2.7
Hyd6	3.2	11.1	1.6
Hyd7	1.4	9.7	1.4

Soil Classification	Percent of sample
Gravel	0.3
Sand	28.1
Coarse Sand	1.9
Medium Sand	6.6
Fine Sand	19.6
Silt	58.9
Clay	12.7

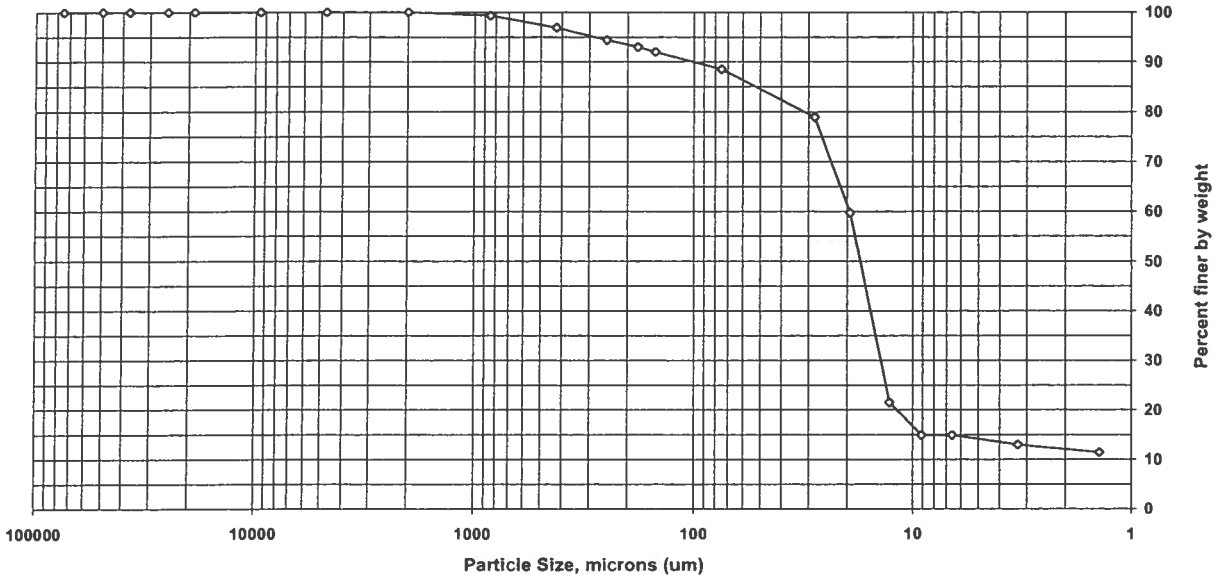
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP04-0012	**Percent Solids:**	36.1%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-4	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.3	0.7
#40	425	96.9	2.4
#60	250	94.4	2.5
#80	180	93.0	1.4
#100	150	92.0	1.0
#200	75	88.5	3.5
Hyd1	28.2	78.9	9.6
Hyd2	19.4	59.7	19.2
Hyd3	12.8	21.5	38.2
Hyd4	9.1	14.9	6.6
Hyd5	6.6	14.9	0.0
Hyd6	3.3	13.0	1.9
Hyd7	1.4	11.4	1.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	11.5
Coarse Sand	0.0
Medium Sand	3.1
Fine Sand	8.4
Silt	73.6
Clay	14.9

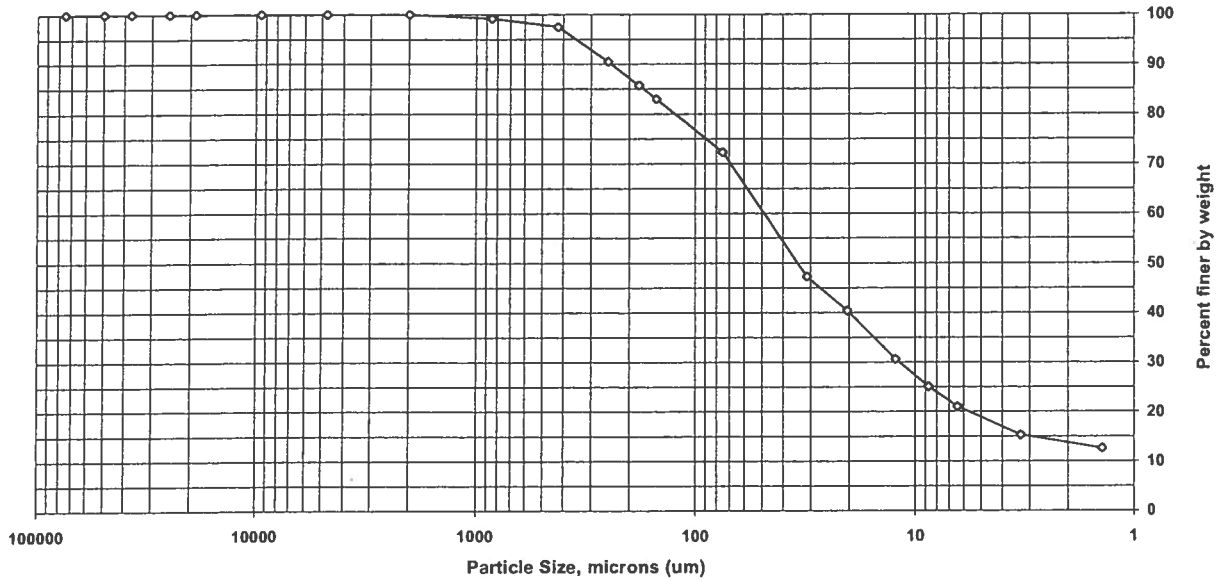
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP05-0012	**Percent Solids:**	60.8%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-5	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.2	0.8
#40	425	97.5	1.7
#60	250	90.5	7.0
#80	180	85.7	4.8
#100	150	83.0	2.7
#200	75	72.3	10.7
Hyd1	31.2	47.3	25.0
Hyd2	20.4	40.4	6.9
Hyd3	12.3	30.6	9.8
Hyd4	8.7	25.1	5.5
Hyd5	6.4	21.0	4.1
Hyd6	3.3	15.3	5.7
Hyd7	1.4	12.6	2.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	27.7
Coarse Sand	0.0
Medium Sand	2.5
Fine Sand	25.2
Silt	51.3
Clay	21.0

Particle Size of Soils by ASTM D422

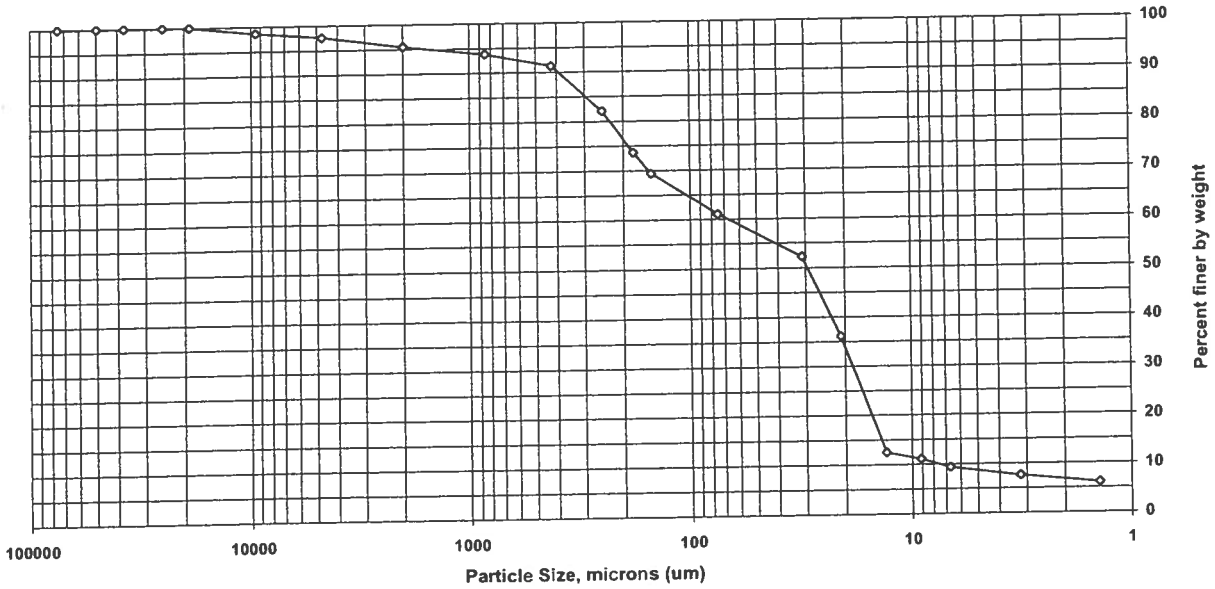
Sample ID: DSY-SD-GP06-0012
Lab ID: 200-7324-A-6

Percent Solids: 41.1%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.6	1.4
#4	4750	97.6	1.0
#10	2000	95.5	2.1
#20	850	93.8	1.7
#40	425	91.3	2.5
#60	250	82.1	9.2
#80	180	73.7	8.4
#100	150	69.4	4.3
#200	75	61.1	8.3
Hyd1	31.1	52.3	8.8
Hyd2	20.9	36.1	16.2
Hyd3	13.1	12.5	23.6
Hyd4	9.1	11.1	1.4
Hyd5	6.7	9.3	1.8
Hyd6	3.2	7.6	1.7
Hyd7	1.4	6.1	1.5

Soil Classification	Percent of sample
Gravel	2.4
Sand	36.5
Coarse Sand	2.1
Medium Sand	4.2
Fine Sand	30.2
Silt	51.8
Clay	9.3

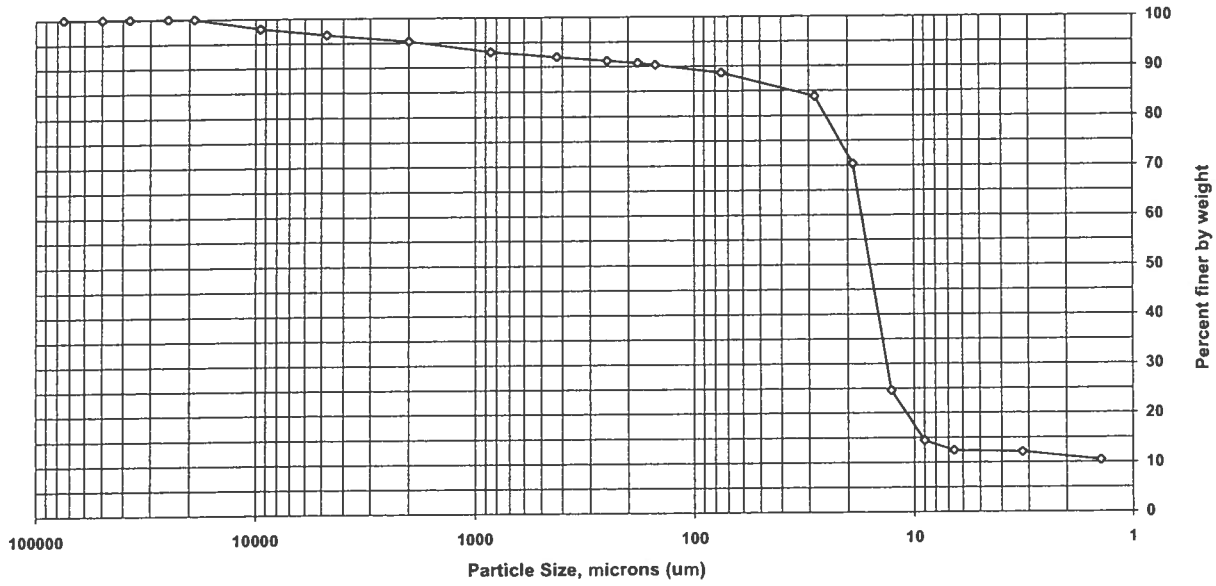
Particle Size of Soils by ASTM D422

Sample ID:	DSY-SD-GP07-0012	**Percent Solids:**	34.3%	**Date Received:**	10/04/11
Lab ID:	200-7324-A-7	**Specific Gravity:**	2.650	**Start Date:**	10/06/11
				End Date:	10/11/11

Shape (> #10): na

Non-soil material: shell

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.0	2.0
#4	4750	96.7	1.3
#10	2000	95.3	1.4
#20	850	93.1	2.2
#40	425	92.0	1.1
#60	250	91.2	0.8
#80	180	90.7	0.5
#100	150	90.3	0.4
#200	75	88.7	1.6
Hyd1	28.2	83.9	4.8
Hyd2	18.9	70.3	13.6
Hyd3	12.7	24.6	45.7
Hyd4	9	14.4	10.2
Hyd5	6.6	12.4	2.0
Hyd6	3.2	12.1	0.3
Hyd7	1.4	10.4	1.7

Soil Classification	Percent of sample
Gravel	3.3
Sand	8.0
Coarse Sand	1.4
Medium Sand	3.3
Fine Sand	3.3
Silt	76.3
Clay	12.4

Particle Size of Soils by ASTM D422

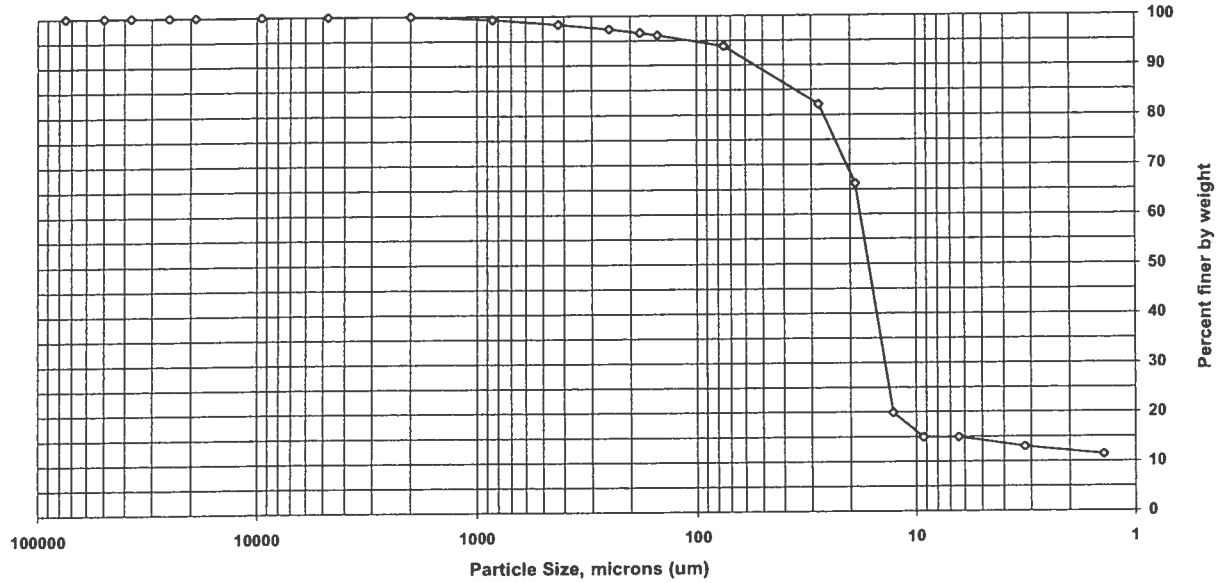
Sample ID: DSY-SD-GP08-0012
Lab ID: 200-7324-A-8

Percent Solids: 38.3%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): na

Non-soil material: na
Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.3	0.7
#40	425	98.3	1.0
#60	250	97.3	1.0
#80	180	96.6	0.7
#100	150	96.1	0.5
#200	75	93.8	2.3
Hyd1	27.8	82.1	11.7
Hyd2	18.9	66.1	16.0
Hyd3	12.8	19.9	46.2
Hyd4	9.3	14.9	5.0
Hyd5	6.4	14.9	0.0
Hyd6	3.2	13.0	1.9
Hyd7	1.4	11.4	1.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.2
Coarse Sand	0.0
Medium Sand	1.7
Fine Sand	4.5
Silt	78.9
Clay	14.9

Particle Size of Soils by ASTM D422

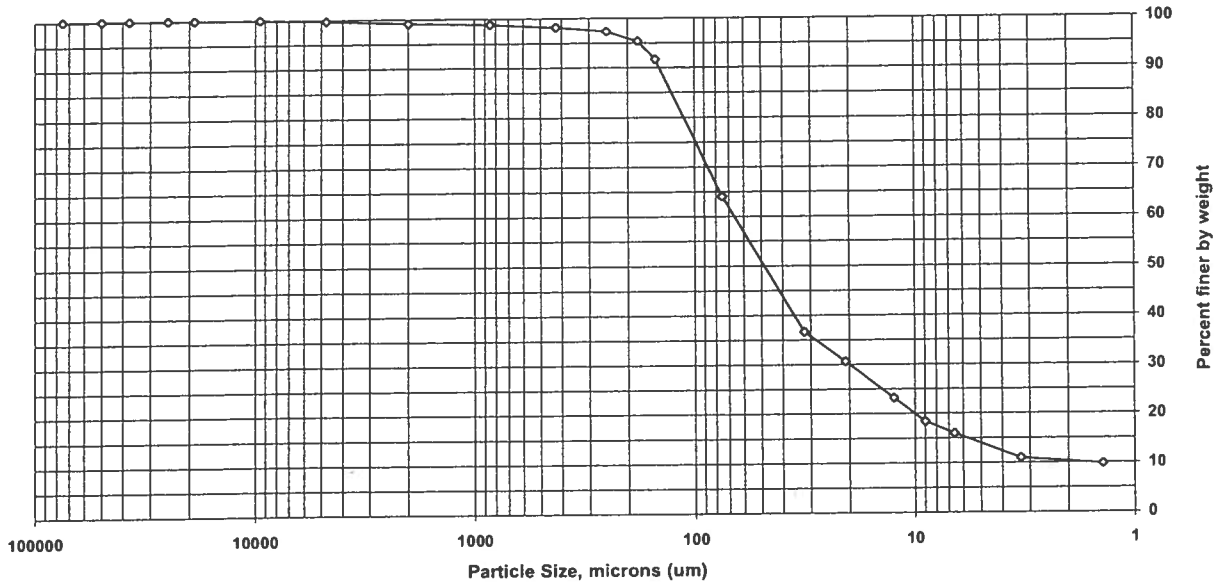
Sample ID: DSY-SD-GP09-0012
Lab ID: 200-7324-A-9

Percent Solids: 61.7%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.7	0.3
#10	2000	99.1	0.6
#20	850	98.8	0.3
#40	425	98.2	0.6
#60	250	97.3	0.9
#80	180	95.4	1.9
#100	150	91.7	3.7
#200	75	64.0	27.7
Hyd1	32	36.6	27.4
Hyd2	20.8	30.6	6.0
Hyd3	12.5	23.2	7.4
Hyd4	9	18.4	4.8
Hyd5	6.6	16.0	2.4
Hyd6	3.3	11.0	5.0
Hyd7	1.4	9.8	1.2

Soil Classification	Percent of sample
Gravel	0.3
Sand	35.7
Coarse Sand	0.6
Medium Sand	0.9
Fine Sand	34.2
Silt	48.0
Clay	16.0

Particle Size of Soils by ASTM D422

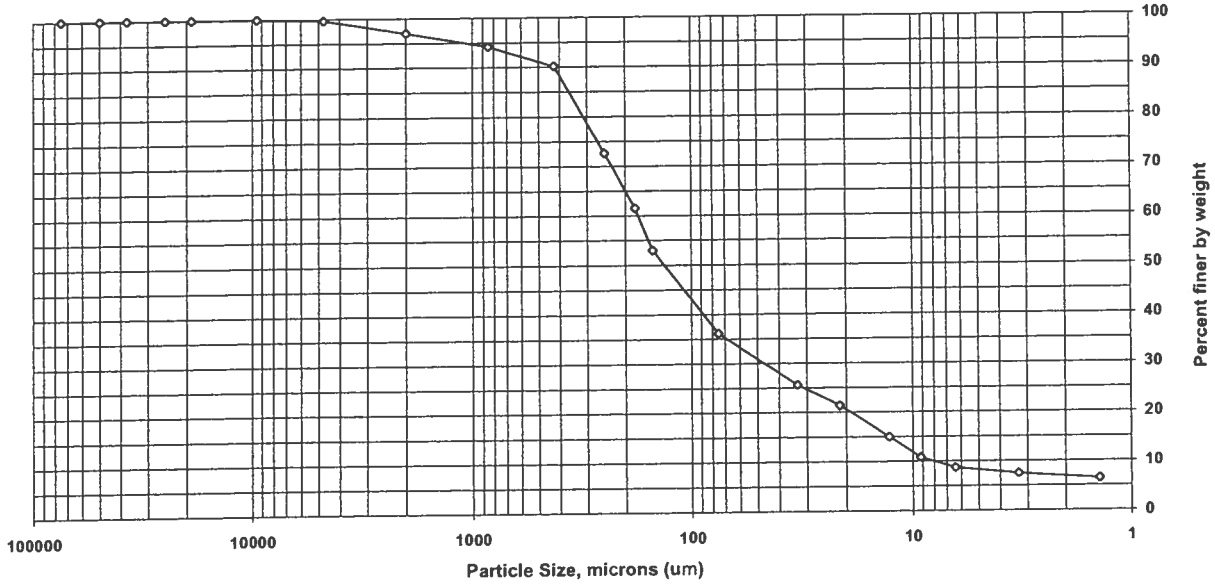
Sample ID: DSY-SD-GP10-0012
Lab ID: 200-7324-A-10

Percent Solids: 69.3%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.6	0.4
#10	2000	97.0	2.6
#20	850	94.2	2.8
#40	425	90.2	4.0
#60	250	72.6	17.6
#80	180	61.5	11.1
#100	150	53.0	8.5
#200	75	36.1	16.9
Hyd1	33.1	25.6	10.5
Hyd2	21.4	21.4	4.2
Hyd3	12.8	15.0	6.4
Hyd4	9.2	10.8	4.2
Hyd5	6.4	8.7	2.1
Hyd6	3.3	7.5	1.2
Hyd7	1.4	6.4	1.0

Soil Classification	Percent of sample
Gravel	0.4
Sand	63.5
Coarse Sand	2.6
Medium Sand	6.8
Fine Sand	54.1
Silt	27.4
Clay	8.7

Particle Size of Soils by ASTM D422

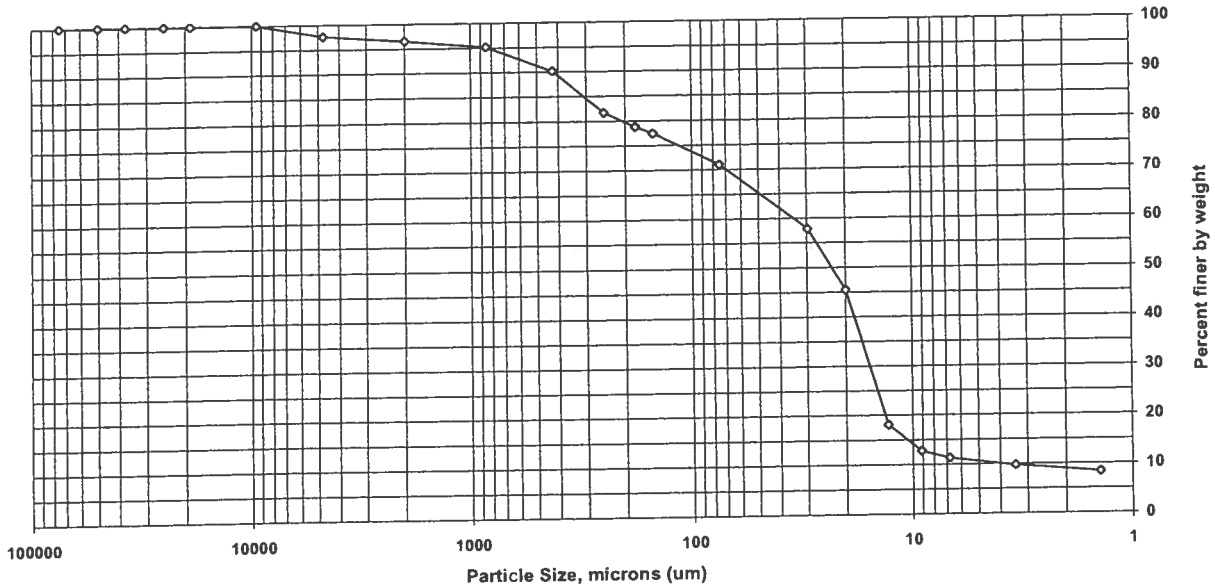
Sample ID: DSY-SD-DUP12-092711
Lab ID: 200-7324-A-11

Percent Solids: 54.8%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell, plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.6	2.4
#10	2000	96.6	1.0
#20	850	95.2	1.4
#40	425	90.2	5.0
#60	250	81.7	8.5
#80	180	78.8	2.9
#100	150	77.4	1.4
#200	75	71.0	6.4
Hyd1	29.7	57.8	13.2
Hyd2	20	45.4	12.4
Hyd3	12.9	18.1	27.3
Hyd4	9.1	12.7	5.4
Hyd5	6.8	11.3	1.4
Hyd6	3.4	9.8	1.6
Hyd7	1.4	8.4	1.4

Soil Classification	Percent of sample
Gravel	2.4
Sand	26.6
Coarse Sand	1.0
Medium Sand	6.4
Fine Sand	19.2
Silt	59.7
Clay	11.3

Particle Size of Soils by ASTM D422

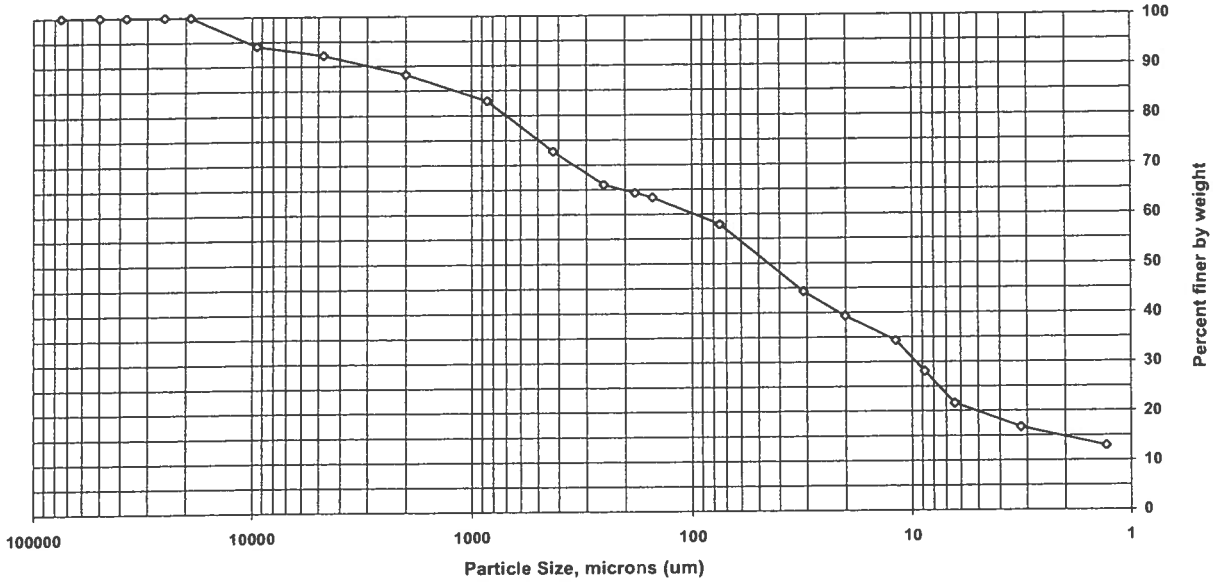
Sample ID: DSY-SD-GP02-0012
Lab ID: 200-7324-A-2DU

Percent Solids: 60.0%
Specific Gravity: 2.650

Date Received: 10/04/11
Start Date: 10/06/11
End Date: 10/11/11

Shape (> #10): subangular

Non-soil material: shell
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.1	5.9
#4	4750	92.2	1.9
#10	2000	88.3	3.9
#20	850	82.9	5.4
#40	425	72.7	10.2
#60	250	66.0	6.7
#80	180	64.3	1.7
#100	150	63.4	0.9
#200	75	57.9	5.5
Hyd1	31.1	44.3	13.6
Hyd2	20.1	39.3	5.0
Hyd3	11.9	34.3	5.0
Hyd4	8.8	28.1	6.2
Hyd5	6.4	21.6	6.5
Hyd6	3.2	16.7	4.9
Hyd7	1.3	12.9	3.8

Soil Classification	Percent of sample
Gravel	7.8
Sand	34.3
Coarse Sand	3.9
Medium Sand	15.6
Fine Sand	14.8
Silt	36.3
Clay	21.6

B4 ASBESTOS DATA

EMSL ASBESTOS DATA PACKAGE

EMSL ORDER ID
041128162

Katahdin Analytical Services
Project SE6768/SE6841

PREPARED BY: Special Projects Group
DATE: November 9, 2011

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7. NVLAP/AIHA Certifications
8. Shipping Documentation

1. Case Narrative

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 9, 2011

Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
jObrin@katahdinlab.com

Re: **Narrative 041128162 Modified Draft ASTM Sieve Method with Qualitative TEM analysis**

Dear Jennifer:

The following set of samples was received October 20th 2011 via FedEx. These samples were received under chain of custody from Katahdin Analytical Services, Scarborough, ME for asbestos content analysis. All samples are associated with the project SE6768/SE6841. The samples submitted were saturated with moisture and required additional time to dry. Most of the samples were received in good condition, except for the following samples below:

EMSL Sample Number	*Client Sample Number*	*Condition at Time of Receipt*
041128162-0015	DSY-SD-AA17-0012	Jar broken
041128162-0019	DSY-SD-AA21-1224	Jar broken
041128162-0028	DSY-SD-AA28-0016	Jar labeled DSY-SD-AA28-0012
041128162-0031	DSY-SD-AA30-1224	Jar broken

The samples were logged in following normal lab procedures. All analyses were performed in the Cinnaminson, NJ laboratory.

Modified Draft ASTM Sieve method

The samples were first dried prior to being fractioned into 3 sieved components, Coarse (<19 mm), Medium (>2 mm) and Fine (<2 mm). The sieved samples were then analyzed via polarized light microscopy (PLM) using the procedures from the EPA 600/R-93/116 method. Any asbestos found in the fine fraction was analyzed via a 400 point count analysis. All data was reported on a percent asbestos basis. The limit of quantification for this method is <1%.

Samples that did not have asbestos detected were analyzed via Qualitative Transmission Electron Microscopy (TEM). Due to the amount of organic material and calcium fibers in these samples, an aliquot of the sample was treated with dilute hydrochloric acid prior to analysis.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

QC Performed

QC guidelines were not specified by the client. EMSL performed QC in compliance with our Quality Assurance Manual (QAM) and pertinent SOPs. For this analysis, two inter-analyst and four intra-analyst samples were analyzed. Six laboratory blanks were also analyzed. All QC was found to be in concordance.

Stephen Siegel, CIH
Asbestos Lab Manager,
EMSL Westmont, NJ

Robyn Denton
Asbestos Quality Assurance Manager
EMSL Westmont, NJ

2. Tabulated Sample Results

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID Client / EMSL	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA01-0012 *041128162-0001*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-1224 *041128162-0002*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA01-2448 *041128162-0003*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-DUP33-101211 *041128162-0004*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA05-0012 *041128162-0005*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-1224 *041128162-0006*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA05-2448 *041128162-0007*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-0012 *041128162-0008*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA09-1224 *041128162-0009*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA09-2448 *041128162-0010*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA13-0012 *041128162-0011*	Chrysotile Amosite	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-1224 *041128162-0012*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448 *041128162-0013*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA13-2448DUP *041128162-0014*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA17-0013 *041128162-0015*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA17-1224 *041128162-0016*	Amosite	None Detected	<1	None Detected	<1	Not Analyzed	

This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (800) 220-3675 Fax: (856) 858-1292
Email: WestmontAsbLab@emsl.com

Attention: JENNIFER OBRIN
Client: KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

Fax: 207-775-4029
Phone: 207-874-2400

Project: SE6768

EMSL Reference: 041128162

Date Received: 10/20/11 2:00 PM
Date Analyzed: 11/4/11-11/10/11
Date Reported: 11/10/11

Asbestos Analysis of Soil Samples via Modified Draft ASTM "Standard Test Method for The Determination of Asbestos in Soil" via PLM

Sample ID *Client / EMSL*	*Asbestos Type(s)*	Asbestos Concentration *Percent* *Coarse*	*Medium*	*Fine*	*Asbestos Concentration Percent*	*TEM Qualitative Result*	*Comments*
DSY-SD-AA17-2448 *041128162-0017*	Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA21-0012 *041128162-0018*	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
DSY-SD-AA21-1224 *041128162-0019*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	Jar received Broken
DSY-SD-AA21-2448 *041128162-0020*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-DUP34-101311 *041128162-0021*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-0012 *041128162-0022*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA24-1224 *041128162-0023*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA24-2448 *041128162-0024*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-0012 *041128162-0025*	Chrysotile	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA26-1224 *041128162-0026*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA26-2448 *041128162-0027*	Chrysotile Amosite	2	<1	None Detected	2	Not Analyzed	
DSY-SD-AA28-0016 *041128162-0028*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	Jar labeled as DSY-SD-AA28-0012
DSY-SD-DUP35-101311 *041128162-0029*	Chrysotile Amosite	<1	<1	None Detected	<1	Not Analyzed	
DSY-SD-AA30-0012 *041128162-0030*	Chrysotile	<1	None Detected	None Detected	<1	Not Analyzed	
DSY-SD-AA30-1224 *041128162-0031*	Chrysotile Amosite	None Detected	<1	None Detected	<1	Not Analyzed	Jar received Broken

Note: Revised report issued 11-10-11 for data entry errors on EMSL samples 041128162-0016,041128162-0018, 041128162-0031

Analysts

Garret Vliet *David Poitras*
Melissa Klinedinst *Robyn Denton*
Leslie McCluskey

Robyn Denton
Approved Lab Signatory

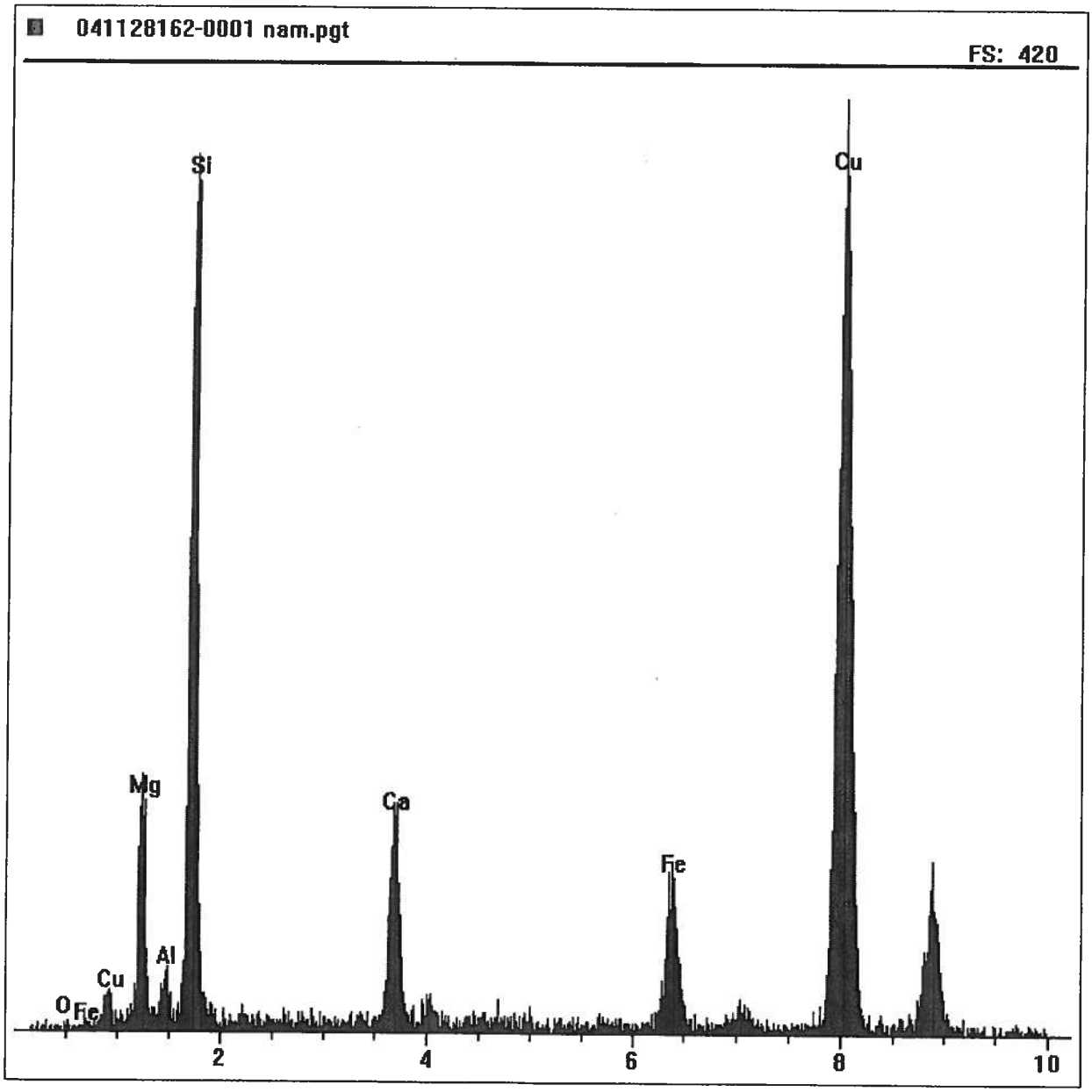
This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations.

Energy Dispersive X-Ray Analysis
Qualitative Spectrum

EMSL ANALYTICAL, INC.

File: C:\Program Files\PGT\Data\041128162-0001 nam.pgt
Collected: November 08, 2011 12:41:16

Live Time:	35.49	Count Rate:	974	Dead Time:	19.08 %
Beam Voltage:	20.00	Beam Current:	2.00	Takeoff Angle:	31.00



3. Worksheets/Benchsheets

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

Date/Time Due:

TAT:

Special Instructions

ASTM

Order Number

041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Rolled, 7. Pitted, 8. Medulla, 9. Fusiform Shaped, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undefined

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-01 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-01 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-02 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 COARSE	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 medium	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
-03 Fine	(C) 2, (T) 2, (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	G.V.
	(C), (T), (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (FC) / E	

Analyst: G. Viet Date: 11/4/11 Computer: Date:

Room Temp (C): 22.3°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT:

Date/Time Due:

Special Instructions

AST M

Order Number

041128162

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (4)

Treatment

1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy 2. Straight 3. Uniform Diameter 4. Ribbon-Like 5. Tapered Ends 6. Boxed 7. Fibril 8. Mesh/Fa 9. Rectin Shapes 10. Other
Sign of Elongation (E): 1. + 2. - 3. Variable
Fluorescence (F): 1. Yes 2. No
Birefringence (B): 1 Low 0.010 2 Med 0.010-0.050 3 High >0.050 4 None 0.000 or Isotropic
Fiber Color (FC): 1 White 2 Brown 3 Beige 4 Blue 5 Green 6 Colorless
Extinction (E): 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
-04 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P B	(FC) E
-04 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P B	(FC) E
-04 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P B	(FC) E
-05 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		1	<1			20	99		1.551, 1.680 ⊥ R.I.	1.557, 1.692 ∥ R.I.
				2	<1						1,2 M	1 S
											2 P 1,2 B	(FC) 6 1 E
-05 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		1	<1			20	99		1.550, 1.680 ⊥ R.I.	1.555, 1.696 ∥ R.I.
				2	<1						1, 2 M	1 S
											2 P 1,2 B	(FC) 6 1 E
-05 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P B	(FC) E
-06 COARSE	(C) 2 (T) 2 (H) 2	1/2/3		2	<1			20	98		1.683 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2 P 2 B	(FC) 6 1 E
-06 MEDIUM	(C) 2 (T) 2 (H) 2	1/2/3		2	<1			20	98		1.680 ⊥ R.I.	1.696 ∥ R.I.
						11	2				2 M	1 S
											2 P 2 B	(FC) 6 1 E
-06 FINE	(C) 2 (T) 2 (H) 2	1/2/3		ND	—			20	100	NF	⊥ R.I.	∥ R.I.
											M	S
											P	(FC) E
	(C) (T) (H)							20			⊥ R.I.	∥ R.I.
											M	S
											P B	(FC) E

Analyst: G.Vliet 11/7/11 L.M. Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3°

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Sealed, 7. Fibril, 8. Ribbon, 9. Cleavage Shape, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mod 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
7 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	⊥ R.I. 1.552; ∥ R.I. 1.557; M 1; S 1; P 2; B 1; (FC) 6; E 1
7 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E
7 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E
8 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	⊥ R.I. 1.550; ∥ R.I. 1.554; M 1; S 1; P 2; B 1; (FC) 6; E 1
8 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	5	20	95	M10	⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E
8 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E
9 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	⊥ R.I. 1.551; ∥ R.I. 1.557; M 1; S 1; P 2; B 1; (FC) 6; E 1
9 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	⊥ R.I. 1.549; ∥ R.I. 1.554; M 1; S 1; P 2; B 1; (FC) 6; E 1
9 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E
QC	(C) (T) (H)							20			⊥ R.I.; ∥ R.I.; M; S; P; B; (FC); E

QC

Analyst: LM Date: 11.5.11 Computer: Date:

Room Temp (C): 23.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties: Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Ashed, 7. Fibril, 8. Modulit, 9. Knobs Shaped, 10. Other. Sign of Elongation (S): 1. +, 2. -, 3. Variable. Pleochroism (P): 1. Yes, 2. No. Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic. Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless. Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose.

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
10 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ⊥ R.I.	1.558 ∥ R.I.			
				2	<1						1 M	1 S			
											2 P	1 B	(FC) 6	1 E	
10 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.			
				2	<1						1 M	1 S			
											2 P	1 B	(FC) 6	1 E	
10 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	
11 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.			
				2	<1						1 M	1 S			
											2 P	1 B	(FC) 6	1 E	
11 MEDIUM	(C) 2 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	
11 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	
12 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I.	1.554 ∥ R.I.			
											1 M	1 S			
											2 P	1 B	(FC) 6	1 E	
12 MEDIUM	(C) 2 (T) 1 (H) 2	1		MD		11	5	20	95	M10	⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	
12 FINE	(C) 2 (T) 1 (H) 1	1		MD		11	5	20	95	M10	⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	
QC	(C) (T) (H)							20			⊥ R.I.	∥ R.I.			
											M	S			
											P	B	(FC)	E	

ams

10 COARSE: 1.680 1.696; 2 1; 22 61

10 MEDIUM: 1.682 1.696; 2 1; 22 61

11 COARSE: 1.680 1.692; 2 1; 22 61

QC

Analyst: LM Date: 11.5.11 Computer: Date:

Room Temp (C): 23.7

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: [redacted]

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scaled, 7. Fibril, 8. Mallella, 9. Equidimensional, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Plane Color (PC): 1. White, 2. Brown, 3. Beige, 4. Blue, 5. Green, 6. Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
13 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
13 MEDIUM	(C) 2 (T) 2 (H)	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
13 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
14 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
15 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.549 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	1	<1	11	2	20	98	M3	1.547 R.I. ‖ 1.555 R.I.; M 1 S 1; P 2 B 1 (FC) 6 E 1
15 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3	⊥ R.I. ‖ R.I.; M S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. ‖ R.I.; M S; P B (FC) E

QC

Analyst: MK Date: 11/6/11 Computer: _____ Date: _____

Room Temp (C): 23.6°

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Fax:

Project:

COMPONENT TYPES | MICROSCOPIC

Macroscopic: COLOR (C) 1 Brown 2 Gray 3 Tan 4 White 5 Red 6 Various 7 Black 8 Silver 9 Blue 10 Yellow; TEXTURE (T) 1 Fibrous 2 Non-Fibrous 3 Other; HOMOGENEITY (H) 1 Homogeneous 2 Heterogeneous 3 OTHER 4 Layers (#)

Treatment: 1 Teased 2 Crushed 3 Dissolve 4 Ashed 5 Heated 6 Melted

Asbestos: 1 Chrysotile 2 Amosite 3 Anthophyllite 4 Tremolite 5 Actinolite 6 Crocidolite

Fibrous: 7 Cellulose 8 Glass 9 Min. Wool 10 Synthetic 11 Other 12 Wollastonite 13 Hair

Non-Fibrous: 14 Quartz 15 Mica 16 Gypsum 17 Cal. Carbonate 18 Matrix 19 Perlite 20 Other

Optical Properties: Morphology (M) 1. Wavy 2. Straight 3. Uniform Diameter 4. Ribbon-Like 5. Tapered Ends 6. Scaled 7. Fibril 8. Fibrils 9. Fibrils Bundle 10. Other; Sign of Elongation (S) 1. + 2. - 3. Variable; Pleochroism (P) 1. Yes 2. No; Birefringence (B) 1 Low: 0.010 2 Mod 0.010-0.030 3 High >0.030 4 None 0.00 or Isotropic; Fiber Color (FC) 1 White 2 Brown 3 Beige 4 Blue 5 Green 6 Colorless; Extinction (E) 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties: ⊥ R.I.	∥ R.I.	M	S	P	B	(FC)	E
16 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
16 MEDIUM	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
16 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
17 COARSE	(C) 2 (T) 1 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.679	1.695	2	1	2	2	6	1
17 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	2	<1	11	2	20	98	M3	1.678	1.695	2	1	2	2	6	1
17 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
18 COARSE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 MEDIUM	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	2	20	98	M3								
18 FINE	(C) 2 (T) 2 (H) 2	1/3	/	NO		11	5	20	95	M3								
QC	(C) (T) (H)							20										

QC

Analyst: MK Date: 11/6/11 Computer: Date:

Room Temp (C): 24.8°

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted]

Address:

Fax:

Project:

Logged:

TAT:

Date/Time Due:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Scaled, 7. Fibril, 8. Mobile, 9. Curly Shape, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
19 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.550 ± R.I.	1.555 ‖ R.I.
											1 M	1 S
											2P 1 B	(FC) 6 1 E
19 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.552 ± R.I.	1.556 ‖ R.I.
											1 M	1 S
											2P 1 B	(FC) 6 1 E
19 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	± R.I.	‖ R.I.
											M	S
											P B	(FC) E
20 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.548 ± R.I.	1.554 ‖ R.I.
											1 M	1 S
											2P 1 B	(FC) 6 1 E
20 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	± R.I.	‖ R.I.
											M	S
											P B	(FC) E
20 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	± R.I.	‖ R.I.
											M	S
											P B	(FC) E
21 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.549 ± R.I.	1.556 ‖ R.I.
											1 M	1 S
											2P 1 B	(FC) 6 1 E
21 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	chrysotile M10	1.548 ± R.I.	1.553 ‖ R.I.
				2	<1						1 M	1 S
											2P 1 B	(FC) 6 1 E
21 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	± R.I.	‖ R.I.
											M	S
											P B	(FC) E
QC	(C) (T) (H)							20			± R.I.	‖ R.I.
											M	S
											P B	(FC) E

amo 1.678 1.692 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.5

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Type of Ends, 6. Tubular, 7. Fibril, 8. Mineritic, 9. Cleavage Fragment, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Blue, 4 Red, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
22 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	3	20	97	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
22 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.548 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
22 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.547 ⊥ R.I. / 1.553 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
23 MEDIUM	(C) 2 (T) 1 (H) 2	1		ND		11	3	20	97	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
23 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
24 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	2	20	98	M10	1.551 ⊥ R.I. / 1.555 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
24 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I. / 1.554 ∥ R.I.; M 1 / S 1; P 2 B 1 (FC) 6 E 1
24 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I. / ∥ R.I.; M / S; P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I. / ∥ R.I.; M / S; P B (FC) E

amo 1.681 1.696 2 1 2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.0

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1 Wavy, 2 Straight, 3 Uniform Diameter, 4 Ribbon-Like, 5 Tapered Ends, 6 Jackstraw, 7 Fibril, 8 Needle, 9 Equant Shape, 10 Other

Sign of Elongation (S): 1 +, 2 -, 3 Variable

Pleochroism (P): 1 Yes, 2 No

Birefringence (B): 1 Low: 0.010, 2 Med 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1 Parallel, 2 Symmetrical, 3 Oblique, 4 Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
25 COARSE	(C) 2 (T) 1 (H) 2	1		1	<1	11	2	20	98	M10	1.549 ⊥ R.I.	1.554 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E 1
25 MEDIUM	(C) 2 (T) 1 (H) 2	1		1	<1	11	5	20	95	M10	1.550 ⊥ R.I.	1.556 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E
25 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.	M	S	P B (FC) E
26 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	98 <1	11	3	20	95	M10	1.550 ⊥ R.I.	1.555 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E 1
26 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.548 ⊥ R.I.	1.554 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E 1
26 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.	M	S	P B (FC) E
27 COARSE	(C) 2 (T) 1 (H) 2	1		1 2	2 <1	11	2	20	96	M10	1.548 ⊥ R.I.	1.553 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E 1
27 MEDIUM	(C) 2 (T) 1 (H) 2	1		1 2	<1 <1	11	5	20	95	M10	1.550 ⊥ R.I.	1.554 ∥ R.I.	M 1	S 1	P 2 B 1 (FC) 6 E 1
27 FINE	(C) 2 (T) 1 (H) 1	1		ND		11	5	20	95	M10	⊥ R.I.	∥ R.I.	M	S	P B (FC) E
QC	(C) (T) (H)							20			⊥ R.I.	∥ R.I.	M	S	P B (FC) E

amo
1.678 1.692
2 1
2 2 6 1

amo
1.680 1.696
2 1
2 2 6 1

1.676 1.691
2 1
2 2 6 1

QC

Analyst: LM Date: 11.7 Computer: Date:

Room Temp (C): 20.4

EMSL Analytical, Inc. PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions: ASTM

Order Number: 041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Kinked, 7. Fibril, 8. Splinters, 9. Needle Shape, 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Fluorescence (F): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid 0.010-0.050, 3 High >0.050, 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char.	Optical Properties
28 COARSE	(C) 1,4 (T) 2 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.546 ⊥ R.I. 1.551 / 1.704 ∥ R.I.; M; S; P B; (FC) C/C; E
				amosite	<1						
28 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	5	20	95	M2	1.550 ⊥ R.I. 1.552 ∥ R.I.; M; S; P B; (FC) C/C; E
28 FINE	(C) 1 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. ∥ R.I.; M; S; P B; (FC); E
29 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 / 1.680 ⊥ R.I. 1.551 / 1.704 ∥ R.I.; M; S; P B; (FC) C/C; E
				amosite	<1						
29 MEDIUM	(C) 1,4 (T) 1 (H) 1	1		ch	<1	11	2	20	98	M2	1.550 / 1.680 ⊥ R.I. 1.551 / 1.704 ∥ R.I.; M; S; P B; (FC) C/C; E
				amosite	<1						
29 FINE	(C) 1,4 (T) 1 (H) 1	1		no		11	5	20	95	M2	⊥ R.I. ∥ R.I.; M; S; P B; (FC); E
30 COARSE	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	2	20	98	M2	1.550 ⊥ R.I. 1.556 ∥ R.I.; M; S; P B; (FC) C/C; E
30 MEDIUM	(C) (T) (H) 1	1		no		11	5	20	95	M2	⊥ R.I. ∥ R.I.; M; S; P B; (FC); E
30 FINE	(C) (T) (H) 1	1		no		11	10	20	90	M2	⊥ R.I. ∥ R.I.; M; S; P B; (FC); E
QC 30 coarse	(C) 1,4 (T) 1 (H) 1	1		chry	<1	11	5	20	95	M2	1.550 / 1.552 ⊥ R.I. 1.554 / 1.705 ∥ R.I.; M; S; P B; (FC) C/C; E
				amosite	<1						

QC

Analyst: David Portnoi Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): 19.4°C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: [redacted] Logged: TAT:

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Soiled, 7. Fibril, 8. Mineralized, 9. Needle Shape, 10. Other

Sign of Elongation (E): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1 Low: 0.010, 2 Mid: 0.010-0.050, 3 High: >0.050, 4 None: 0.00 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties ⊥ R.I.	Optical Properties ∥ R.I.	M	S	P	B	(FC)	E
31 COARSE	(C) 4 (T) 2 (H) 2	1		nd				20	100									
31 MEDIUM	(C) 1 (T) 1 (H) 1	1		chry	<1			20	95	mx	1.110 // 1.550	1.114 // 1.548	1	1	2	2	4	1
				Amosite	<1								2	2	5	2	4	2
31 FINE	(C) 1 (T) 1 (H) 1	1		mx		11	10	20	90	mx								
COARSE	(C) (T) (H)							20										
MEDIUM	(C) (T) (H)							20										
FINE	(C) (T) (H)							20										
COARSE	(C) (T) (H)							20										
MEDIUM	(C) (T) (H)							20										
FINE	(C) (T) (H)							20										
QC 31 COARSE	(C) (T) (H)							20										

QC

Analyst: Dwight Poitra Date: 11/7/2011 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0001
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
01	D3	ND								F B C M		
	J4	1-2	2							F B C M		Mg, Si, Al, Ca, Fe
	O13	3	1							F B C M		Si
	H12	4	1							F B C M		Si
	I11	5-7	3							F B C M		Mg, Si, Al Ca, Fe; Si
02	F5	ND								F B C M		
	F11	8-9	2							F B C M		Si
	G15	~~10-11~~ ND	2							F B C M		Si
	M4	ND								F B C M		
	N10	ND								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		11	11				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing

Mg, Al, Si, Ca, Fe; Si

Prepped w/ acid

Grid Box # Bulk-0075 Row O Column 1,2

Analyst BD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0002
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
03	C7	ND								F B C M		
	D5	↓								F B C M		
	F4	↓								F B C M		
	G11	1	1							F B C M		Si
	D13	2-4	3							F B C M		Mg,Al,Si,Ca,Fe
04	A11	ND								F B C M		
	B13	↓								F B C M		
	D12	↓								F B C M		
	F4	↓								F B C M		
	G7	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		4	4				—	—				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing

Prepped w/ Acid

Grid Box # Bulk.0075 Row O Column 3,4

Analyst RD Scope 04.03 Date 11.08.11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0003
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥ 5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys., Amo., Etc.
05	G5	ND								F B C M		
	H8	ND								F B C M		
	L10	"								F B C M		
	J9	"								F B C M		
	D9	"								F B C M		
06	B5	ND								F B C M		
	H9	"								F B C M		
	C13	"								F B C M		
	D11	"								F B C M		
	M10	1	1							F B C M		Mg, Al, Si, Ca, Fe
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Mg Al Si Ca Fe

Prepped w/Acid

Grid Box # Bulk-75 Row 0 Column 5,6

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0004
Client: Katahdin Analytical Services
Address:

Order ID 041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P1	03	1	1							F B C M		Ca
	H2	ND								F B C M		
	J4	2-3	2							F B C M		Si, Al, Mg
	K7	4	1							F B C M		Si, Al
	D5	ND								F B C M		
P2	C11	|								F B C M		
	D14	|								F B C M		
	K10	↓								F B C M		
	H4	5	1							F B C M		Si
	J2									F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		5	3									

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Si, Al, Mg, Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 1,2

Analyst RD Scope 04-03 Date 11-08-11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0014
Client: Katahdin Analytical Services
Address:

Order ID
041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected *N = No diffraction obtained* *m³ = Liters/1000*

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
P3	C7	ND								F B C M		
	D9	"								F B C M		
	G5	"								F B C M		
	H11	"								F B C M		
	D15	"								F B C M		
P4	A8	1	1							F B C M		Ca
	C10	ND								F B C M		
	D15	"								F B C M		
	K11	"								F B C M		
	D13	"								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		1	1				-	-				

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☑ (5) Fibers Containing Ca

Prepped w/ Acid

Grid Box # Bulk 75 Row P Column 3,4

Analyst BD Scope CH03 Date 11.08.11
RD 11/08/11

Asbestos Analysis via Transmission Electron Microscopy, Qualitative

Lab ID: 041128162-0018
Client: Katahdin Analytical Services
Address:

Order ID 041128162

Logged:
TAT:

Sample ID:
Location:

Results Due

Project: SE6768/SE6841

Voltage (kv):
GO Required: 10
GO Analyzed: 10
Magnification: 20K

Special Instructions

NSD = No Structures Detected N = No diffraction obtained m³ = Liters/1000

Grid I.D.	G.O. I.D.	Structure Number	Non Asbestos	ED OBSERVATION Chrys	ED OBSERVATION Amphi	Sketch	LENGTH ≥0.5 µm < 5 µm	LENGTH ≥ 5 µm	WIDTH µm	Structure Type	SAED Negative Number	EDXA Chrys.,Amo., Etc.
U1	A4	ND								F B C M		
	B6	1	1							F B C M		Ca
	B8									F B C M		
	D6									F B C M		
	F8		1							F B C M		Si
U2	O14									F B C M		
	L15		1							F B C M		Mg, Ca Si, Al
	K11									F B C M		
	F14									F B C M		
	E4	↓								F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
										F B C M		
(Total)		—										

Asbestos Fibers Present
- ☐ Chrysotile
- ☐ Anthophyllite
- ☐ Amosite
- ☐ Crocidolite
- ☐ Actinolite
- ☐ Tremolite

Nonasbestos Fibers Present
- ☐ (1) Gypsum
- ☐ (2) Glass
- ☐ (3) Cellulose
- ☐ (4) Organic Fibers
- ☐ (5) Fibers Containing Ca, Si, Mg, Al

Prepped w/ Acid

Grid Box # Bulk-0075 Row U Column 1, 2

Analyst RD Scope 04.03 Date 11.10.11

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162

Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
1	041128162-0001	DSY-SD-AA01-0012	10/12/2011	109.64	93.13	14.97	1.86	Y
2	041128162-0002	DSY-SD-AA01-1224	10/12/2011	110.96	96.93	12.76	1.65	Y
3	041128162-0003	DSY-SD-AA01-2448	10/12/2011	75.26	61.02	12.87	1.63	Y
4	041128162-0004	DSY-SD-DUP33-101211	10/12/2011	86.24	67.77	16.16	2.7	Y
5	041128162-0005	DSY-SD-AA05-0012	10/12/2011	119.53	98.32	19.09	2.53	Y
6	041128162-0006	DSY-SD-AA05-1224	10/12/2011	100.08	84.64	13.18	2.48	Y
7	041128162-0007	DSY-SD-AA05-2448	10/12/2011	124.57	93.44	25.08	6.31	Y
8	041128162-0008	DSY-SD-AA09-0012	10/13/2011	65.56	49.83	13.68	2.34	Y
9	041128162-0009	DSY-SD-AA09-1224	10/13/2011	100.73	70.26	24.89	5.91	Y
10	041128162-0010	DSY-SD-AA09-2448	10/13/2011	125.05	96.76	22.17	6.49	Y
11	041128162-0011	DSY-SD-AA13-0012	10/13/2011	65.37	49.82	13.41	2.33	Y
12	041128162-0012	DSY-SD-AA13-1224	10/13/2011	113.34	89.41	19.39	4.78	Y
13	041128162-0013	DSY-SD-AA13-2448	10/13/2011	98.20	82.65	13.39	2.57	Y
14	041128162-0014	DSY-SD-AA13-2448DUP	10/13/2011	77.32	63.36	11.73	2.82	Y
15	041128162-0015	DSY-SD-AA17-0013	10/13/2011	96.54	81.39	12.88	2.48	Y
16	041128162-0016	DSY-SD-AA17-1224	10/13/2011	95.61	78.01	14.97	3.04	Y
17	041128162-0017	DSY-SD-AA17-2448	10/13/2011	113.68	89.28	20.83	3.99	Y
18	041128162-0018	DSY-SD-AA21-0012	10/13/2011	63.55	53.08	9.49	1.4	Y
19	041128162-0019	DSY-SD-AA21-1224	10/13/2011	74.76	63.49	9.78	1.83	Y
20	041128162-0020	DSY-SD-AA21-2448	10/13/2011	88.76	78.89	8.24	1.67	Y
21	041128162-0021	DSY-SD-DUP34-101311	10/13/2011	105.22	82.26	19.23	4.02	Y
22	041128162-0022	DSY-SD-AA24-0012	10/13/2011	104.98	83.43	19.38	2.53	Y

EMSL ANALYTICAL, INC.

ASTM Draft Sieve Method Preparation Record

EMSL Order ID 041128162

Prep Date(s) 9/12/2011

Prep Person David Stanhope

	EMSL Sample Number	Customer Sample Number	Date Sample Collected	Post Drying weight	Course Sample Weight	Medium Sample Weight	Fine Sample Weight	Was a subsample taken?
	Order ID +Sample		mm/dd/yy	(g)	(g)	(g)	(g)	Y/N
23	041128162-0023	DSY-SD-AA24-1224	10/13/2011	75.39	60.20	13.51	1.96	Y
24	041128162-0024	DSY-SD-AA24-2448	10/13/2011	105.00	75.29	25.04	4.95	Y
25	041128162-0025	DSY-SD-AA26-0012	10/13/2011	108.33	76.40	29.73	2.71	Y
26	041128162-0026	DSY-SD-AA26-1224	10/13/2011	140.83	93.00	39.86	8.39	Y
27	041128162-0027	DSY-SD-AA26-2448	10/13/2011	121.13	79.09	31.17	11.03	Y
28	041128162-0028	DSY-SD-AA28-0016	10/13/2011	125.92	43.07	67.23	15.61	Y
29	041128162-0029	DSY-SD-DUP35-101311	10/13/2011	123.34	46.17	64.05	13.37	Y
30	041128162-0030	DSY-SD-AA30-0012	10/13/2011	292.02	11.36	263.61	17.26	Y
31	041128162-0031	DSY-SD-AA30-1224	10/13/2011	285.69	4.03	262.76	17.17	Y

4. QC Data Reports/Logs

Monthly PLM Bulk QC Summary

Laboratory: Cinnaminson, NJ **Report #** 1 **Month/Year:** Nov-11

	Date	Reference #	Sample #	Original		QC		Variance		Conclusion
				Analyst	Result	Analyst	Result	Original	QC	
1	11/4/11	041128162-0003	DSY-SD-AA01-2448	GV	0	TY	0	0.00	0.00	Pass
2	11/4/11	041128162-0006	DSY-SD-AA05-1224	GV	0	FD	0	0.00	0.00	Pass
3	11/7/11	041128162-0025C	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
4	11/7/11	041128162-0025M	DSY-SD-AA26-0012	LM	0.5	LM	0.5	0.00	N/A	Pass
5	11/7/11	041128162-0025F	DSY-SD-AA26-0012	LM	0	LM	0	0.00	N/A	Pass
6	11/7/11	041128162-0030	DSY-SD-AA30-0012	DP	0.5	DP	0.5	0.00	N/A	Pass

EMSL PLM ANALYST ACCURACY

Analyst: Leslie McCluskey

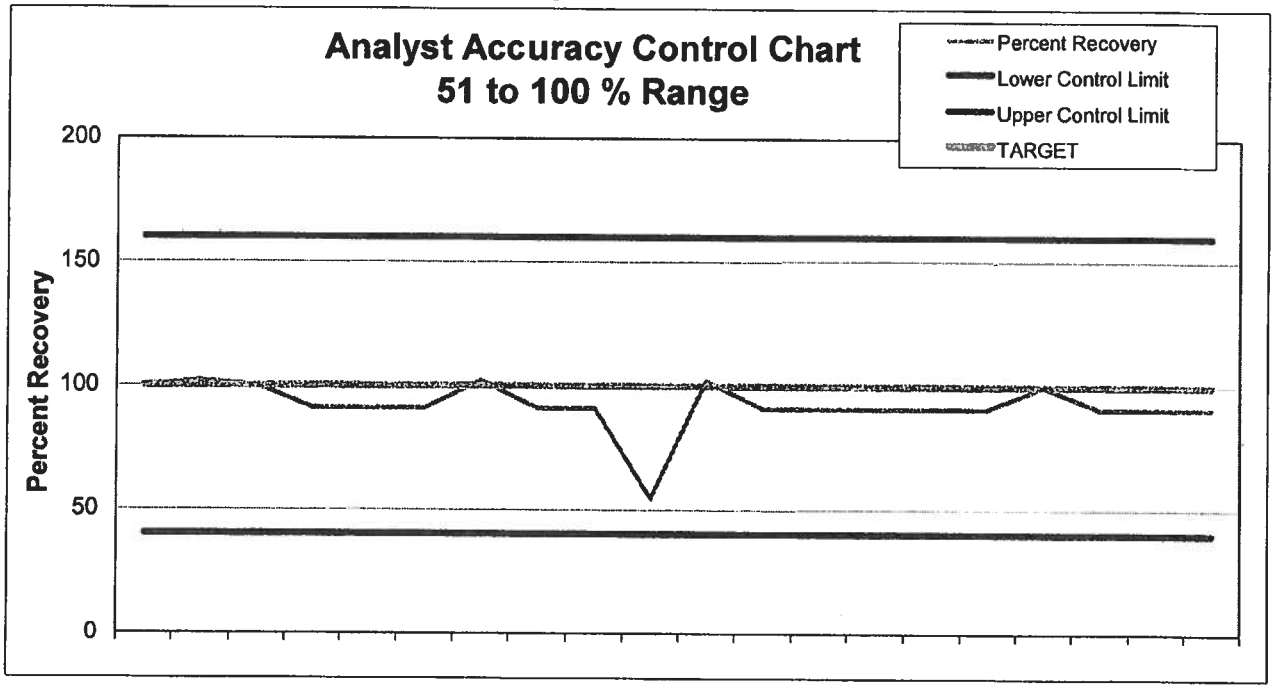
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
1/5/11	6	Chrysotile	55.00	Chrysotile	55.00	IN	100	0	IN
1/6/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
1/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
1/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
2/8/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
3/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
3/26/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	30.00	IN	55	45	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
5/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
6/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/1/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
10/21/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **8.5** *Target = 0*



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EMSL PLM ANALYST ACCURACY

Analyst: Melissa Klinedinst

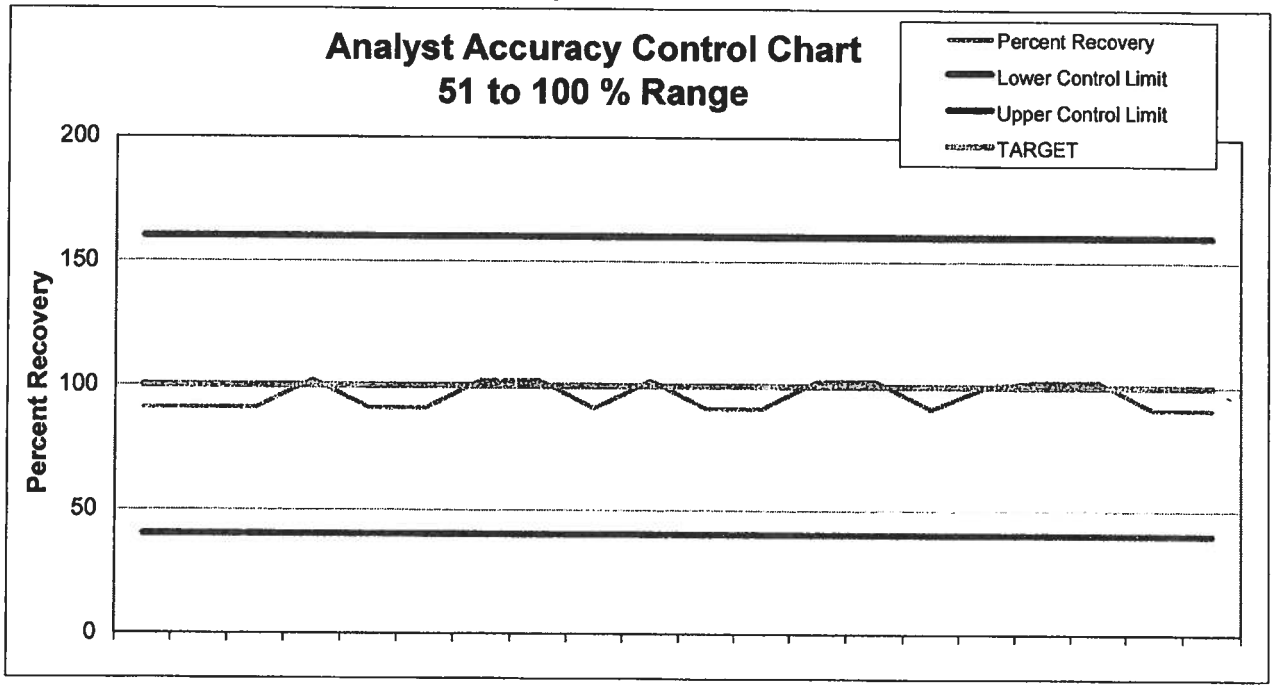
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
6/29/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
7/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/4/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/11/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/14/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
8/21/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
8/24/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
9/29/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/2/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/3/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/9/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/10/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
11/2/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/3/11	3	Chrysotile	95.00	Chrysotile	97.00	IN	102	2	IN
11/6/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	50.00	IN	91	9	IN

Average Accuracy Coeficent = **5.8** ***Target = 0***



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EMSL PLM ANALYST ACCURACY

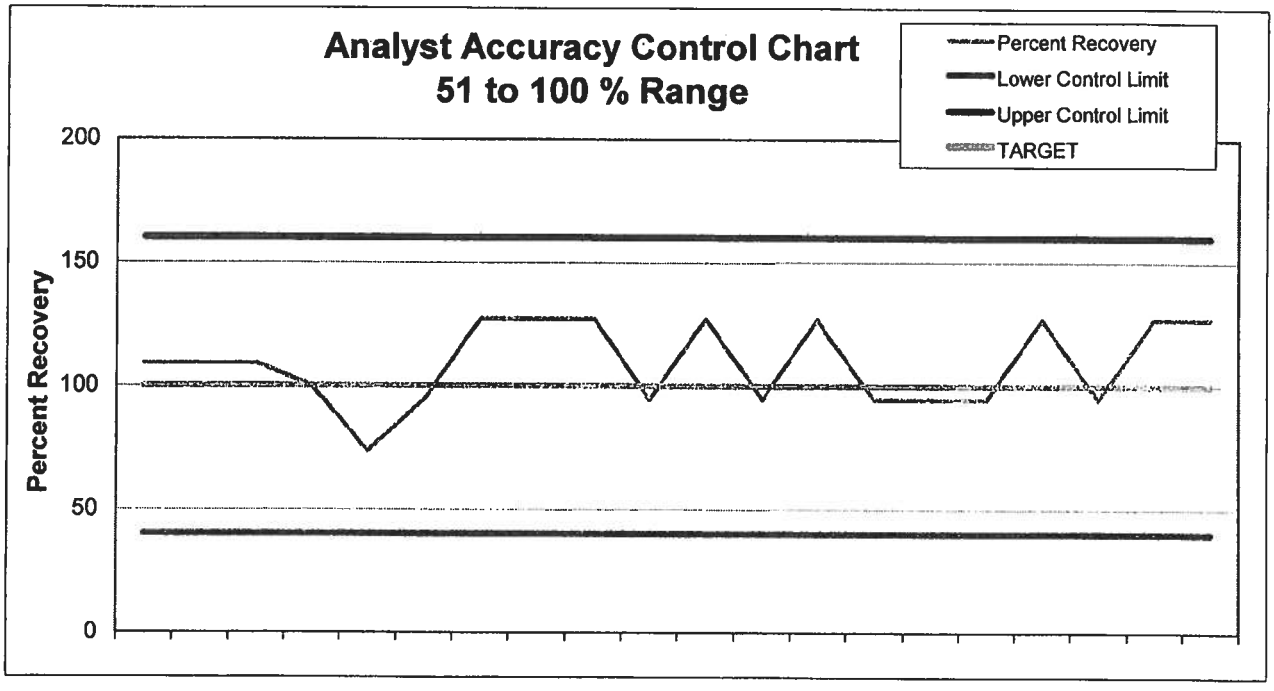
Analyst: Dave Poitras
Range: 51 - 100 %

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	**Sample ID**	**Asbestos Type**	**%**	**Asbestos Type**	**%**	**Qualitative In Control?**	**Percent Recovery**	**Accuracy Coef.**	**Quantitative In Control?**
3/28/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/9/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/12/11	6	Chrysotile	55.00	Chrysotile	60.00	IN	109	9	IN
4/30/11	3	Chrysotile	95.00	Chrysotile	95.00	IN	100	0	IN
5/3/11	3	Chrysotile	95.00	Chrysotile	70.00	IN	74	26	IN
6/28/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
6/29/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/2/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
7/12/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
7/26/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/2/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/15/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
8/20/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
8/22/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/8/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
10/12/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
10/19/11	3	Chrysotile	95.00	Chrysotile	90.00	IN	95	5	IN
11/5/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN
11/7/11	6	Chrysotile	55.00	Chrysotile	70.00	IN	127	27	IN

Average Accuracy Coeficent = **15.4** *Target = 0*



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EMSL PLM ANALYST ACCURACY

Analyst: Garret Vliet

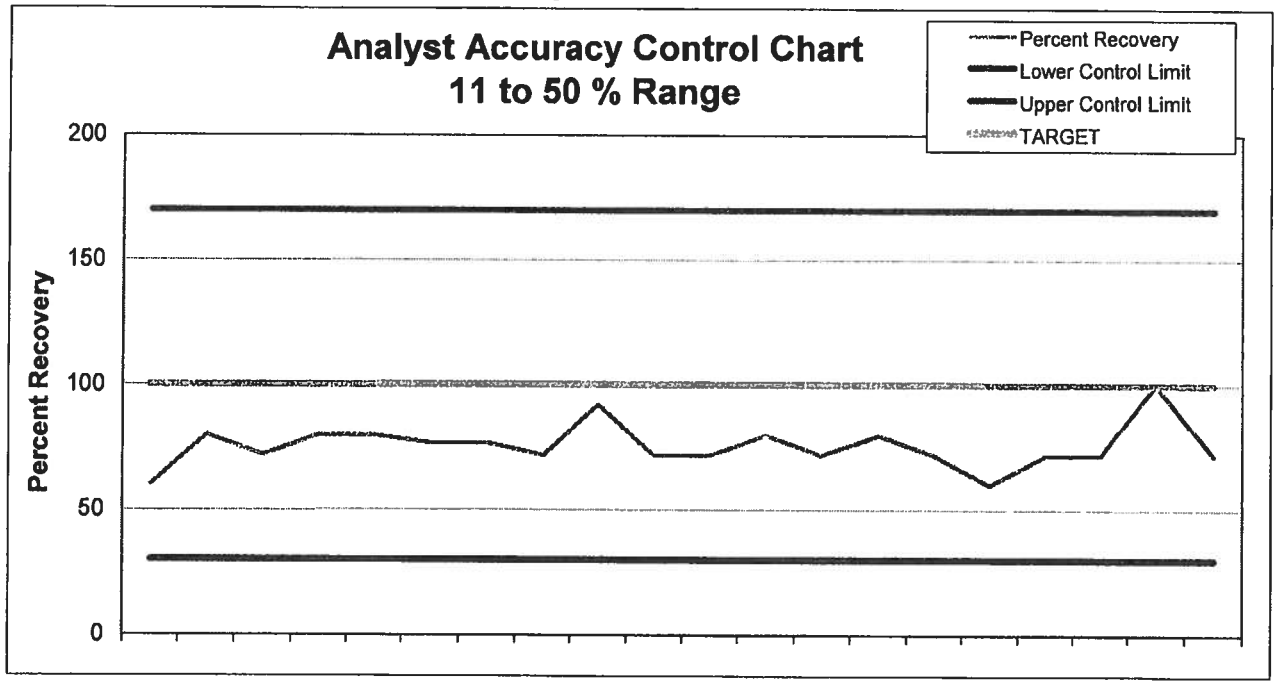
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/24/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	12.00	IN	92	8	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
9/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	18.00	IN	72	28	IN

Average Accuracy Coeficent = **24.3** *Target = 0*



EMSL PLM ANALYST ACCURACY

Analyst: Frank DiCrescenzo

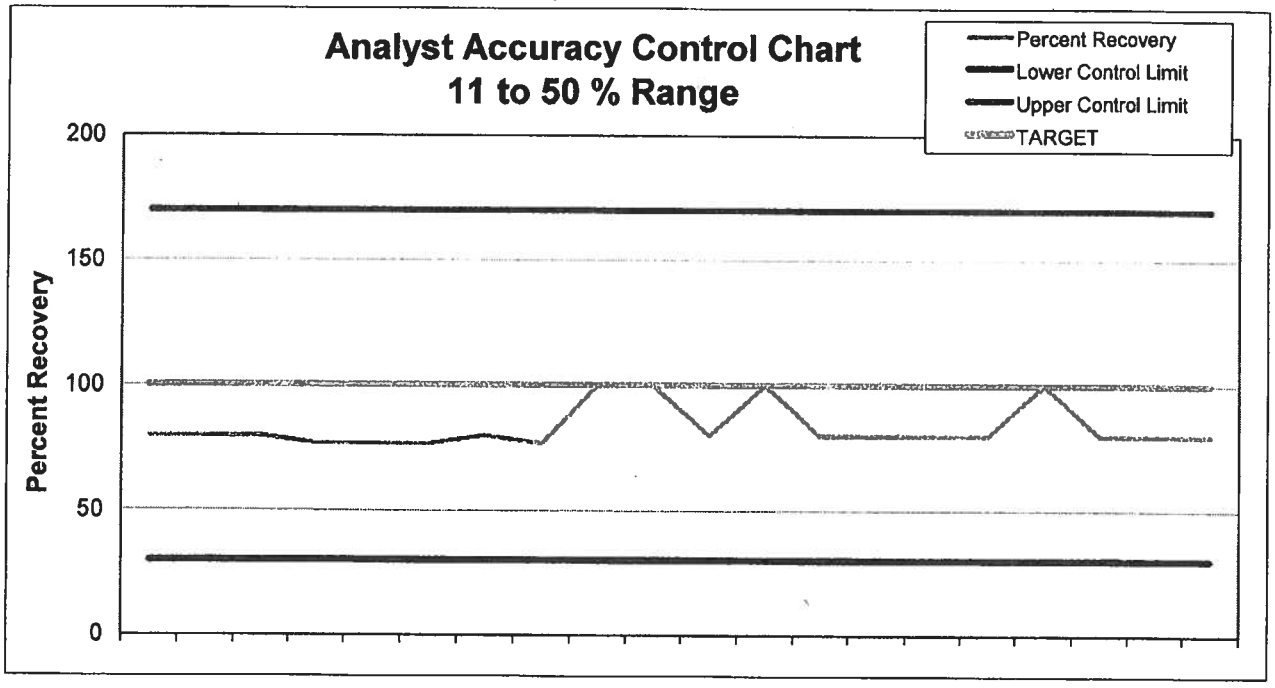
Range: 11 - 50%

Enter multiple asbestos types w/ the predominant type first.
(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/27/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
5/31/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/18/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/20/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
6/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	10.00	IN	77	23	IN
7/1/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/9/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	25.00	IN	100	0	IN
10/11/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	20.00	IN	80	20	IN

Average Accuracy Coeficent = **16.6** *Target = 0*



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EMSL PLM ANALYST ACCURACY

Analyst: Ted Young

Range: 11 - 50%

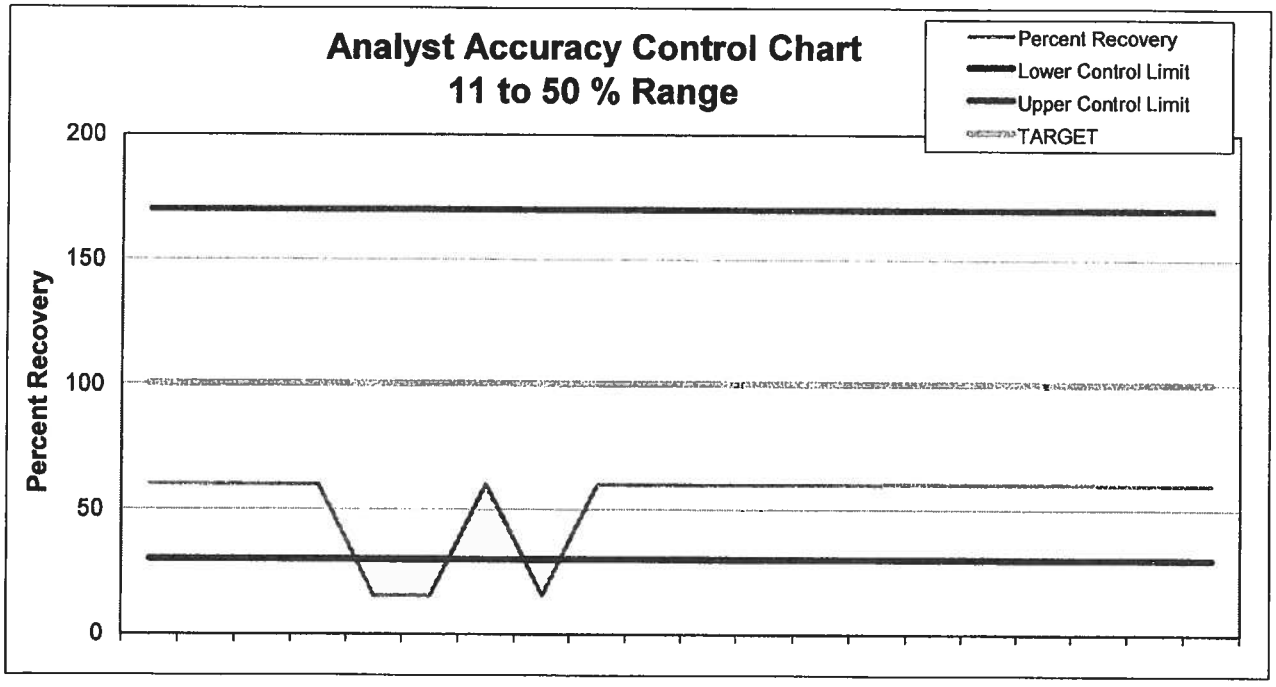
Enter multiple asbestos types w/ the predominant type first.

(ex. Chrys / Amos when %Chrys is > %Amosite)

Accuracy Coefficient -

		Reference Values		Analysis Results			Target		
							100%	0%	
Date	Sample ID	Asbestos Type	%	Asbestos Type	%	Qualitative In Control?	Percent Recovery	Accuracy Coef.	Quantitative In Control?
5/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/26/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/27/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
5/28/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/8/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/20/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
6/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
6/30/11	2	Chrysotile	13.00	Chrysotile	2.00	IN	15	85	OUT
7/1/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/13/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
7/25/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/3/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/12/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
8/23/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/16/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/21/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
9/30/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
10/20/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN
11/4/11	9	Chrysotile	25.00	Chrysotile	15.00	IN	60	40	IN

Average Accuracy Coeficent = **46.7** ***Target = 0***



Controlled Document
Confidential Business Information/Property of EMSL Analytical, Inc.

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
10.5 6 20.3	(C)			1	50			20			1.551 ⊥ R.I. / 1.558 ∥ R.I.
	(T)										M / S
	(H)										2 P / 1 B / (FC) 50 / 1 E
11.7 6 20.3	(C)			1	50			20			1.550 ⊥ R.I. / 1.557 ∥ R.I.
	(T)										1 M / 1 S
	(H)										2 P / 1 B / (FC) 50 / 1 E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E
	(C)							20			⊥ R.I. / ∥ R.I.
	(T)										M / S
	(H)										P / B / (FC) / E

Analyst: LM Date: Computer: Date:

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11. Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC, Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties	
11/2/11 3	(C)			1	97			20	3		1.548 ⊥ R.I.	.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(FC) 0 1 E
11/3 3	(C)			1	97			20	3		1.548 R.I.	1.556 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(FC) 0 1 E
11/6 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(FC) 0 1 E
11/7 6	(C)			1	50			20	50		1.550 ⊥ R.I.	1.555 ∥ R.I.
	(T)										1 M	1 S
	(H)										2P 1 B	(FC) 0 1 E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E
	(C)							20			⊥ R.I.	∥ R.I.
	(T)										M	S
	(H)										P B	(FC) E

21.6°

21.6°

21.3°

21.6°

Analyst: MK Date: Nov 11 Computer: _____ Date: _____

Room Temp (C): _____

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy 2. Straight 3. Uniform Diameter 4. Ribbon-Like 5. Tapered Ends 6. Jointed 7. Fibril 8. Modulo 9. Rectic Shape 10. Other

Sign of Elongation (S): 1. + 2. - 3. Variable

Pleochroism (P): 1. Yes 2. No

Birefringence (B): 1 Low 0.010 2 Mod 0.010-0.050 3 High >0.050 4 None 0.00 or Isotropic

Fiber Color (FC): 1 White 2 Brown 3 Pinks 4 Blue 5 Green 6 Colorless

Extinction (E): 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties				
1/1 8	(C)			act/tre	3			20	97		⊥ R.I.	∥ R.I.	21.1°C		
	(T)										M	S			
	(H)										P B	(FC) E			
1/5 6	(C)			chry	20			20	80		⊥ R.I.	∥ R.I.	25.8°C		
	(T)										M	S			
	(H)										P B	(FC) E			
1/7 6	(C)			chry	20			20	80		⊥ R.I.	∥ R.I.	19.8°C		
	(T)										M	S			
	(H)										P B	(FC) E			
1/8 1	(C)			act/tre	<1			20	100		⊥ R.I.	∥ R.I.	20°C		
	(T)										M	S			
	(H)										P B	(FC) E			
1/9 10	(C)			anth	5			20	95		⊥ R.I.	∥ R.I.	22.8°C		
	(T)										M	S			
	(H)										P B	(FC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(FC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(FC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(FC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(FC) E			
	(C)							20			⊥ R.I.	∥ R.I.			
	(T)										M	S			
	(H)										P B	(FC) E			

Analyst: David Potter Date: _____ Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Bifurcated, 5. Tapered Ends, 6. Parallel, 7. Fibril, 8. Irregular, 9. Beads (Segs), 10. Other

Sign of Elongation (S): 1. +, 2. -, 3. Variable

Pleochroism (P): 1. Yes, 2. No

Birefringence (B): 1. Low ≤0.010, 2. Mid 0.010-0.050, 3. High >0.050, 4. Wave 0.02 or Isotropic

Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless

Extinction (E): 1. Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11/1 (8)	(C) (T) W/A (H)			5	2			20	98		1.605 ⊥ R.I. 1.618 ∥ R.I.; 2 M 1 S; 2P 2 B (FC) 1 B E
11/2 (3)	(C) (T) A (H)			1	65			20	35		1.557 ⊥ R.I. 1.558 ∥ R.I.; M S; P B (FC) E
11/3 (3)	(C) (T) A (H)			1	75			20	25		1.552 ⊥ R.I. 1.557 ∥ R.I.; M S; 2P 1 B (FC) 1 E
11/4 (9)	(C) (T) A (H)			1	18			20	82		1.552 ⊥ R.I. 1.557 ∥ R.I.; M S; 2P 1 B (FC) 1 E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ∥ R.I.; M S; P B (FC) E

Analyst: G. Uliet Date: 11/1/11 Computer: _____ Date: _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Logged:

TAT: QC

Date/Time Due:

Fax:

Project: Ref Slides

Special Instructions	Order Number

Macroscopic

COLOR (C): 1 Brown, 2 Gray, 3 Tan, 4 White, 5 Red, 6 Various, 7 Black, 8 Silver, 9 Blue, 10 Yellow

TEXTURE (T): 1 Fibrous, 2 Non-Fibrous, 3 Other

HOMOGENEITY (H): 1 Homogeneous, 2 Heterogeneous, 3 OTHER, 4 Layers (#)

Treatment: 1 Teased, 2 Crushed, 3 Dissolve, 4 Ashed, 5 Heated, 6 Melted

COMPONENT TYPES

Asbestos: 1 Chrysotile, 2 Amosite, 3 Anthophyllite, 4 Tremolite, 5 Actinolite, 6 Crocidolite

Fibrous: 7 Cellulose, 8 Glass, 9 Min. Wool, 10 Synthetic, 11 Other, 12 Wollastonite, 13 Hair

Non-Fibrous: 14 Quartz, 15 Mica, 16 Gypsum, 17 Cal. Carbonate, 18 Matrix, 19 Perlite, 20 Other

MICROSCOPIC Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
8	(C) (T) (H)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
8	(C) (T) (H)			5	2	~	~	20	98		⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
3	(C) (T) (H)			1	60	~	~	20	40		⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
3	(C) (T) (H)			1	60	~	~	20	40		1.560 ⊥ R.I. / 1.557 ∥ R.I. / M / S / 2P / B / (PC) / E
9	(C) (T) (H)			1	20	~	~	20	80		1.550 ⊥ R.I. / 1.557 ∥ R.I. / M / S / 2P / B / (PC) / E
6	(C) (T) (H)			1	50	~	~	20	50		1.560 ⊥ R.I. / 1.557 ∥ R.I. / M / S / 2P / B / (PC) / E
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E
	(C) (T) (H)							20			⊥ R.I. / ∥ R.I. / M / S / P / B / (PC) / E

0/31 FD

11/1 FD

1/2 FD

1/3 FD

1/4 FD

1/5 FD

Analyst: FD Date: 11-5-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc. PLM7.9.0

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

REFERENCE SLIDES

Special Instructions	Order Number

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (S)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC

Optical Properties

Morphology (M): 1. Wavy 2. Straight 3. Uniform Diameter 4. Bifurcated 5. Tapered Ends 6. Curled 7. Mixed 8. Matted 9. Needle Shape 10. Other

Sign of Elongation (E): 1. + 2. - 3. Variable

Pleochroism (P): 1. Yes 2. No

Birefringence (B): 1. Low 2. Moderate 3. High 4. Above Quartz

Fiber Color (FC): 1. White 2. Brown 3. Beige 4. Blue 5. Green 6. Colorless

Extinction (E): 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
11-1-11	(C)			4/5	2			20	98		1.613 ⊥ R.I. 1.635 ∥ R.I.
8-1.00	(T)										2 M 1 S
	(H)										2 P 2 B (FC) 6 3 E
11-2-11	(C)			1	60			20	40		1.548 ⊥ R.I. 1.574 ∥ R.I.
3-1.00	(T)										1 M 1 S
	(H)										2 1 B (FC) 6 1 E
11-3-11	(C)			1	60			20	40		1.549 ⊥ R.I. 1.570 ∥ R.I.
3-1.00	(T)										1 M 1 S
	(H)										2 1 B (FC) 6 1 E
11-4-11	(C)			1	15			20	85		1.550 ⊥ R.I. 1.557 ∥ R.I.
9-1.00	(T)										1 M 1 S
	(H)										2 1 B (FC) 6 1 E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: Tu Young Date: Nov. 2011 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions

ASTM sieve

Order Number

041128162

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 layers (8)

Treatment

1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
BLANK 1 MED.	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
BLANK 2 MED.	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
BLANK 3 MED.	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
BLANK 1 Fine	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
BLANK 2 Fine	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
BLANK 3 Fine	(C) 3 (T) 2 (H) 1	1		ND	—			20	100	NF	⊥ R.I. ‖ R.I. M S P B (FC) E — G.V.
	(C) (T) (H)							20			⊥ R.I. ‖ R.I. M S P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ‖ R.I. M S P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ‖ R.I. M S P B (FC) E
	(C) (T) (H)							20			⊥ R.I. ‖ R.I. M S P B (FC) E

Analyst: G. Vliet Date: 11/4/11 Computer: _____ Date: _____

Room Temp (C): 22.3 °C

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client: Logged: TAT: **QC**

Address: Date/Time Due:

Fax:

Project:

Special Instructions	Order Number
ASTM	28162

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (H)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties

Morphology (M): 1. Wavy, 2. Straight, 3. Uniform Diameter, 4. Ribbon-Like, 5. Tapered Ends, 6. Sealed, 7. Fibril, 8. Modulis, 9. Exotic Shape, 10. Other
Sign of Elongation (S): 1. +, 2. -, 3. Variable
Pleochroism (P): 1 Yes, 2 No
Birefringence (B): 1 Low: 0.010, 2 Med: 0.010-0.050, 3 High: 0.050, 4 None: 0.005 or Isotropic
Fiber Color (FC): 1 White, 2 Brown, 3 Beige, 4 Blue, 5 Green, 6 Colorless
Extinction (E): 1 Parallel, 2. Symmetrical, 3. Oblique, 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties
intro QC 25 C	(C) 2			1	<1	~~MV~~ 11	2	20	98	M10	1.551 ⊥ R.I. 1.559 ∥ R.I.
	(T) 1										M 1 S
	(H) 2										2 P 1 B (FC) 4 1 E
M	(C) 2			1	<1	11	5	20	95	M10	1.550 ⊥ R.I. 1.554 ∥ R.I.
	(T) 1										M 1 S
	(H) 2										2 P 1 B (FC) 4 1 E
F	(C) 2			ND		11	5	20	95	M10	⊥ R.I. ∥ R.I.
	(T) 1										M S
	(H) 1										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E
	(C)							20			⊥ R.I. ∥ R.I.
	(T)										M S
	(H)										P B (FC) E

Analyst: LM Date: Computer: Date:

Room Temp (C):

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged: **TAT:** QC

Date/Time Due:

Special Instructions	Order Number
ASTM	04112B162

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties

Morphology (M): 1. Wavy 2. Straight 3. Uniform Diameter 4. Ribbon-Like 5. Tapered Ends 6. Solid 7. Fibril 8. Matrix 9. Fiber Bundle 10. Other
Sign of Elongation (S): 1. + 2. - 3. Variable
Pleochroism (P): 1. Yes 2. No
Birefringence (B): 1. Low: 0.010 2. Mod 0.010-0.050 3. High >0.050 4. None 0.00 or Isotropic
Fiber Color (FC): 1 White 2 Brown 3 Beige 4 Blue 5 Green 6 Colorless
Extinction (E): 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties ⊥ R.I.	Optical Properties ∥ R.I.	M	S	P	B	(FC)	E
QC-2 COARSE	(C) 2	1/2/3		NO		—	—	20	100	NF								
	(T) 2																	
	(H) 2																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
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	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	

FD

Analyst: FD Date: 11-4-11 Computer: _____ Date: _____

Room Temp (C): _____

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Client:

Address:

Fax:

Project:

Logged:

TAT: QC

Date/Time Due:

Special Instructions	Order Number
ASTM	041128162

Macroscopic

COLOR (C)
1 Brown 4 White 7 Black
2 Gray 5 Red 8 Silver
3 Tan 6 Various 9 Blue
10 Yellow

TEXTURE (T)
1 Fibrous 2 Non-Fibrous 3 Other

HOMOGENEITY (H)
1 Homogeneous 3 OTHER
2 Heterogeneous 4 Layers (#)

Treatment
1 Teased
2 Crushed
3 Dissolve
4 Ashed
5 Heated
6 Melted

COMPONENT TYPES

Asbestos
1 Chrysotile
2 Amosite
3 Anthophyllite
4 Tremolite
5 Actinolite
6 Crocidolite

Fibrous
7 Cellulose
8 Glass
9 Min. Wool
10 Synthetic
11 Other
12 Wollastonite
13 Hair

Non-Fibrous
14 Quartz
15 Mica
16 Gypsum
17 Cal. Carbonate
18 Matrix
19 Perlite
20 Other

MICROSCOPIC
Optical Properties
Morphology (M): 1. Wavy 2. Straight 3. Uniform Diameter 4. Bifurcated Ends 5. Tapered Ends 6. Sealed 7. Fibril 8. Matrix 9. Fibrils Bundle 10. Other
Sign of Elongation (E): 1. + 2. - 3. Variable
Pleochroism (P): 1. Yes 2. No
Birefringence (B): 1 Low: 0.010 2 Med 0.010-0.050 3 High >0.050 4 None 0.00 or Isotropic
Fiber Color (FC): 1 White 2 Brown 3 Beige 4 Blue 5 Green 6 Colorless
Extinction (E): 1. Parallel 2. Symmetrical 3. Oblique 4. Undulose

Sample	Macrosc.	Treat	Stereo Asbestos Est. %	Asbestos Type	% of Asbestos	Other Fibrous Type	Other Fibrous %	Non-Fibrous Type	Non-Fibrous %	Non-Asb Char. Ex. E4	Optical Properties ⊥ R.I.	Optical Properties ∥ R.I.	M	S	P	B	(FC)	E
QC-3 COARSE	(C) 2	2,3,0		NID				20	100									
	(T) 2																	
	(H) 2																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
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	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	
	(C)							20										
	(T)																	
	(H)																	

Analyst: Tw Young Date: 12-4-11 Computer: _____ Date: _____

Room Temp (C): _____

EMSL Analytical, Inc.

PLM7.9.0

5. Client and EMSL Internal Chains of Custody

Katahdin ANALYTICAL SERVICES

600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

04112816 2

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page 1 of 1

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:
SE6841	

LAB USE ONLY WORK ORDER #: SE6768 / ~~SE6841~~

KATAHDIN PROJECT NUMBER

REMARKS: To EMSL

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
					Asbestos									
•	DSY-SD-AA01-0012	10-12-11/14:20	SL	1	✓		SDG: DSY-23							
•	-AA01-1224	/14:23		1	✓									
•	-AA01-2448	/14:28		1	✓									
•	-DUP33-10211	/00:00		1	✓									
•	-AA05-0012	/14:45		1	✓									
•	-AA05-1224	/14:48		1	✓									
•	-AA05-2448	/14:51		1	✓									
		/												
•	DSY-SD-AA09-0012	10-13-11/11:55	SL	1	✓		SDG: DSY-24							
•	-AA09-1224	/11:58		1	✓									
•	-AA09-2448	/12:01		1	✓									
•	-AA13-0012	/12:20		1	✓									
•	-AA13-1224	/12:23		1	✓									
• •	-AA13-2448	/12:26		2	✓	MS/MSD								
•	-AA17-0012	/12:45		1	✓									
•	-AA17-1224	/12:48		1	✓									

COMMENTS DOD QSM 4.1 ND to LOD QC Level IV Tetra Tech ADAPT EDD

Due ~~Fri~~ 11-1-11

31

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11/15:15	C LaCava 10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

04112816 2

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client	Contact	Phone #	Fax #
	Jen Obrin	( )	( )

Address	City	State	Zip Code

Purchase Order #	Proj. Name / No.	Katahdin Quote #
	DSY	

Bill (if different than above)	Address

Sampler (Print / Sign)	Copies To:

LAB USE ONLY WORK ORDER #: SE6841

KATAHDIN PROJECT NUMBER _____

REMARKS: _____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: _____

TEMP°C _____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	ANALYSIS AND CONTAINER TYPE / PRESERVATIVES: Asbestos (Filt. ☐Y ☐N)	
1	DSY-SD-AA17-2448	10-13-11 / 12:51	SL	1	✓	
2	-AA21-0012	/ 13:05				SDG: DSY-24
3	-AA21-1224	/ 13:08				
4	-AA21-2448	/ 13:11				
5	-DUP34-101311	/ 00:00				
6	-AA24-0012	/ 13:25				
7	-AA24-1224	/ 13:28				
8	-AA24-2448	/ 13:31				
9	-AA26-0012	/ 14:00				
10	-AA26-1224	/ 14:03				
11	-AA26-2448	/ 14:06				
12	-AA28-0016	/ 14:30				Jar marked 0012
13	-DUP35-101311	/ 00:00				
14	-AA30-0012	/ 14:45				
15	-AA30-1224	/ 14:48				Jar rec'd broken
		/				

RECEIVED OCT 20 AM 9:12

COMMENTS See Page 1 called client/left message for Teste TAT CJK

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	10-18-11 / 15:15	10/20/11			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

KAS-COC1

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

REPORT TO INSTRUCTIONS

- ☐ Send Receipt Confirmation Emails
- ☐ Email Report Only-Do not send hard copy
- ☐ No electronic signatures
- ☐ Project ID required
- ☐ Cust. COC ID required
- ☐ Miscellaneous account

Sales Rep and Comment: ssteinmetz

Instructions
Received 2 day extention on due date

BILL TO INSTRUCTIONS

- ☐ Exempt from prep charge
- ☐ Exempt from off hour mln charges
- ☐ Exempt from layer/aliquot charges
- ☐ Email Invoice Only- Do not send hard copy.
- ☐ Credit Card on File
- ☐ P.O. Required

Billing Frequency: With Report -- Print and send an invoice for each Order ID

Use Billing Contact:
Accounting Terms: N30
Payment Directions: With Report
Instructions

Internal Comment

Test: PLM ASTM Sieve Quantitative **Matrix** Soils **TAT:** 2 Week **Qty:** 31

- ☐ Lab Opening Exempt For Test
- ☐ Prep Charge Exempt For Test
- ☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments
weights are estimated using a blank sample jar as tare weight. Sludge could not be completely removed.

Prepped: DS **Date** 11/3/11
Analyzed: G.Vietti/MM MC **Date** 11/4/11 115, 117
Data Entry AD **Date** 11.8.11
Screened: **Date**
Mailed: KB **Date** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date 11/5/11
041128162-0001	DSY-SD-AA01-0012		~~11/3/2011~~ 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0005	DSY-SD-AA05-0012		11/3/2011 2:00:00 PM
041128162-0006	DSY-SD-AA05-1224		11/3/2011 2:00:00 PM
041128162-0007	DSY-SD-AA05-2448		11/3/2011 2:00:00 PM
041128162-0008	DSY-SD-AA09-0012		11/3/2011 2:00:00 PM
041128162-0009	DSY-SD-AA09-1224		11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *10/21/2011 2:13:57 PM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400

Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

041128162-0010	DSY-SD-AA09-2448	11/3/2011 2:00:00 PM
041128162-0011	DSY-SD-AA13-0012	11/3/2011 2:00:00 PM
041128162-0012	DSY-SD-AA13-1224	11/3/2011 2:00:00 PM
041128162-0013	DSY-SD-AA13-2448	11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP	11/3/2011 2:00:00 PM
041128162-0015	DSY-SD-AA17-0013 12	11/3/2011 2:00:00 PM
041128162-0016	DSY-SD-AA17-1224	11/3/2011 2:00:00 PM
041128162-0017	DSY-SD-AA17-2448	11/3/2011 2:00:00 PM
041128162-0018	DSY-SD-AA21-0012	11/3/2011 2:00:00 PM
041128162-0019	DSY-SD-AA21-1224	11/3/2011 2:00:00 PM
041128162-0020	DSY-SD-AA21-2448	11/3/2011 2:00:00 PM
041128162-0021	DSY-SD-DUP34-101311	11/3/2011 2:00:00 PM
041128162-0022	DSY-SD-AA24-0012	11/3/2011 2:00:00 PM
041128162-0023	DSY-SD-AA24-1224	11/3/2011 2:00:00 PM
041128162-0024	DSY-SD-AA24-2448	11/3/2011 2:00:00 PM
041128162-0025	DSY-SD-AA26-0012	11/3/2011 2:00:00 PM
041128162-0026	DSY-SD-AA26-1224	11/3/2011 2:00:00 PM
041128162-0027	DSY-SD-AA26-2448	11/3/2011 2:00:00 PM
041128162-0028	DSY-SD-AA28-0016	11/3/2011 2:00:00 PM
041128162-0029	DSY-SD-DUP35-101311	11/3/2011 2:00:00 PM
041128162-0030	DSY-SD-AA30-0012	11/3/2011 2:00:00 PM
041128162-0031	DSY-SD-AA30-1224	11/3/2011 2:00:00 PM

INTERNAL CHAIN OF CUSTODY

Order ID: 041128162 *11/8/2011 11:23:35 AM*

Attn: Jennifer Obrin
Katahdin Analytical Services
600 Technology Way
Scarborough, ME 04074
Fax: (207) 775-4029 Phone: (207) 874-2400
Project: **SE6768/SE6841**

Customer ID: KATA50
Customer PO:
Received: 10/20/11 2:00 PM

EMSL Order: 041128162
EMSL Proj ID:
Cust COC ID

Test: **TEM ASTM Sieve Qualitative** **Matrix** Soils **TAT:** 2 Week **Qty:** 5

☐ Lab Opening Exempt For Test
☐ Prep Charge Exempt For Test
☐ Layer/Aliquot Charge Exempt For Test

Logged: dbayer **Date:** 10/21/2011
Sample Condition: ☒ Acceptable ☐ Unacceptable

Comments

Prepped: DS **Date:** 11/8/11
Analyzed: RD **Date:** 11.8.11
Data Entry ↓ **Date:** 11.8.11
Screened: **Date:**
Mailed: KB **Date:** 11/10/11

Special Test Instructions

Lab Sample #	Cust. Sample #	Location	Due Date
041128162-0001	DSY-SD-AA01-0012		11/3/2011 2:00:00 PM
041128162-0002	DSY-SD-AA01-1224		11/3/2011 2:00:00 PM
041128162-0003	DSY-SD-AA01-2448		11/3/2011 2:00:00 PM
041128162-0004	DSY-SD-DUP33-101211		11/3/2011 2:00:00 PM
041128162-0014	DSY-SD-AA13-2448DUP		11/3/2011 2:00:00 PM

0411 Bulk 0076 E

Reprep w/acid

0411 Bulk 0075 O

6. Equipment Performance Checks

PLM Calibration & Contamination Record

Lab: Cinnaminson Month / Year: November / 2011

PLM Scope #: 02

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	C.H.	✓	✓	✓	✓	✓	✓	420	589
11/2/11	C.H.	✓	✓	✓	✓	✓	✓		
11/3/11	C.H.	✓	✓	✓	✓	✓	✓		
11/4/11	C.H.	✓	✓	✓	✓	✓	✓		
11/5/11	LM	✓	✓	✓	✓	✓	✓		
11/7/11	LM/C.H	✓	✓	✓	✓	✓	✓		
11/8/11	C.H	✓	✓	✓	✓	✓	✓		
11/9/11									
11/10/11									
11/11/11									
11/									
11/									
11/									
11/									
11/									
11/									

26.1°C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Conn Month / Year: Nov 2011

PLM Scope #: 10

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/2/11	MK	✓	✓	✓	✓	✓	✓	4610	6020
11/3	MK	✓	✓	✓	✓	✓	✓		
11/6	MK	✓	✓	✓	✓	✓	✓		
11/7	MK	✓	✓	✓	✓	✓	✓		
11/9	MK	✓	✓	✓	✓	✓	✓		

21.6 °C

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinn. NJ- Month / Year: November 2011

PLM Scope #: 5

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/2011	DP	✓	center	✓	align	✓	✓	460	620
11/2/2011	DP	✓	center	✓	✓	✓	✓		
11/5/2011	DP	✓	center	✓	✓	✓	✓		
11/7/2011	DP		center	✓	✓	✓	✓		
11/8/2011	DP	✓	center	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson 04 Month / Year: Nov. 2011

PLM Scope #: 01

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1/11	G.V.	/	/	/	/	/	///	460	600
11/2/11	G.V.	/	/	/	/	/	//		
11/3/11	G.V.	/	/	/	/	/	///		
11/4/11	G.V.	/	/	/	/	/	//		
11/7/11	G.V.	/	/	/	/	/	///		
11/9/11	G.V.	/	/	/	/	/	///		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

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PLM Calibration & Contamination Record

Lab: Cinnaminson-Asbestos Month / Year: 11/11

PLM Scope #: 06

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11-1-11	FD	✓	✓	✓	✓	✓	✓	460	620
11-2-11	FD	✓	✓	✓	✓	✓	✓		
11-3-11	FD	✓	✓	✓	✓	✓	✓		
11-4-11	FD	✓	✓	✓	✓	✓	✓		
11-5-11	FD	✓	✓	✓	✓	✓	✓		
11-8-11	FD	✓	✓	✓	✓	✓	✓		
11-9-11	FD	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

PLM Calibration & Contamination Record

Lab: Livermore Month / Year: Nov / 2011

PLM Scope #: 4 Tai Yang

		Daily						Monthly	
								Record Wavelength (Amosite DS)	
Date	Analyst	Illumination	Stage / Objective Centered	Condenser Focused / Centered	Analyzer/ Polarizer 90°	Ocular Alignment (NIST Anthophyllite)	Daily Contamination Check*	∥	⊥
11/1	TY	✓	✓	✓	✓	✓	✓	4.55	5.80
11/2	TY	✓	✓	✓	✓	✓	✓		
11/3	TY	✓	✓	✓	✓	✓	✓		
11/4	TY	✓	✓	✓	✓	✓	✓		
11/7	TY	✓	✓	✓	✓	✓	✓		
11/8	TY	✓	✓	✓	✓	✓	✓		

* Daily contamination check includes checks of the following: Tools, Fine Table Salt, R.I. Oils, Work Surfaces, and Slides.

Daily TEM Calibration Sheet

Month: November Year: 2011 Scope: 04-03

Day (1-31)	Analyst Initials	Scope Align.	LN Dewar Filled	Al Peak Actual	Al Peak Accepted Limit	Cu Peak Actual	Cu Peak Accepted Limit	Pass/Fail* (circle)
1	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	(Pass)/Fail
2	CG	✓	CG	1.48	1.47-1.49	8.05	8.03-8.05	(Pass)/Fail
3	CG	✓	FC	1.48	1.47-1.49	8.04	8.03-8.05	(Pass)/Fail
4	CG	✓	CG	1.48	1.47-1.49	8.04	8.03-8.05	(Pass)/Fail
5			FC		1.47-1.49		8.03-8.05	Pass/Fail
6					1.47-1.49		8.03-8.05	Pass/Fail
7			FC		1.47-1.49		8.03-8.05	Pass/Fail
8	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	(Pass)/Fail
9			FC		1.47-1.49		8.03-8.05	Pass/Fail
10	RD	✓		1.48	1.47-1.49	8.04	8.03-8.05	(Pass)/Fail
11					1.47-1.49		8.03-8.05	Pass/Fail
12					1.47-1.49		8.03-8.05	Pass/Fail
13					1.47-1.49		8.03-8.05	Pass/Fail
14					1.47-1.49		8.03-8.05	Pass/Fail
15					1.47-1.49		8.03-8.05	Pass/Fail
16					1.47-1.49		8.03-8.05	Pass/Fail
17					1.47-1.49		8.03-8.05	Pass/Fail
18					1.47-1.49		8.03-8.05	Pass/Fail
19					1.47-1.49		8.03-8.05	Pass/Fail
20					1.47-1.49		8.03-8.05	Pass/Fail
21					1.47-1.49		8.03-8.05	Pass/Fail
22					1.47-1.49		8.03-8.05	Pass/Fail
23					1.47-1.49		8.03-8.05	Pass/Fail
24					1.47-1.49		8.03-8.05	Pass/Fail
25					1.47-1.49		8.03-8.05	Pass/Fail
26					1.47-1.49		8.03-8.05	Pass/Fail
27					1.47-1.49		8.03-8.05	Pass/Fail
28					1.47-1.49		8.03-8.05	Pass/Fail
29					1.47-1.49		8.03-8.05	Pass/Fail
30					1.47-1.49		8.03-8.05	Pass/Fail
31					1.47-1.49		8.03-8.05	Pass/Fail

*** Any failing results need immediate corrective action**

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Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Chrysotile Beam Dose Sensitivity

(Quarterly)

Date	Initials	Negative Numbers		At least 90% of patterns >15 seconds ?
		SAED	Morphology	
1/27/2009	JRB	03070	03071	PASS
5/7/2009	KLB	03125	03124	PASS
8/5/2009	KLB	03_247	03_246	PASS
11/3/2009	KLB	03-356	03-357	PASS
2/8/2010	DY	03_372	03_373	PASS
5/18/2010	DY	03373	03374	PASS
8/16/2010	DY	03030	03031	PASS
11/5/2010	CG	11-5-10CG6	11-5-10CG5	PASS
2/18/2011	CG	03125	03126	PASS
5/20/2011	CG	03155	03154	PASS
8/18/2011	CG	03227	03228	PASS
11/4/2011	CG	03316	03317	PASS

Comments:

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

Negative (Camera)					
Date	Initials	Negative Number	Camera Length	Camera Constant	Is 2 Standard Dev. < 5% Mean?
2/25/2010	CJG	03-37216	100	516.02	PASS
3/17/2010	CJG	03-6[4]	100	514.61	PASS
5/18/2010	DY	03006	100	501.47	PASS
6/18/2010	DY	03024	100	510.82	PASS
7/28/2010	DY	03027	100	521.57	PASS
9/3/2010	CG	03030	100	517.31	PASS
10/4/2010	CG	03035	100	521.76	PASS
11/5/2010	CG	11-5-10-CG1	100	526.44	PASS
12/16/2010	CG	03-278	100	527.61	PASS
1/13/2011	CG	1-13-10 CG1	100	523.21	PASS
2/17/2011	CG	03122	100	529.45	PASS
3/18/2011	CG	03139	100	523.70	PASS
4/15/2011	CG	03144	100	510.25	PASS
5/20/2011	CG	03156	100	522.70	PASS
6/13/2011	CG	03163	100	522.09	PASS
7/12/2011	CG	03169	100	533.34	PASS
8/11/2011	CG	03219	100	529.18	PASS
9/15/2011	CG	03258	100	532.16	PASS
10/12/2011	CG	03289	100	524.71	PASS
11/4/2011	CG	03318	100	532.69	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Camera Constant Calibrations

(Monthly / Weekly when Water Analysis is performed)

On Screen					
Date	Initials	Camera Length	Aperture #	Aperture Diameter	Is 2 Standard Dev. < 5% Mean?
7/28/2010	DY	24	1	1.12	PASS
9/3/2010	CG	24	1	1.18	PASS
10/4/2010	CG	24	1	1.18	PASS
11/5/2010	CG	24	1	1.18	PASS
12/16/2010	CG	24	1	1.18	PASS
2/17/2011	CG	24	1	1.18	PASS
2/18/2011	CG	24	1	1.18	PASS
2/22/2011	CG	24	1	1.18	PASS
3/3/2011	CG	24	1	1.18	PASS
3/7/2011	CG	24	1	1.18	PASS
3/8/2011	CG	24	1	1.18	PASS
3/18/2011	CG	24	1	1.18	PASS
4/15/2011	CG	24	1	1.18	PASS
5/20/2011	CG	24	1	1.18	PASS
6/13/2011	CG	24	1	1.18	PASS
7/12/2011	CG	24	1	1.20	PASS
8/11/2011	CG	24	1	1.20	PASS
9/15/2011	CG	24	1	1.18	PASS
10/12/2011	CG	24	1	1.18	PASS
11/4/2011	CG	24	1	1.18	PASS

The above aperture diameter represents the on screen diameter in reciprocal space. Multiply this number times the number of layer lines seen to get layer line spacing.

Comments:

Plasma Asher Calibration

(Quarterly)

Time To Ash 5% of Collapsed MCE Filter			
Date	initials	Min	Sec
10/28/2009	SNS	3	18
2/2/2010	SNS	6	49
5/12/2010	DY	7	28
8/20/2010	DS	9	32
9/13/2010	WP	4	15

Comments: This is Asher is no longer in use as off Dec 2010. The 2 ashers currently in use for prep are on Scope 1 and Scope 2's calibration report.

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Magnification Calibrations
(Monthly)

20,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	20963	20925	PASS
6/18/2010	DY	20963	21060	PASS
7/28/2010	DY	20963	21060	PASS
9/3/2010	CG	20963	20250	PASS
10/4/2010	CG	20963	21330	PASS
11/5/2010	CG	20963	21060	PASS
12/17/2010	CG	20963	21060	PASS
1/13/2011	CG	20963	21060	PASS
2/17/2011	CG	20963	21330	PASS
3/18/2011	CG	20963	21330	PASS
4/15/2011	CG	20963	21330	PASS
5/20/2011	CG	20963	20790	PASS
6/13/2011	CG	20963	20304	PASS
7/12/2011	CG	20963	20790	PASS
8/11/2011	CG	20963	21276	PASS
9/15/2011	CG	20963	20385	PASS
10/12/2011	CG	20963	20925	PASS
11/4/2011	CG	20963	21060	PASS

Comments:

20,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DY	14474	14644	PASS
3/18/2010	DY	14474	14400	PASS
5/18/2010	DY	14474	14582	PASS
6/18/2010	DY	14474	14400	PASS
7/28/2010	DY	14474	14400	PASS
9/3/2010	CG	14474	14164	PASS
10/3/2010	CG	14474	14521	PASS
11/5/2010	CG	14474	14644	PASS
12/17/2010	CG	14474	14400	PASS
1/13/2011	CG	14474	14400	PASS
2/17/2011	CG	14474	14521	PASS
3/18/2011	CG	14474	14644	PASS
4/15/2011	CG	14474	14644	PASS
5/20/2011	CG	14474	14400	PASS
6/13/2011	CG	14474	14521	PASS
7/12/2011	CG	14474	14400	PASS
8/11/2011	CG	14474	14521	PASS
9/15/2011	CG	14474	14521	PASS
10/11/2011	CG	14474	14281	PASS
11/4/2011	CG	14474	14400	PASS

Comments:

10,000x - Negative

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
5/18/2010	DY	10641	10800	PASS
6/18/2010	DY	10641	10962	PASS
7/28/2010	DY	10641	10800	PASS
9/3/2010	CG	10641	10908	PASS
10/4/2010	CG	10641	10584	PASS
11/5/2010	CG	10641	10692	PASS
12/17/2010	CG	10641	10757	PASS
1/13/2011	CG	10641	10757	PASS
2/17/2011	CG	10641	10584	PASS
3/18/2011	CG	10641	10843	PASS
4/15/2011	CG	10641	10692	PASS
5/20/2011	CG	10641	10584	PASS
6/13/2011	CG	10641	10303	PASS
7/12/2011	CG	10641	10368	PASS
8/11/2011	CG	10641	10627	PASS
9/15/2011	CG	10641	10152	PASS
10/12/2011	CG	10641	10584	PASS
11/4/2011	CG	10641	10541	PASS

Comments:

10,000x - Screen

Date	Initials	Target Mag	Actual Mag	Is 2 SD <5% of Mean?
2/8/2010	DLY	7293	7448	PASS
3/18/2010	DLY	7293	7353	PASS
5/18/2010	DY	7293	7353	PASS
6/18/2010	DY	7293	7353	PASS
7/28/2010	DY	7293	7353	PASS
9/3/2010	CG	7293	7082	PASS
10/4/2010	CG	7293	7140	PASS
11/5/2010	CG	7293	7385	PASS
12/16/2010	CG	7293	7200	PASS
1/13/2011	CG	7293	7140	PASS
2/17/2011	CG	7293	7261	PASS
3/18/2011	CG	7293	7448	PASS
4/15/2011	CG	7293	7448	PASS
5/20/2011	CG	7293	7291	PASS
6/13/2011	CG	7293	7353	PASS
7/12/2011	CG	7293	7291	PASS
8/11/2011	CG	7293	7322	PASS
9/15/2011	CG	7293	7200	PASS
10/11/2011	CG	7293	7140	PASS
11/4/2011	CG	7293	7140	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

Calibration of On Screen 0.5 and 5µm

Measuring Aids at EPA AHERA Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DY	0.55	5.46
3/18/2010	DY	0.56	5.56
5/18/2010	DY	0.55	5.49
6/18/2010	DY	0.56	5.56
7/28/2010	DY	0.56	5.56
9/3/2010	CG	0.56	5.65
10/3/2010	CG	0.55	5.51
11/5/2010	CG	0.55	5.46
12/17/2010	CG	0.56	5.56
1/13/2011	CG	0.56	5.56
2/17/2011	CG	0.55	5.51
3/18/2011	CG	0.55	5.46
4/15/2011	CG	0.55	5.46
5/20/2011	CG	0.56	5.56
6/13/2011	CG	0.55	5.51
7/12/2011	CG	0.56	5.56
8/11/2011	CG	0.55	5.51
9/15/2011	CG	0.55	5.51
10/11/2011	CG	0.56	5.60
11/4/2011	CG	0.56	5.56

Comments:

Calibration of On Screen 1.0 and 10µm

Measuring Aids at EPA 100.2 Magnification

(Monthly)

Date	Initials	Small Circle microns	Large Circle microns
2/8/2010	DLY	1.07	10.74
3/18/2010	DLY	1.09	10.88
5/18/2010	DY	1.09	10.88
6/18/2010	DY	1.09	10.88
7/28/2010	DY	1.09	10.88
9/3/2010	CG	1.13	11.30
10/4/2010	CG	1.12	11.20
11/5/2010	CG	1.08	10.83
12/16/2010	CG	1.11	11.11
1/13/2011	CG	1.12	11.20
2/17/2011	CG	1.10	11.02
3/18/2011	CG	1.07	10.74
4/15/2011	CG	1.07	10.74
5/20/2011	CG	1.10	10.97
6/13/2011	CG	1.09	10.88
7/12/2011	CG	1.10	10.97
8/11/2011	CG	1.09	10.93
9/15/2011	CG	1.11	11.11
10/11/2011	CG	1.12	11.20
11/4/2011	CG	1.12	11.20

Comments:

Spot Size Measurements

(Quarterly)

Date	Initials	Actual Spot	Target Spot Size	FAIL ≤250nm =	Is 2 SD <25% of
5/18/2010	DY	203.11	≤ 250 nm	PASS	PASS
8/16/2010	DY	213.68	≤ 250 nm	PASS	PASS
11/5/2010	CG	216.38	≤ 250 nm	PASS	PASS
12/17/2010	CG	206.76	≤ 250 nm	PASS	PASS
2/17/2011	CG	192.34	≤ 250 nm	PASS	PASS
2/18/2011	CG	216.38	≤ 250 nm	PASS	PASS
2/22/2011	CG	201.95	≤ 250 nm	PASS	PASS
3/3/2011	CG	221.19	≤ 250 nm	PASS	PASS
3/7/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/8/2011	CG	216.38	≤ 250 nm	PASS	PASS
3/18/2011	CG	192.34	≤ 250 nm	PASS	PASS
4/15/2011	CG	201.95	≤ 250 nm	PASS	PASS
5/20/2011	CG	240.42	≤ 250 nm	PASS	PASS
6/13/2011	CG	231.48	≤ 250 nm	PASS	PASS
7/12/2011	CG	216.45	≤ 250 nm	PASS	PASS
8/11/2011	CG	197.41	≤ 250 nm	PASS	PASS
9/15/2011	CG	245.28	≤ 250 nm	PASS	PASS
10/12/2011	CG	215.05	≤ 250 nm	PASS	PASS
11/4/2011	CG	223.17	≤ 250 nm	PASS	PASS

Comments:

Monthly Report for TEM Calibrations

Laboratory: Cinnaminson

Scope: 04-03

Detector: PGT Avalon

K Factors

(Semi-Annually)

Test Dates	Initials	Mean K Factor	Pass Criteria	Actual	PASS FAIL	Acceptance Criteria	PASS/FAIL
5/19/2011	CG	Mg:Si	1.0 - 2.0	1.63	PASS	2SD < 10% Mean	PASS
5/19/2011	CG	Ca:Si	1.0 - 1.75	1.11	PASS	2SD < 10% Mean	PASS
----		Fe:Si	1.0 - 2.0	1.46	PASS	2SD < 10% Mean	PASS
----		Mg:Fe	1.5 or less	1.11	PASS	N / A	N / A
12/16/2010	CG	Na:Si	1.0 - 4.0	3.02	PASS	2SD < 20% Mean	PASS
5/20/2011	CG	Al:Si	1.0 - 1.75	1.19	PASS	2SD < 10% Mean	PASS

Comments:

Detector Resolution

(Semi-Annually / Quarterly when necessary to meet TNI Standard)

Date	@Mn Kα Peak Initials	Resolution	<175?	Resolution + 2(s) <180?
10/25/2007	GPA	130.5	Pass	Pass
5/1/2008	GPA	134.8	Pass	Pass
10/29/2008	JRB	115.9	Pass	Pass
5/6/2009	JB	128.9	Pass	Pass
11/3/2009	KLB	141.0	Pass	Pass
4/28/2010	DY	131.0	Pass	Pass
11/4/2010	CG	120.0	Pass	Pass
5/20/2011	CG	135.0	Pass	Pass
8/18/2011	CG	125.0	Pass	Pass
11/4/2011	CG	135.0	Pass	Pass

Comments:

Significant Na and Resolvable Mg-Si Peaks

(Quarterly)

Date	Initials	Significant Na		Date	Initials	Resolvable Mg	Resolvable Si
8/5/2009	KLB	Pass		8/5/09	KLB	Yes	Yes
11/3/2009	KLB	Pass		11/3/09	KLB	Yes	Yes
2/5/2010	DY	Pass		2/5/10	DY	Yes	Yes
4/28/2010	DY	Pass		4/28/10	DY	Yes	Yes
7/28/2010	DY	Pass		7/28/10	DY	Yes	Yes
11/5/2010	CG	Pass		11/4/10	CG	Yes	Yes
2/18/2011	CG	Pass		2/18/11	CG	Yes	Yes
5/20/2011	CG	Pass		5/20/11	CG	Yes	Yes
8/18/2011	CG	Pass		8/18/11	CG	Yes	Yes
11/4/2011	CG	Pass		11/4/11	CG	Yes	Yes

Comments:

7. NVLAP/AIHA Certifications

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.
Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

AIRBORNE ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30
Effective dates

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® **National Voluntary Laboratory Accreditation Program**

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

AIRBORNE ASBESTOS FIBER ANALYSIS (TEM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-0

EMSL Analytical, Inc.

Cinnaminson, NJ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2011-07-01 through 2012-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Mr. Stephen Siegel, CIH
Phone: 800-220-3675 Fax: 856-786-5973
E-Mail: ssiegel@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101048-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2011-07-01 through 2012-06-30
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMSL Analytical Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Laboratory ID: 100194

has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC thereby conforming to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*. The above named laboratory, along with all premises from which key activities are performed, as listed above, have been accredited by AIHA-LAP, LLC in the following:

LABORATORY ACCREDITATION PROGRAMS

√	**INDUSTRIAL HYGIENE**	Accreditation Expires: July 01, 2012
√	**ENVIRONMENTAL LEAD**	Accreditation Expires: July 01, 2012
√	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: July 01, 2012
☐	**FOOD**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current scope of accreditation.

Dave Sandusky

Dave Sandusky, CIH
Chairperson, Analytical Accreditation Board

Date Issued: 07/01/2010

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMSL Analytical, Inc.
107 Haddon Avenue, Westmont, NJ 08108

Laboratory ID: 100194
Issue Date: 07/01/2010

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or revocation. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 02/01/1989

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Gas Chromatography	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1400	
		NIOSH 1500	
		NIOSH 1550	
		NIOSH 1603	
		NIOSH 2000	
		NIOSH 2551	
		NIOSH 5502	
		NIOSH 5503	
		NIOSH 5510	
		OSHA 1010	
	GC (Diffusive Samplers)	NIOSH 1003	
		NIOSH 1005	
		NIOSH 1501	
	GC/MS	EPA TO-15	
	HPLC	NIOSH 2016	
		NIOSH 5506	
		OSHA 47	
		OSHA 58	
	AA	NIOSH 6009	
		NIOSH 7105	
		OSHA ID-140	
		OSHA ID-145	
	ICP	NIOSH 7300	
	XRD	NIOSH 7500	
	Ion Chromatography	NIOSH 6004	
		NIOSH 6011	
		NIOSH 7903	

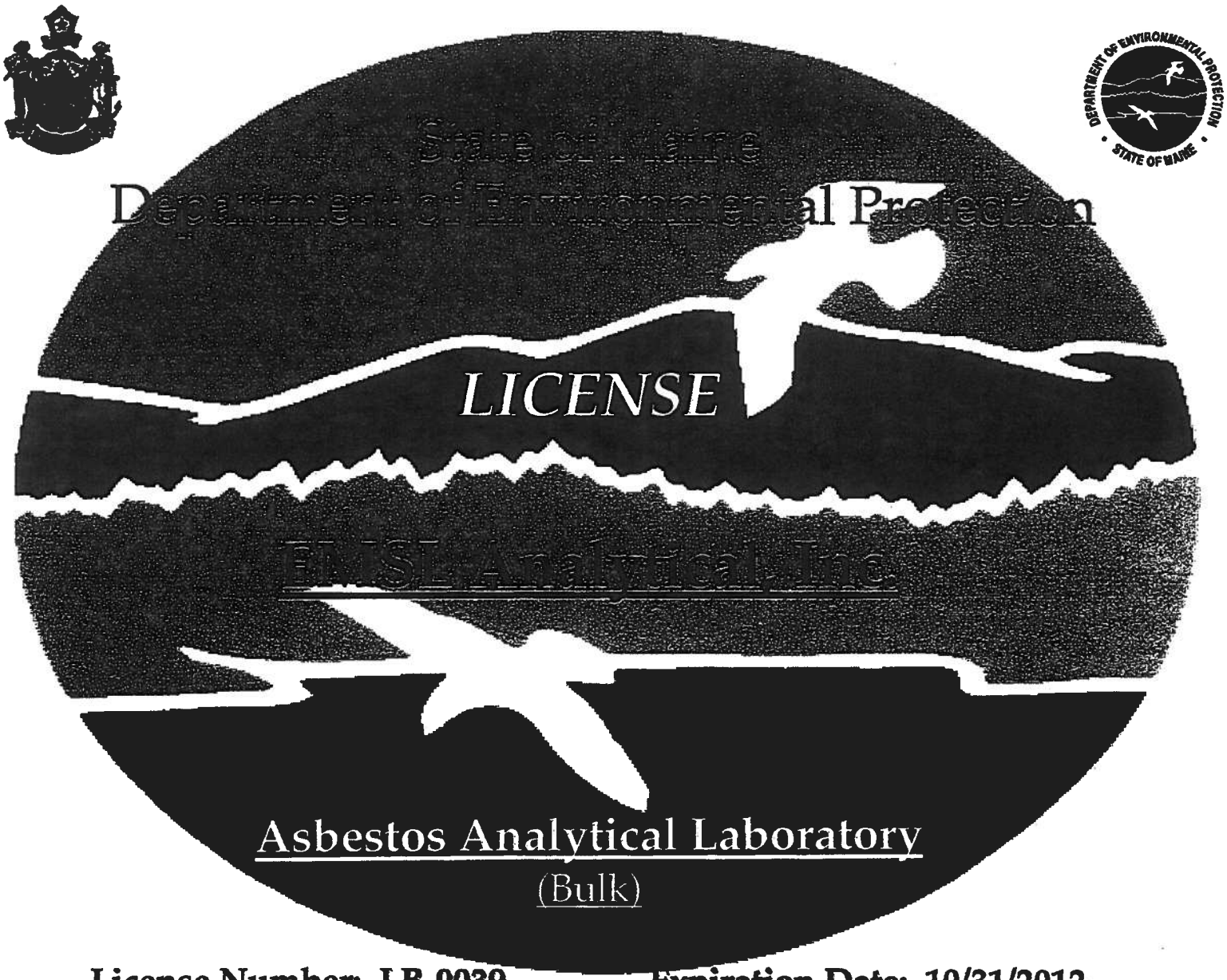
AIHA
Laboratory Accreditation Programs, LLC

IHLAP Category	Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Core Program Testing	Ion Chromatography	OSHA ID-214	
		OSHA ID-215	
	Gravimetric	NIOSH 0500	
		NIOSH 0600	
	UV/VIS (Colorimetric)	NIOSH 6010	
	Thermal Optical Analyzer	NIOSH 5040	
	Polarized Light Microscopy (PLM)	EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)	NIOSH 7400	
	Transmission Electron Microscopy (TEM)	EPA AHERA - 40 CFR Part 763	
		NIOSH 7402	

The laboratory participates in the following AIHA-LAP, LLC-approved proficiency testing programs:

- ✓ Metals*
- ✓ Silica*
- ✓ Asbestos*
- ☐ Bulk Asbestos*
- ✓ Beryllium
- ✓ Organic Solvents*
- ✓ Diffusive Sampler (3M)*
- ☐ Diffusive Sampler (SKC)*
- ☐ Diffusive Sampler (AT)
- ✓ WASP[1] (Formaldehyde)
- ☐ WASP[1] (Thermal Desorption Tubes)
- ☐ Pharmaceutical Round Robin
- ☐ Compressed/Breathing Air Round Robin
- ☐ NVLAP (determined at the time of site assessment)

[1] Workplace Analytical Scheme for Proficiency



License Number: LB-0039 **Expiration Date: 10/31/2012**

8. Shipping Documentation

From:
WILLARD WARREN
KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY

SCARBOROUGH, ME 04074
(207) 874-2400

Ship Date: 18OCT11
ActWgt: 36.6 LB
CAD: 683287/CAFE2472

TO SAMPLE RECEIVING
EMSL
3 COOPER STREET

WESTMONT, NJ 08108 (US)

FedEx Ground

Ref:
INV:
PO: Dept:

1 of 1

(9612019) 8146989 60046520

Part # 158148-434 RIT2 04/11

GND Prepaid

Katahdin ANALYTICAL SERVICES

Date: 10-18-11 Signature

CU

ENVIRONMENTAL ULTRA CL

B5 Po 210 DATA

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407

P 843.556.8171 F 843.766.1178

www.gel.com

November 07, 2011

Ms. Tobrena Sedlmyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Dr.
Pittsburgh, Pennsylvania 15220

Re: CTO WE61, Navsta Newport, RI
Work Order: 288297

Dear Ms. Sedlmyer:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 18, 2011. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4512.

Sincerely,

Hope Taylor for
Ann Skradski
Project Manager

Enclosures

Tetra Tech NUS, Inc.
CTO WE61, Navsta Newport, RI
SDG: 288297

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Case Narrative

Receipt Narrative
for
Tetra Tech NUS, Inc.
SDG: 288297

November 07, 2011

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on October 18, 2011 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
288297001	DYS-SD-GP01-0102
288297002	DYS-SD-GP01-0304
288297003	DYS-SD-GP01-0809
288297004	DYS-SD-GP01-1112
288297005	DYS-SD-GP01-1314
288297006	DYS-SD-GP01-1516
288297007	DYS-SD-GP01-2223
288297008	DYS-SD-GP01-2728
288297009	DYS-SD-GP02-0102
288297010	DYS-SD-GP02-0708
288297011	DYS-SD-GP02-1112
288297012	DYS-SD-GP02-1718
288297013	DYS-SD-GP03-0102
288297014	DYS-SD-GP03-0910
288297015	DYS-SD-GP03-1718
288297016	DYS-SD-GP03-2122
288297017	DYS-SD-GP04-0102
288297018	DYS-SD-GP04-0708
288297019	DYS-SD-GP04-1415
288297020	DYS-SD-GP04-2122
288297021	DYS-SD-GP05-0102
288297022	DYS-SD-GP05-0809
288297023	DYS-SD-GP05-1516
288297024	DYS-SD-GP05-2324
288297025	DYS-SD-GP06-0102
288297026	DYS-SD-GP06-0809
288297027	DYS-SD-GP06-1516
288297028	DYS-SD-GP06-2324
288297029	DYS-SD-GP07-0102

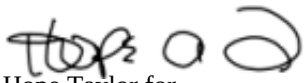
288297030	DYS-SD-GP07-0809
288297031	DYS-SD-GP07-1516
288297032	DYS-SD-GP07-2324
288297033	DYS-SD-GP08-0102
288297034	DYS-SD-GP08-1112
288297035	DYS-SD-GP08-1617
288297036	DYS-SD-GP08-2021
288297037	DYS-SD-GP08-2324
288297038	DYS-SD-GP08-0607
288297039	DYS-SD-GP09-0102
288297040	DYS-SD-GP09-0506
288297041	DYS-SD-GP09-1516
288297042	DYS-SD-GP09-2021
288297043	DYS-SD-GP09-2627
288297044	DYS-SD-GP10-0102
288297045	DYS-SD-GP10-0304
288297046	DYS-SD-GP10-0809
288297047	DYS-SD-GP10-1112
288297048	DYS-SD-GP10-1617
288297049	DYS-SD-GP10-2122
288297050	DYS-SD-GP10-2627

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.



Hope Taylor for
Ann Skradski
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number: 288297

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #: (978) 474-8400
Project/Site Name: CTO WE61 Fax #: (978) 474-8499
Address: 250 Andover St. Suite 200, Wilmington MA, 01887
Collected by: Michael Horton Send Results To: Steve Parker

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Po-210	<-- Preservative Type (6)
DSY-SD-GP01-0102	10/11/11	1100			SED			1	X	
DSY-SD-GP01-0304		1103						1	X	
DSY-SD-GP01-0809		1106						1	X	
DSY-SD-GP01-1112		1109						1	X	
DSY-SD-GP01-1314		1111						1	X	
DSY-SD-GP01-1516		1114						1	X	
DSY-SD-GP01-2223		1117						1	X	
DSY-SD-GP01-2728		1120						1	X	
DSY-SD-GP02-0102		1130						1	X	
DSY-SD-GP02-0708	↓	1133			↓			1	X	

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	10/17/11	1000	1 FedEx		
2			2 Shanta White-Jr	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact?
YES *NO*
Cooler Temp: 5 & 6 C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 2 of 3
Project #: 112G02747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:
Project/Site Name: CTOWER 61 Fax #:
Address:
Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	PO-210	<-- Preservative Type (6)	Comments
DSY-SD-GP02-1112	10/11/11	1136			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP02-1718		1139						1	X		
DSY-SD-GP03-0102		1200						1	X		
DSY-SD-GP03-0910		1203	1200 container					1	X		
DSY-SD-GP03-1718		1206						1	X		
DSY-SD-GP03-2122		1209						1	X		
DSY-SD-GP04-0102		1300						1	X		
DSY-SD-GP04-0708		1303						1	X		
DSY-SD-GP04-1415		1306						1	X		
DSY-SD-GP04-2122	↓	1309			↓			1	X		

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone: Eastern Pacific Central Other ____ Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		10/17/11	1000	FedEx		
2					10/18/11	9:45
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: 5&6 ____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 3 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:
Project/Site Name: CTO WE 61 Fax #:
Address:
Collected by: [signature] Send Results To:

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test): PO-210	<-- Preservative Type (6)	Comments
DSY-SD-GP05-0102	10/14/11	0730			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP05-0809		0733						1	X		
DSY-SD-GP05-1516		0736						1	X		
DSY-SD-GP05-2324		0739						1	X		
DSY-SD-GP06-0102		0900						1	X		
DSY-SD-GP06-0809		0903						1	X		
DSY-SD-GP06-1516		0906						1	X		
DSY-SD-GP06-2324		0909						1	X		
DSY-SD-GP07-0102		0920						1	X		
DSY-SD-GP07-0809		0923						1	X		

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone: Eastern Pacific Central Other ____ Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	10/17/11	1000	1 FedEx		
2			2 [signature]	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5 & 6 C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 4 of 5
Project #: 112G02747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: SEE PAGE ONE Phone #:

Project/Site Name: CTO WE 61 Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Pb-210	<-- Preservative Type (6)	Comments
DSY-SD-GP07-1516	10/14/11	0926			SED			1	X		Note: extra sample is required for sample specific QC
DSY-SD-GP07-2324		0929						1	X		
DSY-SD-GP08-0102		0940						1	X		
DSY-SD-GP08-1112		0943						1	X		
DSY-SD-GP08-1617		0946						1	X		
DSY-SD-GP08-2021		0949						1	X		
DSY-SD-GP08-2324		0952						1	X		
DSY-SD-GP08-0607		0955						1	X		
DSY-SD-GP09-0102		1015						1	X		
DSY-SD-GP09-0506		1018						1	X		

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		10/17/11	1000	FedEx		
2					10/18/11	9:45
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: 5.6 C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 5 of 5
Project #: 112602747
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: TetraTech NUS Phone #: SEE PAGE ONE

Project/Site Name: CTOWE 61

Address:

Collected by: Send Results To:

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Pb-210									<-- Preservative Type (6)
DSY-SD-GP09-1516	10/14/11	1021			SED			1	X									
DSY-SD-GP09-2021		1024						1	X									
DSY-SD-GP09-2627		1027						1	X									
DSY-SD-GP10-0102		1040						1	X									
DSY-SD-GP10-0304		1043						1	X									
DSY-SD-GP10-0809		1046						1	X									
DSY-SD-GP10-1112		1049						1	X									
DSY-SD-GP10-1617		1052						1	X									
DSY-SD-GP10-2122		1055						1	X									
DSY-SD-GP10-2627	↓	1058			↓			1	X									

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ____ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	10/17/11	1000	1 FedEx		
2			2	10/18/11	9:45
3			3		

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).
6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: 5 ℃

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: TETR	**SDG/AR/COC/Work Order:** 288297.1.
Received By: Shanta Whitlock	**Date Received:** 10/18/11 @ 9:45

Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		✓	Maximum Counts Observed*:
Classified Radioactive II or III by RSO?		✓	
COC/Samples marked containing PCBs?		✓	
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		✓	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?	✓			Preservation Method: (Ice bags) Blue ice Dry ice None Other (describe) 5 & 6°
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: 51050004 Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Are Encore containers present?		✓		(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Sample ID's affected: DS4-SD-GP03-0910 time on container is 12:00.
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			
14	Carrier and tracking number.				Circle Applicable: (FedEx Air) FedEx Ground UPS Field Services Courier Other 7976 3071 2060 7976 3071 3960

Comments (Use Continuation Form if needed):

10-18-11

Page 1 of 1

Laboratory Certifications

List of current GEL Certifications as of 07 November 2011

State	Certification
Arizona	AZ0766
Arkansas	88−0651
CLIA	42D0904046
California − NELAP	01151CA
Colorado	E87156 (FL/NELAP)
Connecticut	PH−0169
DoD ELAP − A2LA	2567.01
Florida − NELAP	E87156
Foreign Soils Permit USDA	P330−09−00191
Georgia	E87156 (FL/NELAP)
Georgia SDWA	967
Hawaii	E87156 (FL/NELAP)
ISO 17025	2567.01
Idaho	SC00012
Illinois − NELAP	200029
Indiana	C−SC−01
Kansas − NELAP	E−10332
Kentucky	90129
Louisiana − NELAP	03046 (Al33904)
Louisiana SDWA	LA110006
Maryland	270
Massachusetts	M−SC012
Mississippi	E87156 (FL/NELAP)
Nevada	SC00012
New Hampshire	2054
New Jersey − NELAP	SC002
New Mexico	E87156 (FL/NELAP)
New York − NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania − NELAP	68−00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas − NELAP	T104704235−11−4
Utah − NELAP	SC00012
Vermont	VT87156
Virginia	00151
Washington	C780−11
Wisconsin	999887790

Radiological Analysis

Radiochemistry Case Narrative
Tetra Tech NUS, Inc. (TETR)
SDG 288297

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1151771
Prep Batch Number:	1151704

Sample ID	Client ID
288297001	DYS-SD-GP01-0102
288297002	DYS-SD-GP01-0304
288297003	DYS-SD-GP01-0809
288297004	DYS-SD-GP01-1112
288297005	DYS-SD-GP01-1314
288297006	DYS-SD-GP01-1516
288297007	DYS-SD-GP01-2223
288297008	DYS-SD-GP01-2728
288297009	DYS-SD-GP02-0102
288297010	DYS-SD-GP02-0708
288297011	DYS-SD-GP02-1112
288297012	DYS-SD-GP02-1718
288297013	DYS-SD-GP03-0102
288297014	DYS-SD-GP03-0910
288297015	DYS-SD-GP03-1718
288297016	DYS-SD-GP03-2122
288297017	DYS-SD-GP04-0102
288297018	DYS-SD-GP04-0708
288297019	DYS-SD-GP04-1415
288297020	DYS-SD-GP04-2122
1202512206	Method Blank (MB)
1202512207	288297001(DYS-SD-GP01-0102) Sample Duplicate (DUP)
1202512208	288297001(DYS-SD-GP01-0102) Matrix Spike (MS)
1202512209	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 288297001 (DYS-SD-GP01-0102).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 288297016 (DYS-SD-GP03-2122) was recounted due to high MDC. The recount is reported. Sample 288297007 (DYS-SD-GP01-2223) was recounted due to a peak shift. The recount is reported. Samples 1202512207 (DYS-SD-GP01-0102), 288297004 (DYS-SD-GP01-1112), 288297007 (DYS-SD-GP01-2223), 288297010 (DYS-SD-GP02-0708), 288297012 (DYS-SD-GP02-1718), 288297013 (DYS-SD-GP03-0102) and 288297014 (DYS-SD-GP03-0910) were given additional clean-up steps and recounted in order to remove suspected interferences. The recounts are reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1151775
Prep Batch Number:	1151710

Sample ID	Client ID
288297021	DYS-SD-GP05-0102
288297022	DYS-SD-GP05-0809
288297023	DYS-SD-GP05-1516
288297024	DYS-SD-GP05-2324
288297025	DYS-SD-GP06-0102
288297026	DYS-SD-GP06-0809
288297027	DYS-SD-GP06-1516
288297028	DYS-SD-GP06-2324
288297029	DYS-SD-GP07-0102
288297030	DYS-SD-GP07-0809
288297031	DYS-SD-GP07-1516
288297032	DYS-SD-GP07-2324
288297033	DYS-SD-GP08-0102
288297034	DYS-SD-GP08-1112
288297035	DYS-SD-GP08-1617
288297036	DYS-SD-GP08-2021
288297037	DYS-SD-GP08-2324
288297038	DYS-SD-GP08-0607
288297039	DYS-SD-GP09-0102
288297040	DYS-SD-GP09-0506
1202512210	Method Blank (MB)
1202512211	288297021(DYS-SD-GP05-0102) Sample Duplicate (DUP)
1202512212	288297021(DYS-SD-GP05-0102) Matrix Spike (MS)
1202512213	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 288297021 (DYS-SD-GP05-0102).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 1202512211 (DYS-SD-GP05-0102) was recounted due to a peak shift. The recount is reported. Sample 288297022 (DYS-SD-GP05-0809) was given additional clean-up steps and recounted in order to remove suspected interferences. The recount is reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Po210, solid**
Analytical Method:	DOE EML HASL-300, Po-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1156276
Prep Batch Number:	1151713

Sample ID	Client ID
288297041	DYS-SD-GP09-1516
288297042	DYS-SD-GP09-2021
288297043	DYS-SD-GP09-2627
288297044	DYS-SD-GP10-0102
288297045	DYS-SD-GP10-0304
288297046	DYS-SD-GP10-0809
288297047	DYS-SD-GP10-1112
288297048	DYS-SD-GP10-1617
288297049	DYS-SD-GP10-2122
288297050	DYS-SD-GP10-2627
1202523258	Method Blank (MB)
1202523259	288297042(DYS-SD-GP09-2021) Sample Duplicate (DUP)
1202523260	288297042(DYS-SD-GP09-2021) Matrix Spike (MS)
1202523261	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-016 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volumes in this batch.

Designated QC
The following sample was used for QC: 288297042 (DYS-SD-GP09-2021).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

Samples were reprepped due to high recovery. The re-analysis is being reported. Sample 288297047 (DYS-SD-GP10-1112) was given additional clean-up steps and recounted in order to remove suspected interferences. The recount is reported. Sample 1202523258 (MB) was recounted due to suspected interference. The recount is being reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

TETR038 Tetra Tech NUS, Inc.

Client SDG: 288297 GEL Work Order: 288297

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: **Name: Kate Gellatly**

Date: 07 NOV 2011 **Title: Analyst I**

Sample Data Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0102	Project:	TETR00221
Sample ID:	288297001	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.29	+/-0.675	0.491	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.6	(15%-125%)

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0304	Project:	TETR00221
Sample ID:	288297002	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.243	+/-0.388	0.703	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.8	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-0809	Project:	TETR00221
Sample ID:	288297003	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0443	+/-0.176	0.472	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.3	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1112	Project:	TETR00221
Sample ID:	288297004	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.210	+/-0.321	0.562	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			57.3	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1314	Project:	TETR00221
Sample ID:	288297005	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:11		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.357	+/-0.371	0.509	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.1	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-1516	Project:	TETR00221
Sample ID:	288297006	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:14		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.201	+/-0.250	0.349	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			83.6	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-2223	Project:	TETR00221
Sample ID:	288297007	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:17		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0709	+/-0.188	0.448	1.00	pCi/g		MXS2	11/01/11	1927	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			59.5	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP01-2728	Project:	TETR00221
Sample ID:	288297008	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:20		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.31	+/-0.755	0.795	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.2	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-0102	Project:	TETR00221
Sample ID:	288297009	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:30		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.24	+/-1.12	0.595	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			63.5	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-0708	Project:	TETR00221
Sample ID:	288297010	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:33		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.50	+/-0.961	0.521	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			61.2	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-1112	Project:	TETR00221
Sample ID:	288297011	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:36		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.44	+/-0.676	0.389	1.00	pCi/g		MXS2	10/28/11	1504	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			66.7	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP02-1718	Project:	TETR00221
Sample ID:	288297012	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 11:39		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		0.720	+/-0.533	0.590	1.00	pCi/g		MXS2	10/31/11	2224	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			53.0	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-0102	Project:	TETR00221
Sample ID:	288297013	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.81	+/-0.860	0.571	1.00	pCi/g		MXS2	11/01/11	0837	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			57.1	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-0910	Project:	TETR00221
Sample ID:	288297014	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.509	+/-0.494	0.665	1.00	pCi/g		MXS2	11/01/11	0837	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			54.8	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-1718	Project:	TETR00221
Sample ID:	288297015	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0627	+/-0.166	0.396	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			85.7	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP03-2122	Project:	TETR00221
Sample ID:	288297016	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 12:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.449	+/-0.557	0.780	1.00	pCi/g		MXS2	11/01/11	1927	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			38.5	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-0102	Project:	TETR00221
Sample ID:	288297017	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.09	+/-1.28	1.04	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			61.6	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-0708	Project:	TETR00221
Sample ID:	288297018	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		3.01	+/-1.27	1.32	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.6	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-1415	Project:	TETR00221
Sample ID:	288297019	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.29	+/-0.834	0.937	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			63.0	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP04-2122	Project:	TETR00221
Sample ID:	288297020	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	11-OCT-11 13:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.81	+/-0.803	0.656	1.00	pCi/g		MXS2	10/28/11	1505	1151771	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1821	1151704

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			76.2	(15%-125%)

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Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-0102	Project:	TETR00221
Sample ID:	288297021	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:30		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.97	+/-0.911	0.681	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.0	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-0809	Project:	TETR00221
Sample ID:	288297022	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:33		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.190	+/-0.329	0.615	1.00	pCi/g		LYS1	10/31/11	2224	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			59.0	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-1516	Project:	TETR00221
Sample ID:	288297023	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:36		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.193	+/-0.240	0.335	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.5	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP05-2324	Project:	TETR00221
Sample ID:	288297024	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 07:39		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.01	+/-0.644	0.497	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.0	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-0102	Project:	TETR00221
Sample ID:	288297025	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:00		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.18	+/-0.936	0.988	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			80.9	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-0809	Project:	TETR00221
Sample ID:	288297026	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:03		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.94	+/-0.998	0.966	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.0	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-1516	Project:	TETR00221
Sample ID:	288297027	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:06		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.916	+/-0.674	0.946	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			82.9	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP06-2324	Project:	TETR00221
Sample ID:	288297028	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:09		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.24	+/-0.675	0.666	1.00	pCi/g		LYS1	10/28/11	0913	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			77.5	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-0102	Project:	TETR00221
Sample ID:	288297029	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:20		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.76	+/-1.12	0.843	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			68.9	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-0809	Project:	TETR00221
Sample ID:	288297030	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:23		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.49	+/-0.784	0.710	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.2	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-1516	Project:	TETR00221
Sample ID:	288297031	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:26		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.382	+/-0.453	0.706	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			60.9	(15%-125%)

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Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP07-2324	Project:	TETR00221
Sample ID:	288297032	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:29		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.176	+/-0.305	0.570	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.3	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-0102	Project:	TETR00221
Sample ID:	288297033	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:40		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		4.79	+/-1.53	0.896	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			64.5	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-1112	Project:	TETR00221
Sample ID:	288297034	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:43		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.40	+/-0.935	0.629	1.00	pCi/g		LYS1	10/28/11	0900	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.5	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-1617	Project:	TETR00221
Sample ID:	288297035	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:46		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.03	+/-0.842	0.534	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.3	(15%-125%)

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-2021	Project:	TETR00221
Sample ID:	288297036	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:49		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.268	+/-0.297	0.436	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.6	(15%-125%)

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Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-2324	Project:	TETR00221
Sample ID:	288297037	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:52		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		0.565	+/-0.435	0.474	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			74.2	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP08-0607	Project:	TETR00221
Sample ID:	288297038	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 09:55		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.62	+/-0.868	0.408	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			80.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-0102	Project:	TETR00221
Sample ID:	288297039	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:15		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		2.38	+/-0.874	0.496	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			77.6	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-0506	Project:	TETR00221
Sample ID:	288297040	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:18		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.53	+/-0.606	0.450	1.00	pCi/g		LYS1	10/28/11	1504	1151775	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1825	1151710

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			79.1	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-1516	Project:	TETR00221
Sample ID:	288297041	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:21		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0389	+/-0.370	0.943	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			55.0	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-2021	Project:	TETR00221
Sample ID:	288297042	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:24		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.0706	+/-0.187	0.445	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.2	(15%-125%)

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Certificate of Analysis

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP09-2627	Project:	TETR00221
Sample ID:	288297043	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:27		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.233	+/-0.357	0.625	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			70.9	(15%-125%)

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Certificate of Analysis

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0102	Project:	TETR00221
Sample ID:	288297044	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:40		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.41	+/-0.898	0.917	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			62.6	(15%-125%)

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Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0304	Project:	TETR00221
Sample ID:	288297045	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:43		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.70	+/-0.726	0.436	1.00	pCi/g		HAKB	11/03/11	0810	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			69.3	(15%-125%)

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Certificate of Analysis

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Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-0809	Project:	TETR00221
Sample ID:	288297046	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:46		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.378	+/-0.396	0.481	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			73.3	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-1112	Project:	TETR00221
Sample ID:	288297047	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:49		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210		1.45	+/-0.842	0.593	1.00	pCi/g		HAKB	11/04/11	1059	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			49.8	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-1617	Project:	TETR00221
Sample ID:	288297048	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:52		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.363	+/-0.353	0.475	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			65.7	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-2122	Project:	TETR00221
Sample ID:	288297049	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:55		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.042	+/-0.167	0.448	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			78.8	(15%-125%)

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Certificate of Analysis

Report Date: November 7, 2011

Company :	Tetra Tech NUS, Inc.
Address :	Foster Plaza 7 661 Andersen Dr. Pittsburgh, Pennsylvania 15220
Contact:	Ms. Tobrena Sedlmyer
Project:	CTO WE61, Navsta Newport, RI

Client Sample ID:	DYS-SD-GP10-2627	Project:	TETR00221
Sample ID:	288297050	Client ID:	TETR038
Matrix:	Soil		
Collect Date:	14-OCT-11 10:58		
Receive Date:	18-OCT-11		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Po210, solid "Dry Weight Corrected"												
Polonium-210	U	0.145	+/-0.272	0.528	1.00	pCi/g		HAKB	11/03/11	0811	1156276	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	10/18/11	1835	1151713

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Po-01-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Polonium-209 Tracer	Alphaspec Po210, solid "Dry Weight Corrected"			72.4	(15%-125%)

Quality Control Data

QC Summary

Report Date: November 7, 2011

Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Dr.
Pittsburgh, Pennsylvania
Contact: **Ms. Tobrena Sedlmyer**

Workorder: **288297**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1151771										
QC1202512207 288297001 DUP										
Polonium-210		1.29		1.27	pCi/g	1.12		(0% - 100%)	MXS2	11/01/11 08:37
Uncertainty		+/-0.675		+/-0.634						
QC1202512209 LCS										
Polonium-210	13.1			13.6	pCi/g		104	(75%-125%)		10/28/11 15:05
Uncertainty				+/-2.24						
QC1202512206 MB										
Polonium-210			U	0.0472	pCi/g					10/28/11 15:05
Uncertainty				+/-0.253						
QC1202512208 288297001 MS										
Polonium-210	15.5	1.29		19.9	pCi/g		121	(75%-125%)		10/28/11 15:05
Uncertainty		+/-0.675		+/-2.90						
Batch 1151775										
QC1202512211 288297021 DUP										
Polonium-210		1.97		2.31	pCi/g	16.0		(0% - 100%)	LYS1	11/01/11 14:37
Uncertainty		+/-0.911		+/-0.828						
QC1202512213 LCS										
Polonium-210	13.8			16.7	pCi/g		121	(75%-125%)		10/28/11 15:04
Uncertainty				+/-1.97						
QC1202512210 MB										
Polonium-210			U	0.209	pCi/g					10/28/11 15:04
Uncertainty				+/-0.255						
QC1202512212 288297021 MS										
Polonium-210	17.4	1.97		20.0	pCi/g		103	(75%-125%)		10/28/11 15:04
Uncertainty		+/-0.911		+/-2.39						
Batch 1156276										
QC1202523259 288297042 DUP										
Polonium-210	U	0.0706	U	0.493	pCi/g	0.00		N/A	HAKB	11/03/11 08:11
Uncertainty		+/-0.187		+/-0.479						
QC1202523261 LCS										
Polonium-210	9.65			9.71	pCi/g		101	(75%-125%)		11/03/11 08:11
Uncertainty				+/-1.54						
QC1202523258 MB										
Polonium-210			U	0.052	pCi/g					11/03/11 13:33
Uncertainty				+/-0.138						
QC1202523260 288297042 MS										
Polonium-210	16.2 U	0.0706		16.8	pCi/g		104	(75%-125%)		11/03/11 08:11
Uncertainty		+/-0.187		+/-2.58						

Notes:
The Qualifiers in this report are defined as follows:

QC Summary

Workorder: 288297

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Alpha Spectroscopy
Raw Data

Radiochemistry Batch Checklist

02-Nov-2011

Batch# 115775 Product: Po Date: 11/2/11

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required). Blank correction reported included (if required).			NA
If activity less than 10x MDA/MDC, error is less than or equal to 150% of sample activity. If greater than 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are: Less than 5* MDA/ MDC, then RPD is 100% or less, If greater 5* MDA/ MDC, then RPD 20% or less, If below the MDA/ MDC, the RPD is 0%, Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. (Or meets the client's contract acceptance criteria).	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% (or meets the client's contract acceptance criteria).	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
MS, LCS, and Duplicate RPD/RER values uploaded to LIMS and values verified	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed. Disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

Primary Review Performed By: [signature] 11/2/11

Secondary Review Performed By: [signature] 11/2/11

10/29-(11/8)

JTR

PV

Polonium Queue Sheet

18-OCT-11

Batch #: 1151775 Analyst:LYS1 First Client Due Date:08-NOV-11 Internal Due Date:29-OCT-11

Tracer Isotope: Po-209 Tracer Code: 1423-D Expiration Date: 5/12/12 Vol: 0.1 ml

LCS Isotope: Po-210 LCS Code: 1437-B Expiration Date: 11/23/11 Vol: ~~0.1 ml~~ 0.2 ml JD 10/21/11

Spike Isotope: Po-210 Spike Code: 1437-B Expiration Date: 11/23/11 Vol: ~~0.1 ml~~ 0.2 ml

Prep Date: 10/21/11 Initials: JD Pipet ID: 1840023 Balance ID: 504 0272 Witness: NBD 10-21-11

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) l / f	Po Det #
288297021-1	DYS-SD-GP05-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	1	1	0.101	21 mm 11/2/11
288297022-1	DYS-SD-GP05-0809	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	2	2	0.100	~~22~~ 37
288297023-1	DYS-SD-GP05-1516	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	3	3	0.123	24
288297024-1	DYS-SD-GP05-2324	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	4	4	0.106	114
288297025-1	DYS-SD-GP06-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	5	5	0.117	115
288297026-1	DYS-SD-GP06-0809	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	6	6	0.104	116
288297027-1	DYS-SD-GP06-1516	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	7	7	0.118	117
288297028-1	DYS-SD-GP06-2324	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	8	8	0.125	118
288297029-1	DYS-SD-GP07-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	9	9	0.105	119
288297030-1	DYS-SD-GP07-0809	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	10	10	0.109	120
288297031-1	DYS-SD-GP07-1516	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	11	11	0.128	127
288297032-1	DYS-SD-GP07-2324	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	12	12	0.127	128
288297033-1	DYS-SD-GP08-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	13	13	0.100	129
288297034-1	DYS-SD-GP08-1112	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	14	14	0.113	130
288297035-1	DYS-SD-GP08-1617	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	15	15	0.101	26
288297036-1	DYS-SD-GP08-2021	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	16	16	0.119	27
288297037-1	DYS-SD-GP08-2324	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	17	17	0.114	28
288297038-1	DYS-SD-GP08-0607	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	18	18	0.110	29
288297039-1	DYS-SD-GP09-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	19	19	0.107	30
288297040-1	DYS-SD-GP09-0506	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	20	20	0.118	37
1202512210-1	MB for batch 1151775	MB		1 pCi/g	SOIL	QC ACCOUNT		21	21	0.128	38
1202512211-1	DYS-SD-GP05-0102(288297021DUP)	DUP		1 pCi/g	SOIL	QC ACCOUNT	14-OCT-11	22	22	0.113	29 ~~29~~ mm 11/2/11
1202512212-1	DYS-SD-GP05-0102(288297021MS)	MS		1 pCi/g	SOIL	QC ACCOUNT	14-OCT-11	23	23	0.105	40
1202512213-1	LCS for batch 1151775	LCS		1 pCi/g	SOIL	QC ACCOUNT		24	24	0.128	42

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One) Data Reviewed By: 11/2/11

11/2/11

Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

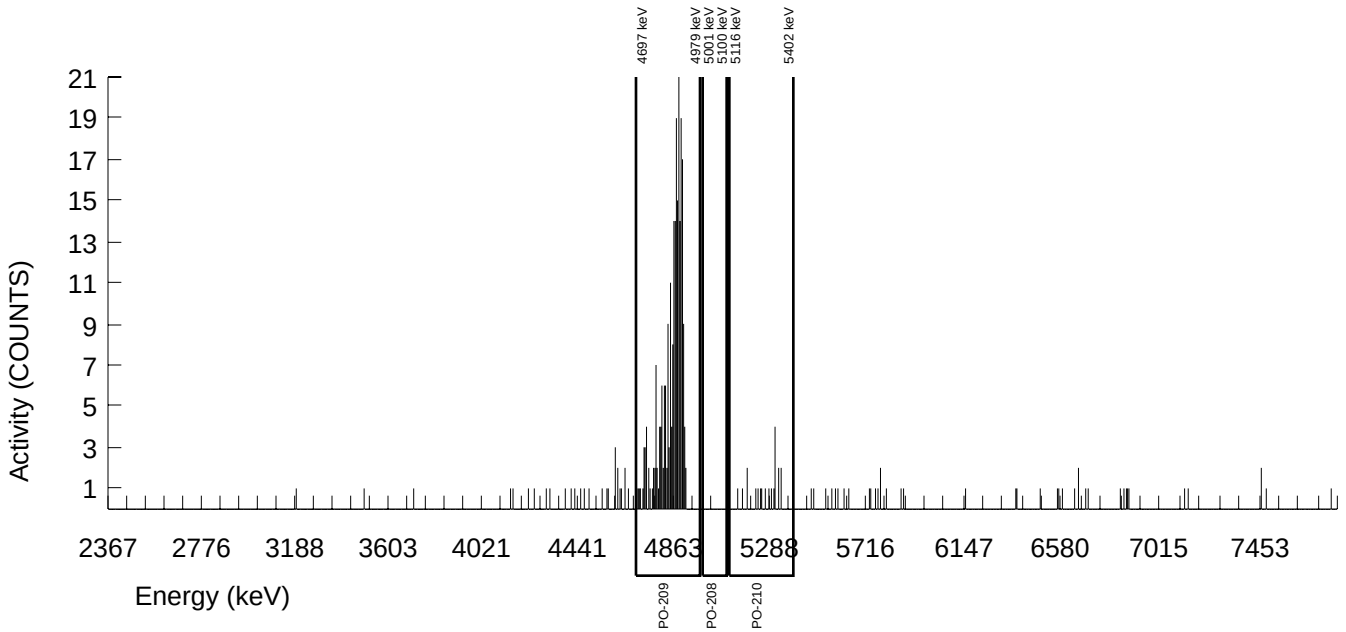
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 021	LIB FILE : PO
SAMPLE ID : S0288297021_PO	DETECTOR S/N : 795159	BKG FILE : B021.CNF;1297
SAMPLE QTY : 0.101 G +/-3.198 %	AVERAGE %EFFICIENCY : 26.4734	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7749	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:46	EFF FILE : W021.CNF;377
% YIELD : 73.0 +/-7.611 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8094E+01	1437-B	PO-210	1.8094E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.9145E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.478	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.91E-01	2.91E-01	0.00E+00	1.90E-01
PO-209	4882.000	4862.974	55.490	248.000	248.000	0.000	0.0000	99.740	2.39E+01	5.07E+00	2.89E-01	0.00E+00	2.98E+00
PO-210	5304.380	5278.228	5.953	20.000	19.040	0.960	0.9798	100.000	1.97E+00	9.72E-01	6.81E-01	1.85E-01	9.11E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

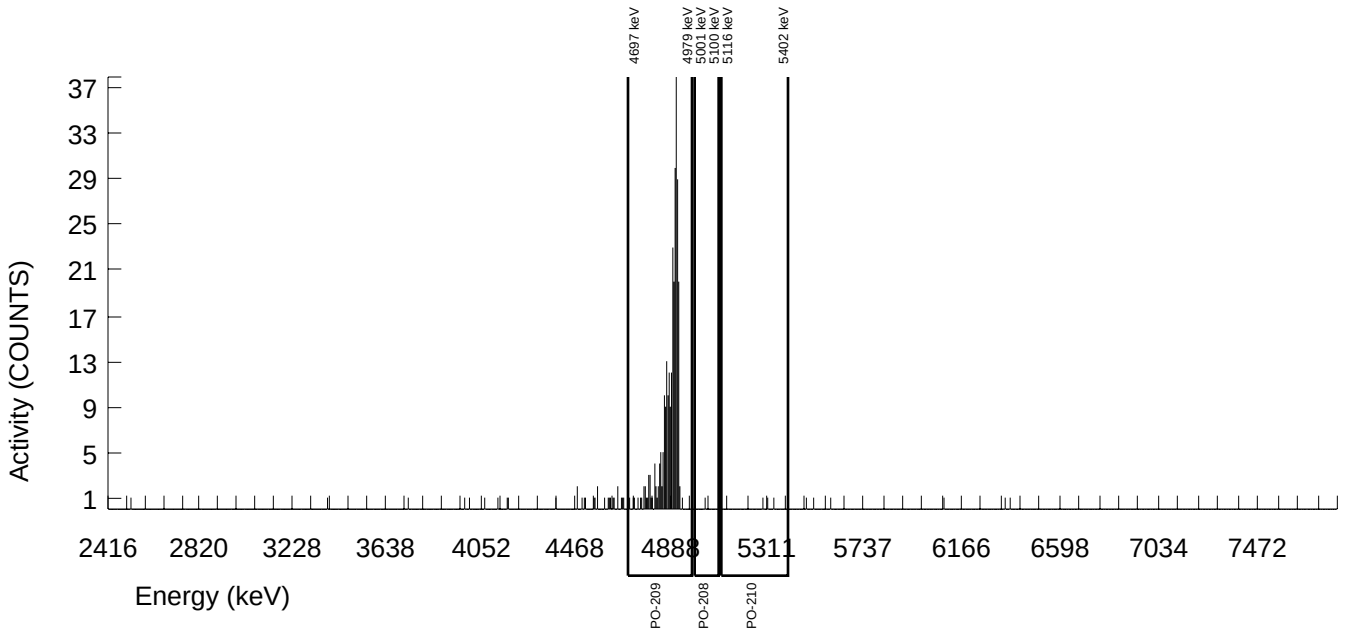
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 037	LIB FILE : PO
SAMPLE ID : S0288297022_PO	DETECTOR S/N : 45-149BB5	BKG FILE : B037.CNF;1308
SAMPLE QTY : 0.100 G +/-0.437 %	AVERAGE %EFFICIENCY : 37.3187	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 1.0906	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 31-Oct-2011 22:24:25	EFF FILE : W037.CNF;355
% YIELD : 59.0 +/-7.283 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.8275E+01	1437-B	PO-210	1.8275E+01
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.1636E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5046.271	5.032	1.000	1.000	0.000	0.0000	100.000	8.62E-02	1.70E-01	2.59E-01	0.00E+00	1.69E-01
PO-209	4882.000	4892.428	27.271	283.000	282.520	0.480	0.6928	99.740	2.41E+01	4.67E+00	4.73E-01	1.08E-01	2.82E+00
PO-210	5304.380	5323.320	50.324	3.000	2.040	0.960	0.9798	100.000	1.90E-01	3.30E-01	6.15E-01	1.67E-01	3.29E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

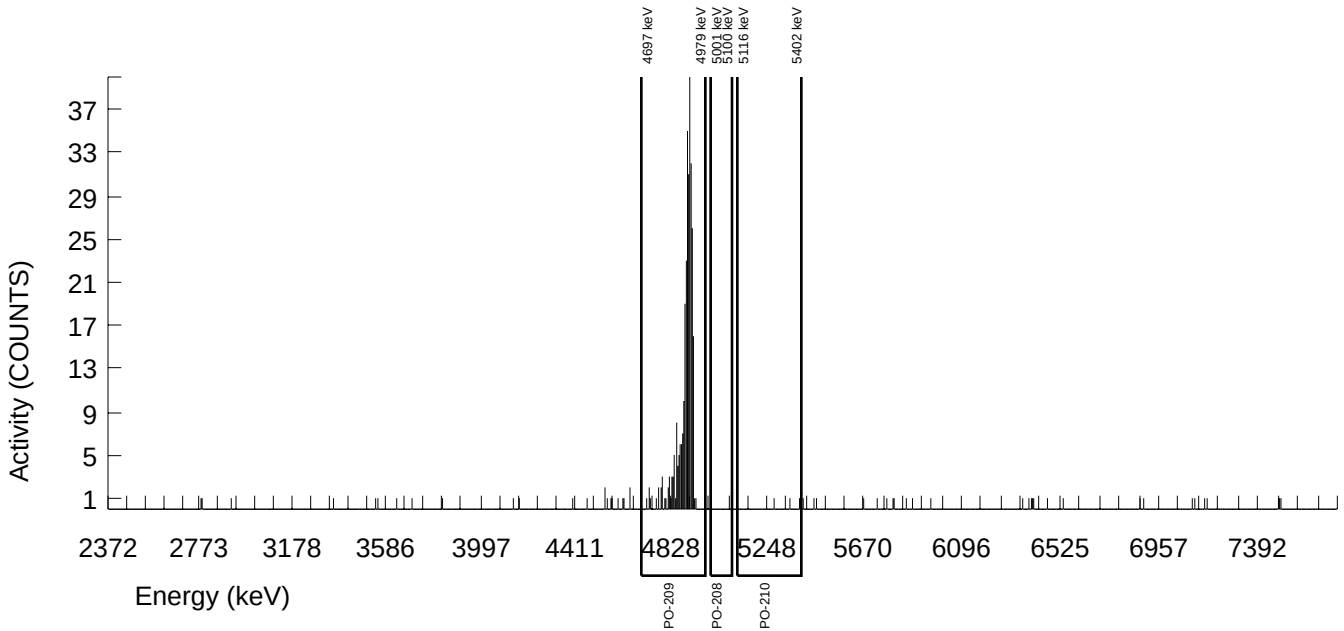
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 024	LIB FILE : PO
SAMPLE ID : S0288297023_PO	DETECTOR S/N : 76542	BKG FILE : B024.CNF;1288
SAMPLE QTY : 0.123 G +/-2.628 %	AVERAGE %EFFICIENCY : 33.7483	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9855	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:46	EFF FILE : W024.CNF;347
% YIELD : 69.5 +/-7.140 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4858E+01	1437-B	PO-210	1.4858E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.7245E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.475	0.000	0.000	-0.240	0.240	0.4899	100.000	-1.58E-02	1.33E-01	3.15E-01	5.90E-02	1.32E-01
PO-209	4882.000	4897.512	31.772	302.000	300.800	1.200	1.0954	99.740	1.96E+01	3.84E+00	4.58E-01	1.31E-01	2.22E+00
PO-210	5304.380	5344.200	110.075	3.000	2.760	0.240	0.4899	100.000	1.93E-01	2.42E-01	3.35E-01	6.28E-02	2.40E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

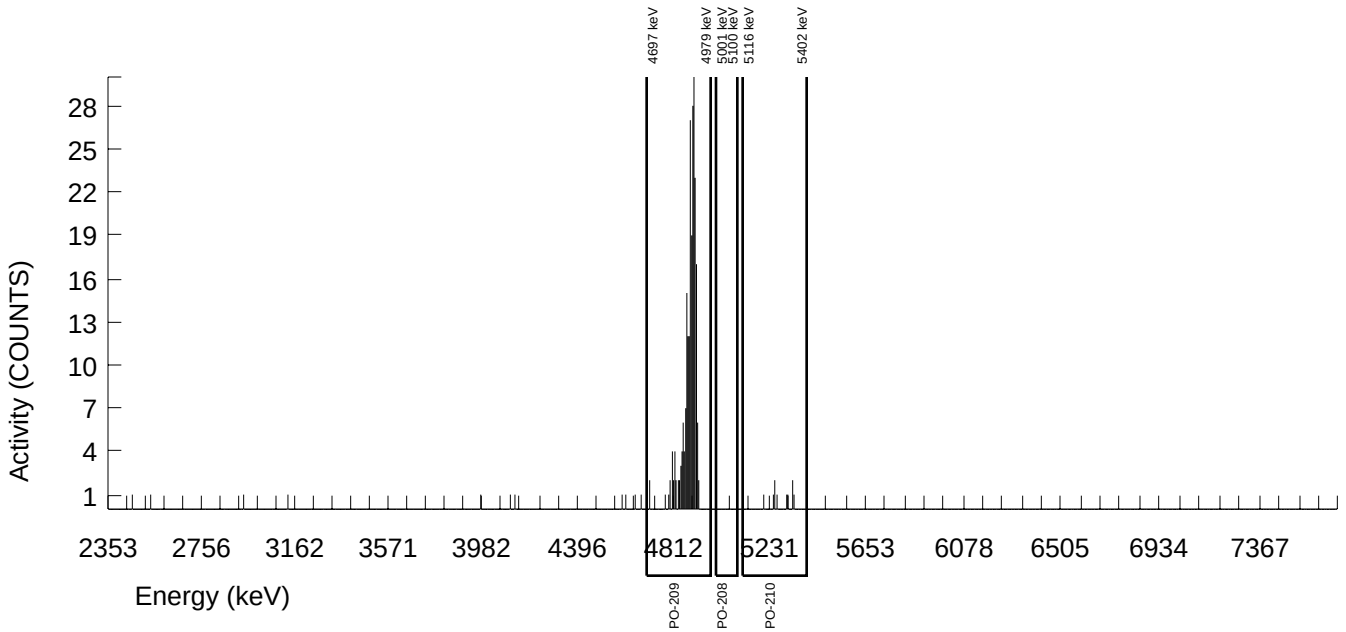
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 114	LIB FILE : PO
SAMPLE ID : S0288297024_PO	DETECTOR S/N : 78258	BKG FILE : B114.CNF;643
SAMPLE QTY : 0.106 G +/-3.047 %	AVERAGE %EFFICIENCY : 24.7962	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7248	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:09	EFF FILE : W114.CNF;170
% YIELD : 74.0 +/-7.769 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
	ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D	1437-B	PO-210	1.7241E+01	1437-B	PO-210	1.7241E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.9697E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.477	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.92E-01	2.92E-01	0.00E+00	1.91E-01
PO-209	4882.000	4892.001	30.047	237.000	235.560	1.440	1.2000	99.740	2.28E+01	4.91E+00	7.15E-01	2.13E-01	2.92E+00
PO-210	5304.380	5293.812	85.391	10.000	9.760	0.240	0.4899	100.000	1.01E+00	6.68E-01	4.97E-01	9.30E-02	6.44E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

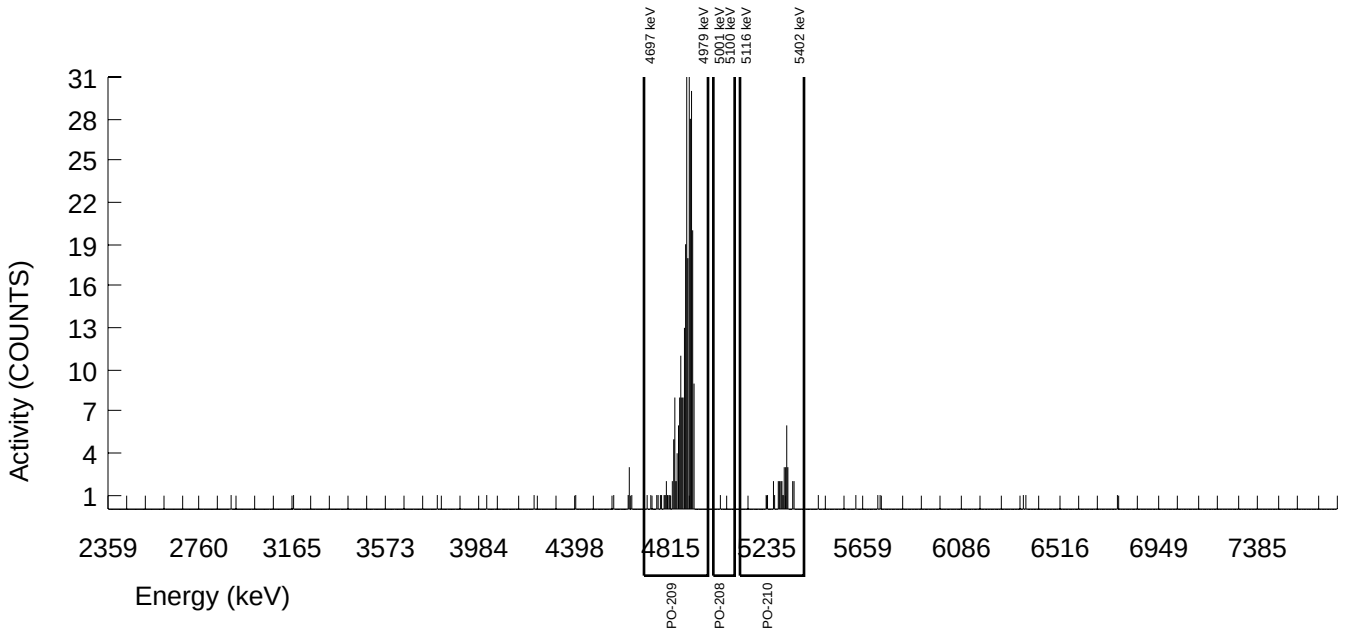
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 115	LIB FILE : PO
SAMPLE ID : S0288297025_PO	DETECTOR S/N : 79995	BKG FILE : B115.CNF;654
SAMPLE QTY : 0.117 G +/-2.762 %	AVERAGE %EFFICIENCY : 26.2161	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7661	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:12	EFF FILE : W115.CNF;201
% YIELD : 80.9 +/-7.393 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5620E+01	1437-B	PO-210	1.5620E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.3368E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5040.427	4.997	1.000	1.000	0.000	0.0000	100.000	7.64E-02	1.50E-01	2.29E-01	0.00E+00	1.50E-01
PO-209	4882.000	4887.926	34.941	274.000	272.080	1.920	1.3856	99.740	2.06E+01	4.20E+00	6.13E-01	1.93E-01	2.46E+00
PO-210	5304.380	5314.920	9.994	33.000	26.760	6.240	2.4980	100.000	2.18E+00	1.00E+00	9.88E-01	3.72E-01	9.36E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

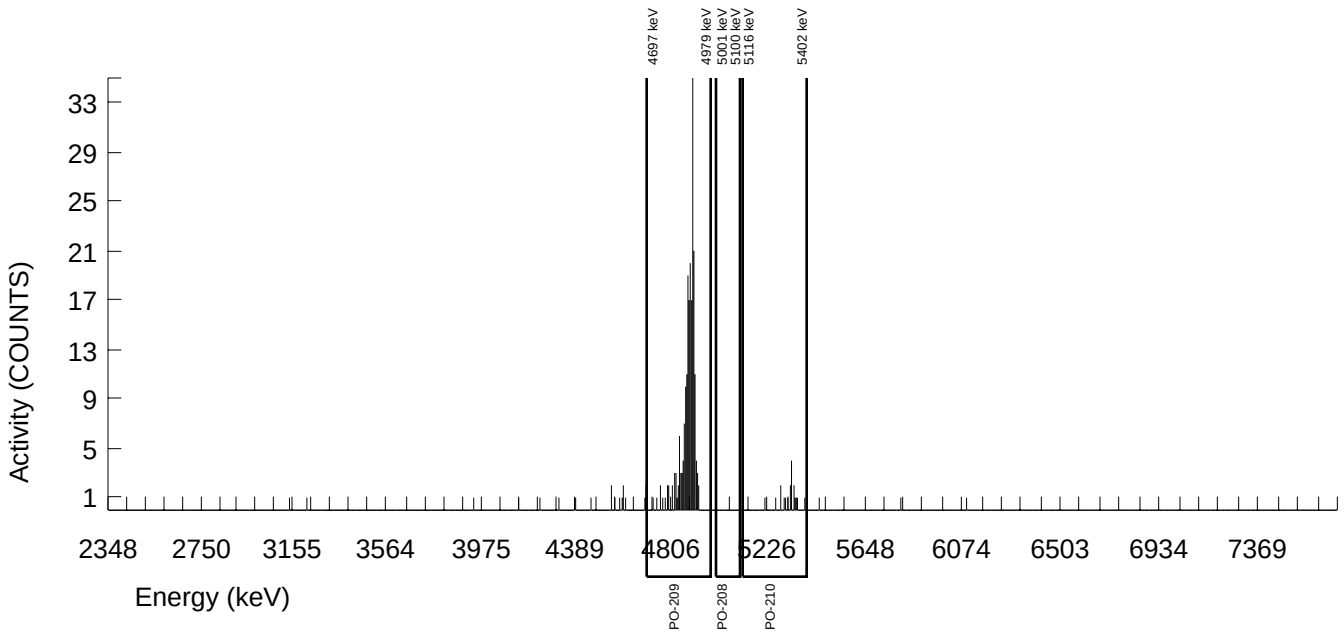
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 116	LIB FILE : PO
SAMPLE ID : S0288297026_PO	DETECTOR S/N : 80004	BKG FILE : B116.CNF;635
SAMPLE QTY : 0.104 G +/-3.106 %	AVERAGE %EFFICIENCY : 25.9266	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7577	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:14	EFF FILE : W116.CNF;158
% YIELD : 65.0 +/-8.008 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.7572E+01	1437-B	PO-210	1.7572E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.4820E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5004.805	5.012	1.000	0.760	0.240	0.4899	100.000	8.22E-02	2.19E-01	5.19E-01	9.71E-02	2.18E-01
PO-209	4882.000	4882.278	27.752	217.000	216.040	0.960	0.9798	99.740	2.32E+01	5.17E+00	7.08E-01	1.93E-01	3.10E+00
PO-210	5304.380	5324.636	7.517	19.000	16.840	2.160	1.4697	100.000	1.94E+00	1.06E+00	9.66E-01	3.10E-01	9.98E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

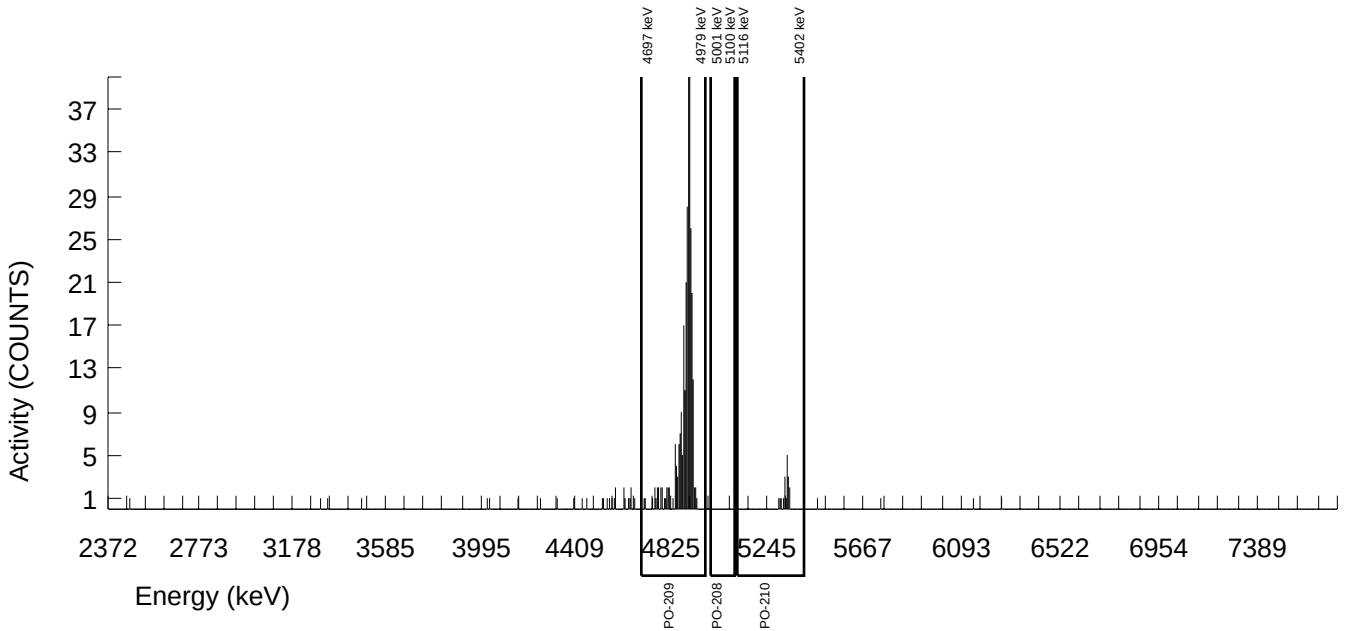
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 117	LIB FILE : PO
SAMPLE ID : S0288297027_PO	DETECTOR S/N : 80003	BKG FILE : B117.CNF;644
SAMPLE QTY : 0.118 G +/-2.738 %	AVERAGE %EFFICIENCY : 26.4928	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7739	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:16	EFF FILE : W117.CNF;171
% YIELD : 82.9 +/-7.297 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5487E+01	1437-B	PO-210	1.5487E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.4448E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.474	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.44E-01	2.19E-01	0.00E+00	1.43E-01
PO-209	4882.000	4894.261	25.472	283.000	281.800	1.200	1.0954	99.740	2.05E+01	4.11E+00	5.09E-01	1.46E-01	2.40E+00
PO-210	5304.380	5333.315	18.729	18.000	11.760	6.240	2.4980	100.000	9.16E-01	6.90E-01	9.46E-01	3.56E-01	6.74E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

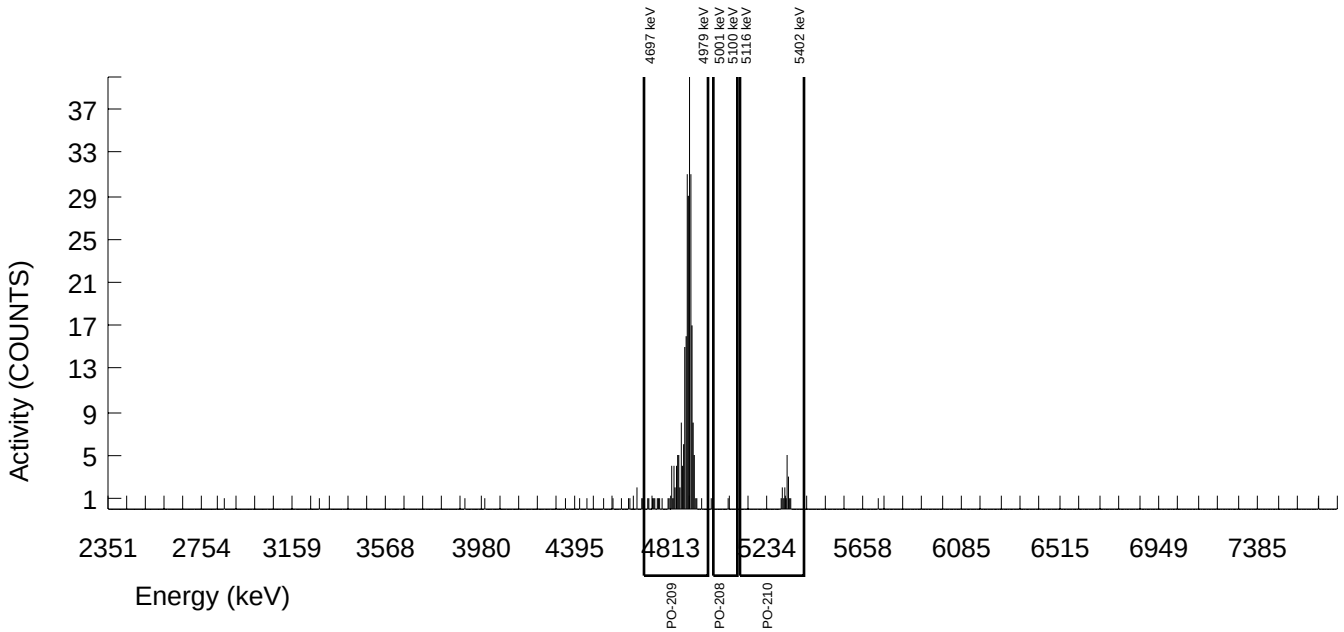
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 118	LIB FILE : PO
SAMPLE ID : S0288297028_PO	DETECTOR S/N : 80061	BKG FILE : B118.CNF;655
SAMPLE QTY : 0.125 G +/-2.586 %	AVERAGE %EFFICIENCY : 25.2694	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7385	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:13:00	EFF FILE : W118.CNF;185
% YIELD : 77.5 +/-7.584 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4620E+01	1437-B	PO-210	1.4620E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.1553E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5070.010	5.011	1.000	0.520	0.480	0.6928	100.000	4.02E-02	1.61E-01	4.29E-01	9.82E-02	1.60E-01
PO-209	4882.000	4884.665	22.646	252.000	251.280	0.720	0.8485	99.740	1.93E+01	4.02E+00	4.70E-01	1.19E-01	2.39E+00
PO-210	5304.380	5324.633	9.396	17.000	15.080	1.920	1.3856	100.000	1.24E+00	7.06E-01	6.66E-01	2.09E-01	6.75E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

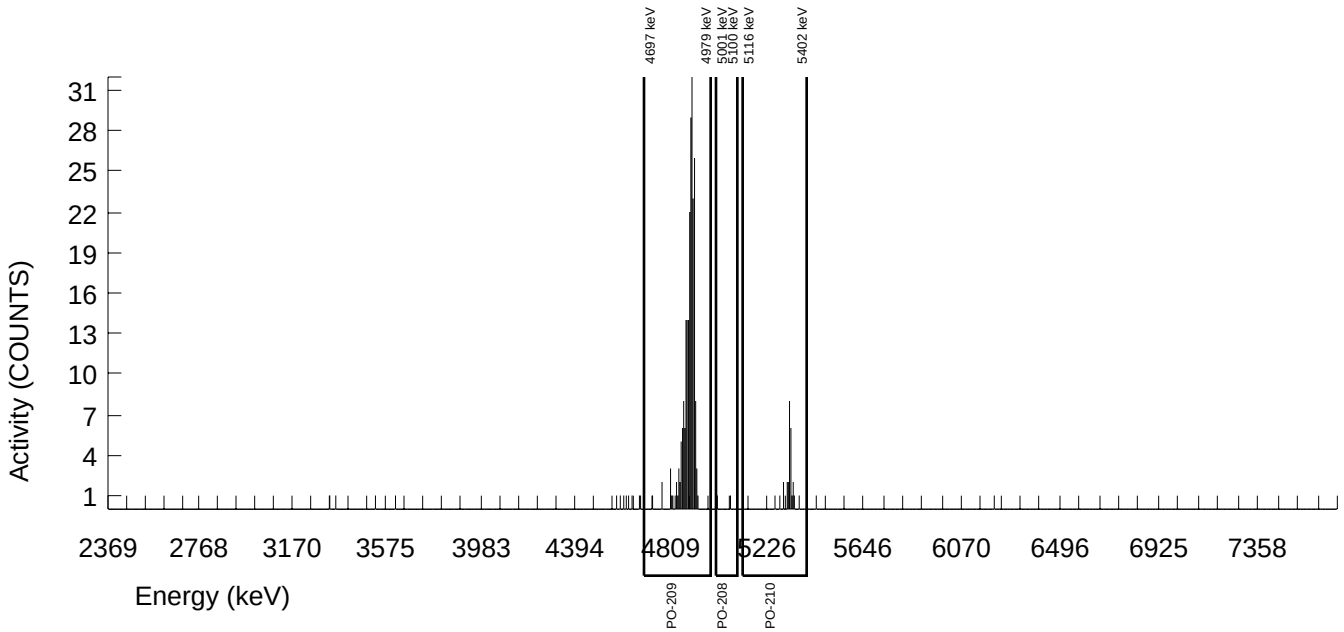
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 119	LIB FILE : PO
SAMPLE ID : S0288297029_PO	DETECTOR S/N : 79450	BKG FILE : B119.CNF;654
SAMPLE QTY : 0.105 G +/-3.076 %	AVERAGE %EFFICIENCY : 25.6231	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7487	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:20	EFF FILE : W119.CNF;176
% YIELD : 68.9 +/-7.878 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.7405E+01	1437-B	PO-210	1.7405E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.6948E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5045.470	59.624	2.000	1.760	0.240	0.4899	100.000	1.80E-01	2.89E-01	4.90E-01	9.17E-02	2.87E-01
PO-209	4882.000	4893.984	26.361	228.000	226.560	1.440	1.2000	99.740	2.30E+01	5.03E+00	7.51E-01	2.23E-01	3.01E+00
PO-210	5304.380	5328.656	10.269	27.000	25.320	1.680	1.2961	100.000	2.76E+00	1.22E+00	8.43E-01	2.58E-01	1.12E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

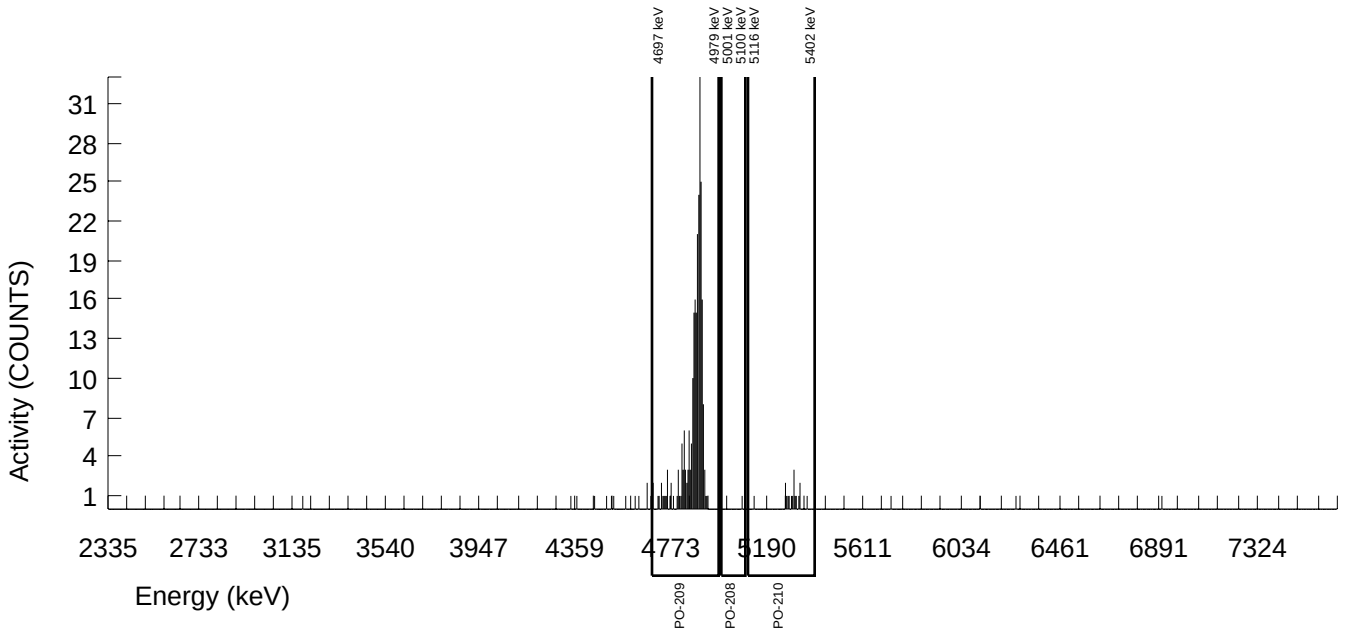
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 120	LIB FILE : PO
SAMPLE ID : S0288297030_PO	DETECTOR S/N : 74430	BKG FILE : B120.CNF;656
SAMPLE QTY : 0.109 G +/-2.964 %	AVERAGE %EFFICIENCY : 25.9854	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7591	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:22	EFF FILE : W120.CNF;175
% YIELD : 74.2 +/-7.626 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
	ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D	1437-B	PO-210	1.6766E+01	1437-B	PO-210	1.6766E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.9765E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5090.740	4.961	1.000	0.760	0.240	0.4899	100.000	6.85E-02	1.82E-01	4.32E-01	8.09E-02	1.82E-01
PO-209	4882.000	4881.733	23.289	248.000	247.280	0.720	0.8485	99.740	2.22E+01	4.68E+00	5.47E-01	1.39E-01	2.77E+00
PO-210	5304.380	5304.562	62.011	17.000	15.560	1.440	1.2000	100.000	1.49E+00	8.24E-01	7.10E-01	2.11E-01	7.84E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

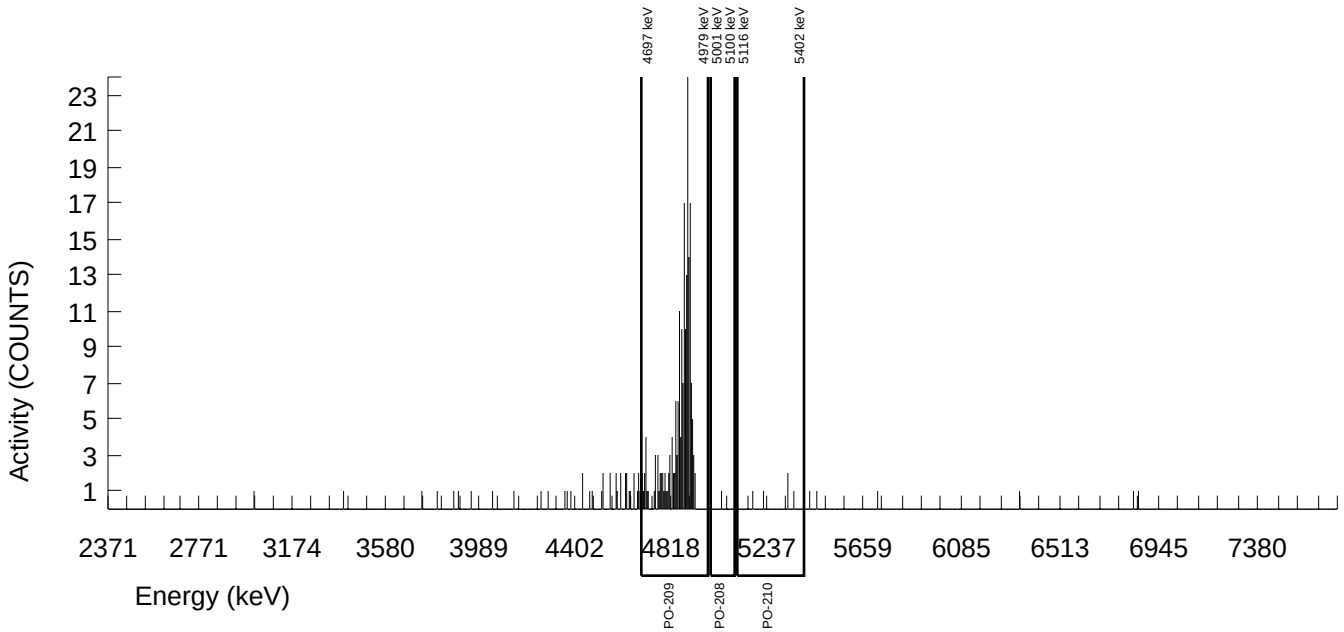
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 127	LIB FILE : PO
SAMPLE ID : S0288297031_PO	DETECTOR S/N : 78770	BKG FILE : B127.CNF;642
SAMPLE QTY : 0.128 G +/-2.525 %	AVERAGE %EFFICIENCY : 25.7319	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7518	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:25	EFF FILE : W127.CNF;172
% YIELD : 60.9 +/-8.223 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4277E+01	1437-B	PO-210	1.4277E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.2647E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5048.016	4.978	1.000	1.000	0.000	0.0000	100.000	9.45E-02	1.86E-01	2.83E-01	0.00E+00	1.85E-01
PO-209	4882.000	4868.331	29.866	202.000	201.040	0.960	0.9798	99.740	1.89E+01	4.26E+00	6.18E-01	1.68E-01	2.62E+00
PO-210	5304.380	5290.643	4.978	5.000	3.800	1.200	1.0954	100.000	3.82E-01	4.59E-01	7.06E-01	2.02E-01	4.53E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

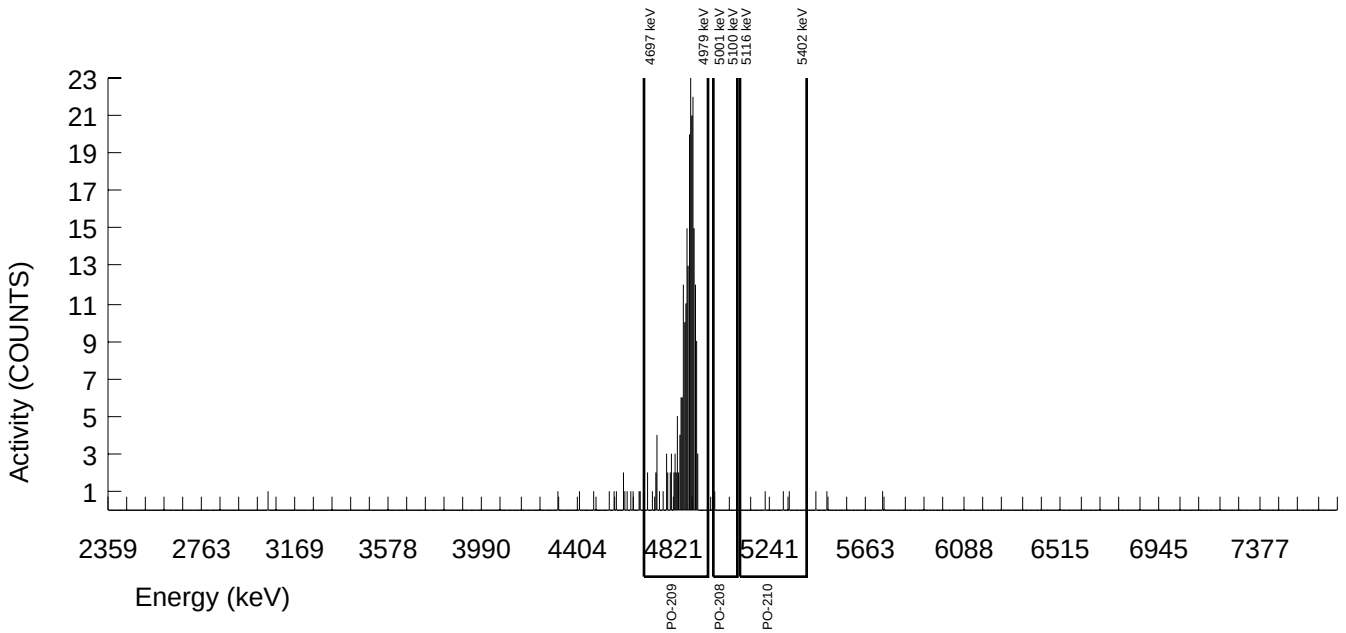
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 128	LIB FILE : PO
SAMPLE ID : S0288297032_PO	DETECTOR S/N : 75549	BKG FILE : B128.CNF;648
SAMPLE QTY : 0.127 G +/-2.545 %	AVERAGE %EFFICIENCY : 25.4337	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7436	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:27	EFF FILE : W128.CNF;182
% YIELD : 72.3 +/-7.763 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4390E+01	1437-B	PO-210	1.4390E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.8741E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5009.760	5.032	1.000	0.760	0.240	0.4899	100.000	6.17E-02	1.64E-01	3.89E-01	7.28E-02	1.64E-01
PO-209	4882.000	4886.654	51.576	237.000	235.800	1.200	1.0954	99.740	1.90E+01	4.05E+00	5.66E-01	1.62E-01	2.43E+00
PO-210	5304.380	5291.663	105.667	3.000	2.040	0.960	0.9798	100.000	1.76E-01	3.06E-01	5.70E-01	1.55E-01	3.05E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

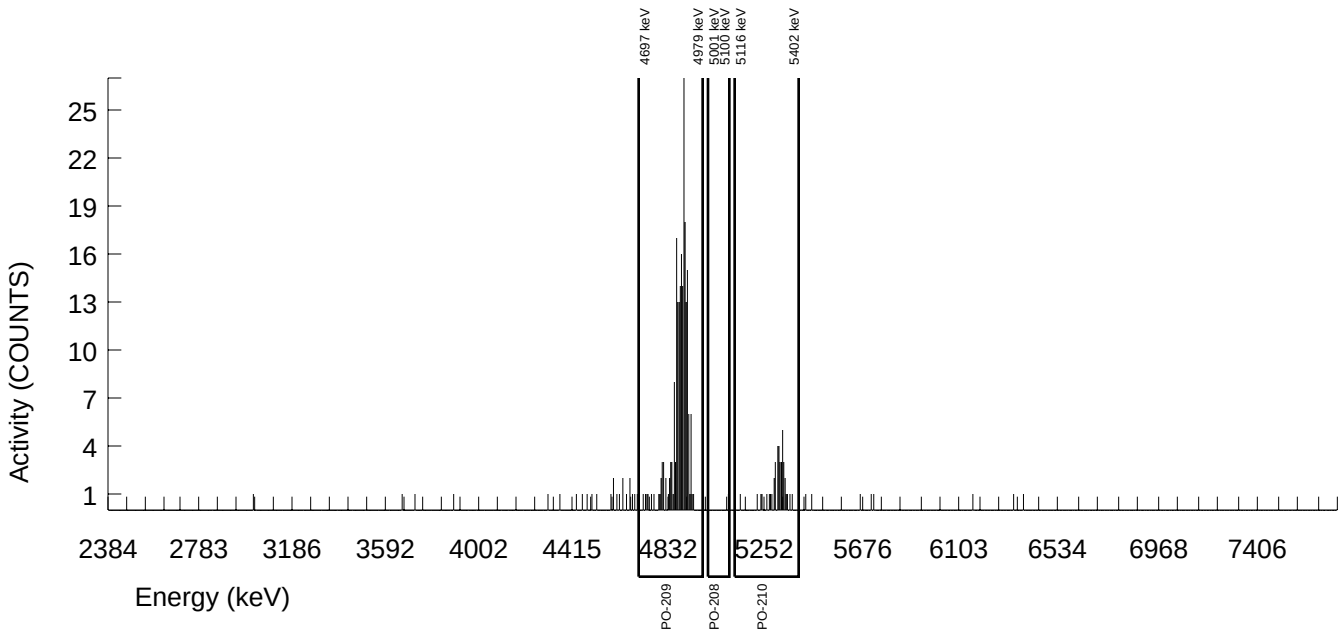
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 129	LIB FILE : PO
SAMPLE ID : S0288297033_PO	DETECTOR S/N : 76227	BKG FILE : B129.CNF;641
SAMPLE QTY : 0.100 G +/-0.437 %	AVERAGE %EFFICIENCY : 25.8471	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7551	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:29	EFF FILE : W129.CNF;184
% YIELD : 64.5 +/-8.042 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8275E+01	1437-B	PO-210	1.8275E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.4565E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5099.105	0.000	1.000	0.520	0.480	0.6928	100.000	5.91E-02	2.36E-01	6.30E-01	1.44E-01	2.35E-01
PO-209	4882.000	4886.267	46.754	215.000	213.800	1.200	1.0954	99.740	2.41E+01	5.20E+00	7.92E-01	2.27E-01	3.25E+00
PO-210	5304.380	5313.794	39.720	41.000	39.560	1.440	1.2000	100.000	4.79E+00	1.73E+00	8.96E-01	2.66E-01	1.53E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

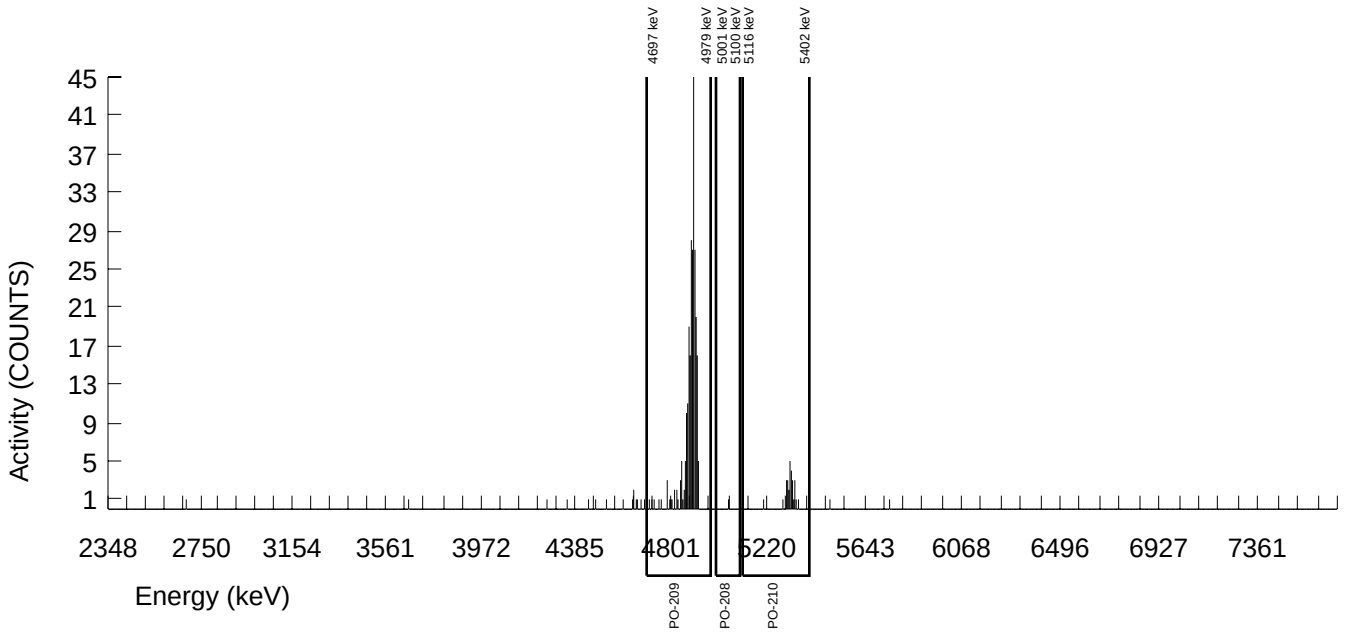
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 130	LIB FILE : PO
SAMPLE ID : S0288297034_PO	DETECTOR S/N : 76228	BKG FILE : B130.CNF;639
SAMPLE QTY : 0.113 G +/-2.859 %	AVERAGE %EFFICIENCY : 25.3670	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7414	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 09:00:31	EFF FILE : W130.CNF;185
% YIELD : 78.5 +/-7.537 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6173E+01	1437-B	PO-210	1.6173E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.2091E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5057.558	4.998	1.000	0.760	0.240	0.4899	100.000	6.40E-02	1.70E-01	4.04E-01	7.56E-02	1.70E-01
PO-209	4882.000	4891.626	20.498	256.000	255.520	0.480	0.6928	99.740	2.14E+01	4.45E+00	4.63E-01	1.06E-01	2.62E+00
PO-210	5304.380	5324.130	37.068	28.000	26.800	1.200	1.0954	100.000	2.40E+00	1.02E+00	6.29E-01	1.80E-01	9.35E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

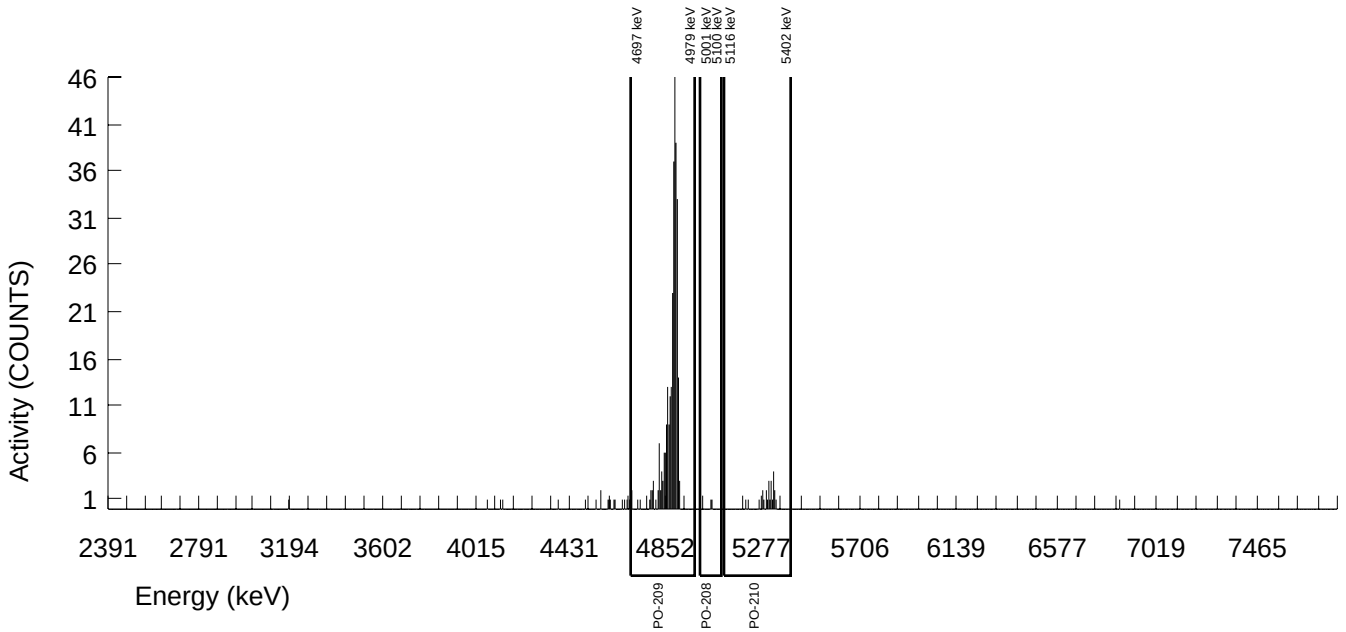
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 026	LIB FILE : PO
SAMPLE ID : S0288297035_PO	DETECTOR S/N : 80017	BKG FILE : B026.CNF;1314
SAMPLE QTY : 0.101 G +/-3.198 %	AVERAGE %EFFICIENCY : 31.6538	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9264	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:54	EFF FILE : W026.CNF;362
% YIELD : 72.3 +/-7.198 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8094E+01	1437-B	PO-210	1.8094E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.8785E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5061.081	9.933	2.000	1.760	0.240	0.4899	100.000	1.44E-01	2.32E-01	3.93E-01	7.35E-02	2.30E-01
PO-209	4882.000	4884.062	22.479	295.000	293.800	1.200	1.0954	99.740	2.39E+01	4.80E+00	5.71E-01	1.63E-01	2.74E+00
PO-210	5304.380	5309.442	27.315	24.000	23.280	0.720	0.8485	100.000	2.03E+00	9.06E-01	5.34E-01	1.36E-01	8.42E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

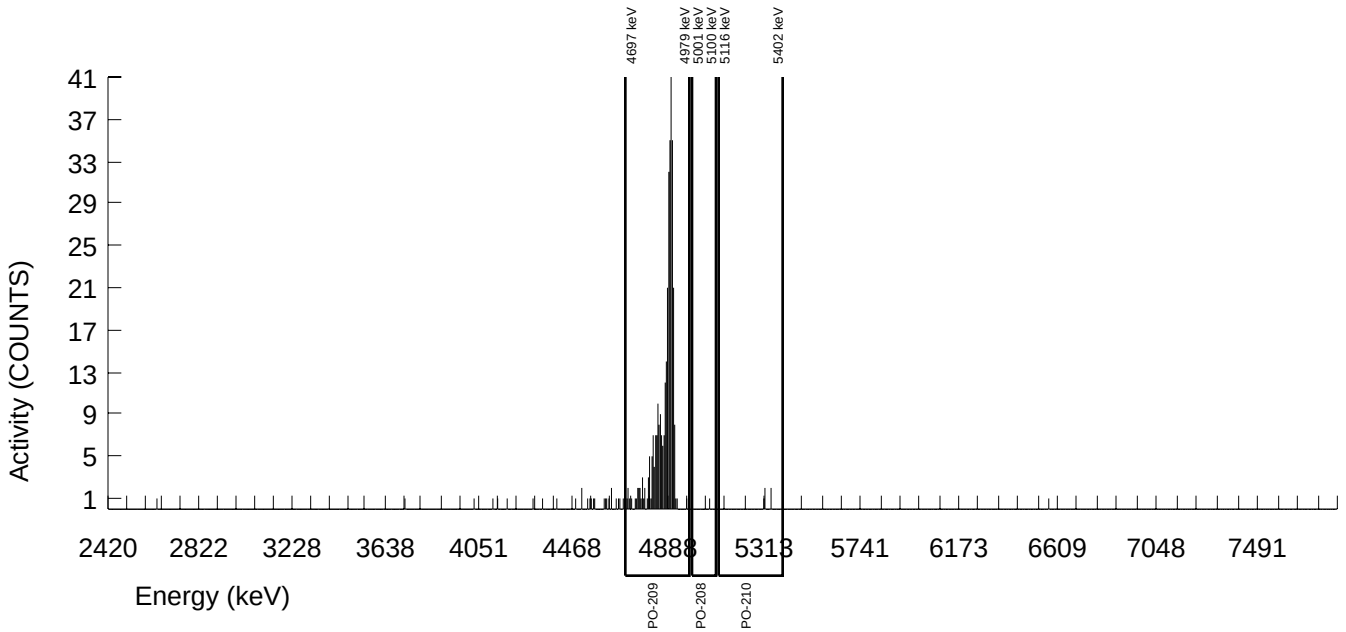
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 027	LIB FILE : PO
SAMPLE ID : S0288297036_PO	DETECTOR S/N : 70317	BKG FILE : B027.CNF;1318
SAMPLE QTY : 0.119 G +/-2.715 %	AVERAGE %EFFICIENCY : 32.6067	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9550	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:54	EFF FILE : W027.CNF;387
% YIELD : 78.6 +/-6.948 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5357E+01	1437-B	PO-210	1.5357E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.2142E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5078.980	5.002	1.000	0.520	0.480	0.6928	100.000	3.23E-02	1.29E-01	3.44E-01	7.88E-02	1.29E-01
PO-209	4882.000	4880.742	25.557	331.000	328.840	2.160	1.4697	99.740	2.03E+01	3.87E+00	5.17E-01	1.66E-01	2.20E+00
PO-210	5304.380	5333.130	32.510	5.000	4.040	0.960	0.9798	100.000	2.68E-01	3.00E-01	4.36E-01	1.19E-01	2.97E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

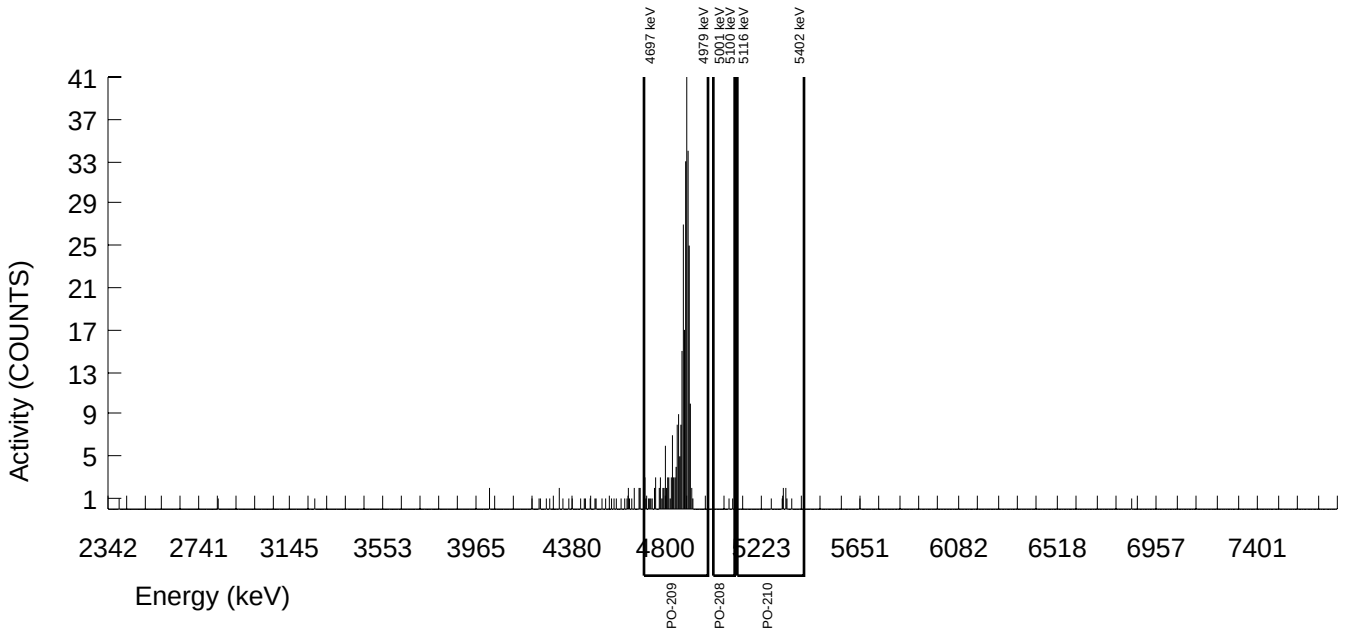
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 028	LIB FILE : PO
SAMPLE ID : S0288297037_PO	DETECTOR S/N : 78792	BKG FILE : B028.CNF;1318
SAMPLE QTY : 0.114 G +/-2.834 %	AVERAGE %EFFICIENCY : 30.7704	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9010	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:54	EFF FILE : W028.CNF;367
% YIELD : 74.2 +/-7.207 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6031E+01	1437-B	PO-210	1.6031E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.9763E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5087.945	19.890	2.000	1.760	0.240	0.4899	100.000	1.28E-01	2.06E-01	3.49E-01	6.54E-02	2.05E-01
PO-209	4882.000	4869.837	29.048	294.000	292.800	1.200	1.0954	99.740	2.12E+01	4.21E+00	5.07E-01	1.45E-01	2.43E+00
PO-210	5304.380	5321.230	19.890	8.000	7.280	0.720	0.8485	100.000	5.65E-01	4.45E-01	4.74E-01	1.21E-01	4.35E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

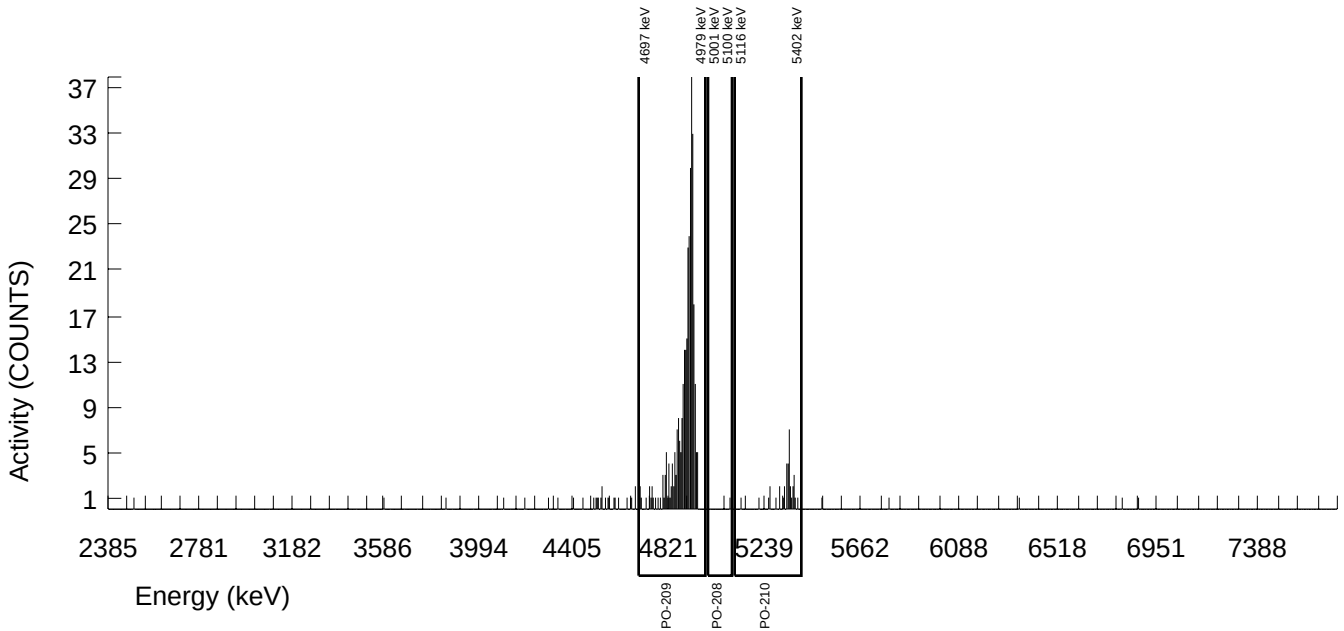
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 029	LIB FILE : PO
SAMPLE ID : S0288297038_PO	DETECTOR S/N : 33454	BKG FILE : B029.CNF;1307
SAMPLE QTY : 0.110 G +/-2.937 %	AVERAGE %EFFICIENCY : 31.0402	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9090	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:54	EFF FILE : W029.CNF;364
% YIELD : 80.3 +/-7.010 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 06-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6614E+01	1437-B	PO-210	1.6614E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.3057E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5097.622	4.937	1.000	0.760	0.240	0.4899	100.000	5.25E-02	1.40E-01	3.31E-01	6.20E-02	1.39E-01
PO-209	4882.000	4902.565	26.825	322.000	319.840	2.160	1.4697	99.740	2.20E+01	4.26E+00	5.75E-01	1.85E-01	2.42E+00
PO-210	5304.380	5335.870	13.948	36.000	35.520	0.480	0.6928	100.000	2.62E+00	9.63E-01	4.08E-01	9.35E-02	8.68E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

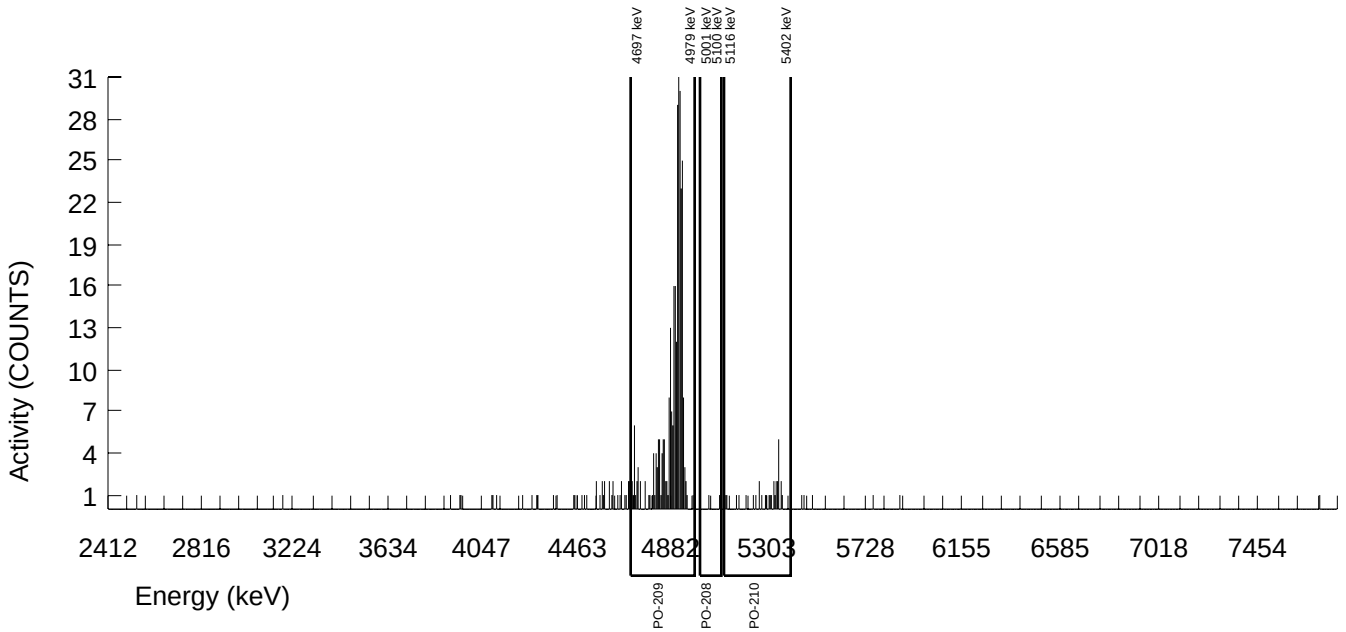
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 030	LIB FILE : PO
SAMPLE ID : S0288297039_PO	DETECTOR S/N : 33447	BKG FILE : B030.CNF;1304
SAMPLE QTY : 0.107 G +/-3.019 %	AVERAGE %EFFICIENCY : 29.9716	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.8799	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:54	EFF FILE : W030.CNF;349
% YIELD : 77.6 +/-7.170 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
	ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D	1437-B	PO-210	1.7080E+01	1437-B	PO-210	1.7080E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.1592E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5073.795	50.393	2.000	1.760	0.240	0.4899	100.000	1.34E-01	2.15E-01	3.65E-01	6.84E-02	2.14E-01
PO-209	4882.000	4887.903	38.343	300.000	298.320	1.680	1.2961	99.740	2.26E+01	4.49E+00	5.86E-01	1.80E-01	2.57E+00
PO-210	5304.380	5299.841	6.719	30.000	29.280	0.720	0.8485	100.000	2.38E+00	9.56E-01	4.96E-01	1.26E-01	8.74E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

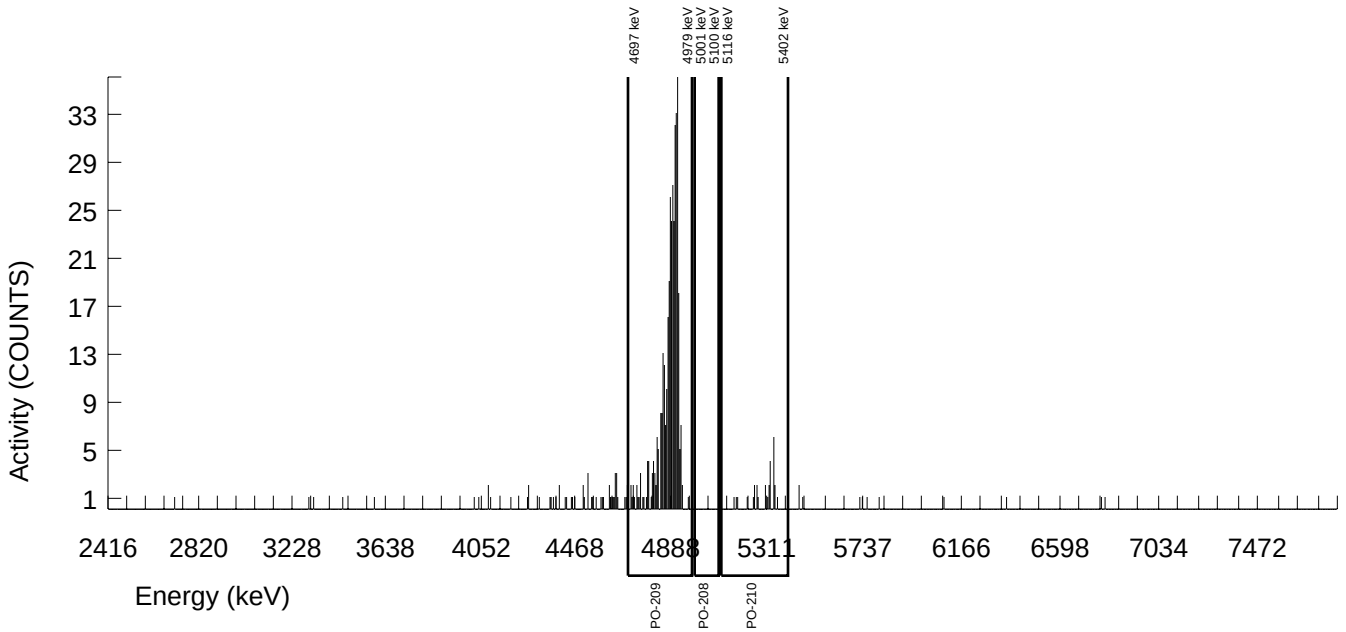
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 037	LIB FILE : PO
SAMPLE ID : S0288297040_PO	DETECTOR S/N : 45-149BB5	BKG FILE : B037.CNF;1306
SAMPLE QTY : 0.118 G +/-2.738 %	AVERAGE %EFFICIENCY : 37.3187	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 1.0906	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:56	EFF FILE : W037.CNF;355
% YIELD : 79.1 +/-6.648 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5487E+01	1437-B	PO-210	1.5487E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.2393E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.474	0.000	0.000	-0.240	0.240	0.4899	100.000	-1.31E-02	1.10E-01	2.61E-01	4.88E-02	1.10E-01
PO-209	4882.000	4886.327	41.936	381.000	378.600	2.400	1.5492	99.740	2.05E+01	3.74E+00	4.69E-01	1.53E-01	2.07E+00
PO-210	5304.380	5302.602	21.388	28.000	26.320	1.680	1.2961	100.000	1.53E+00	6.49E-01	4.50E-01	1.38E-01	6.06E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

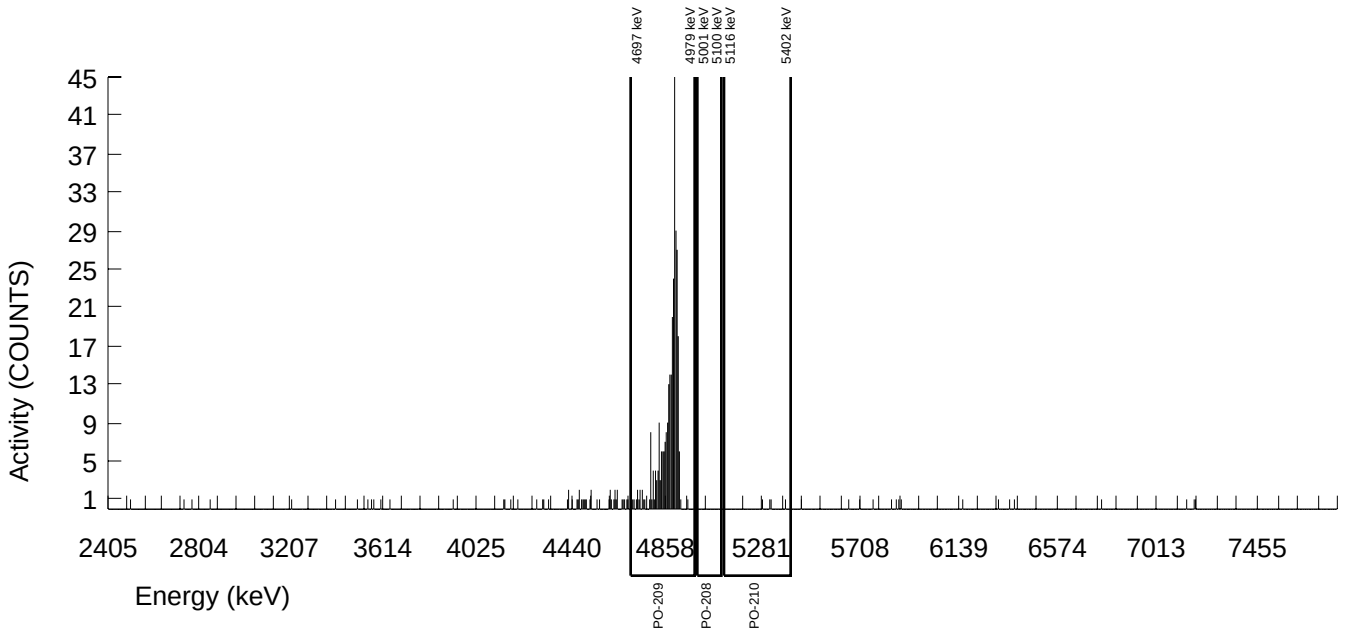
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 038	LIB FILE : PO
SAMPLE ID : S1202512210_PO	DETECTOR S/N : 72532	BKG FILE : B038.CNF;1300
SAMPLE QTY : 0.128 G +/-2.525 %	AVERAGE %EFFICIENCY : 34.7216	BKG DATE : 23-Oct-2011
SAMPLE DATE : 21-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 1.0153	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:56	EFF FILE : W038.CNF;361
% YIELD : 69.0 +/-7.092 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
	ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D	1437-B	PO-210	1.3786E+01	1437-B	PO-210	1.3786E+01
NUCLIDE : PO-209						
NOMINAL : 5.3603E+00 dpm						
RESULTS : 3.7009E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.468	0.000	0.000	-0.480	0.480	0.6928	100.000	-2.95E-02	1.28E-01	3.40E-01	7.80E-02	1.27E-01
PO-209	4882.000	4874.239	19.227	309.000	307.560	1.440	1.2000	99.740	1.89E+01	3.66E+00	4.54E-01	1.35E-01	2.11E+00
PO-210	5304.380	5329.134	99.238	4.000	3.280	0.720	0.8485	100.000	2.09E-01	2.57E-01	3.88E-01	9.88E-02	2.55E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

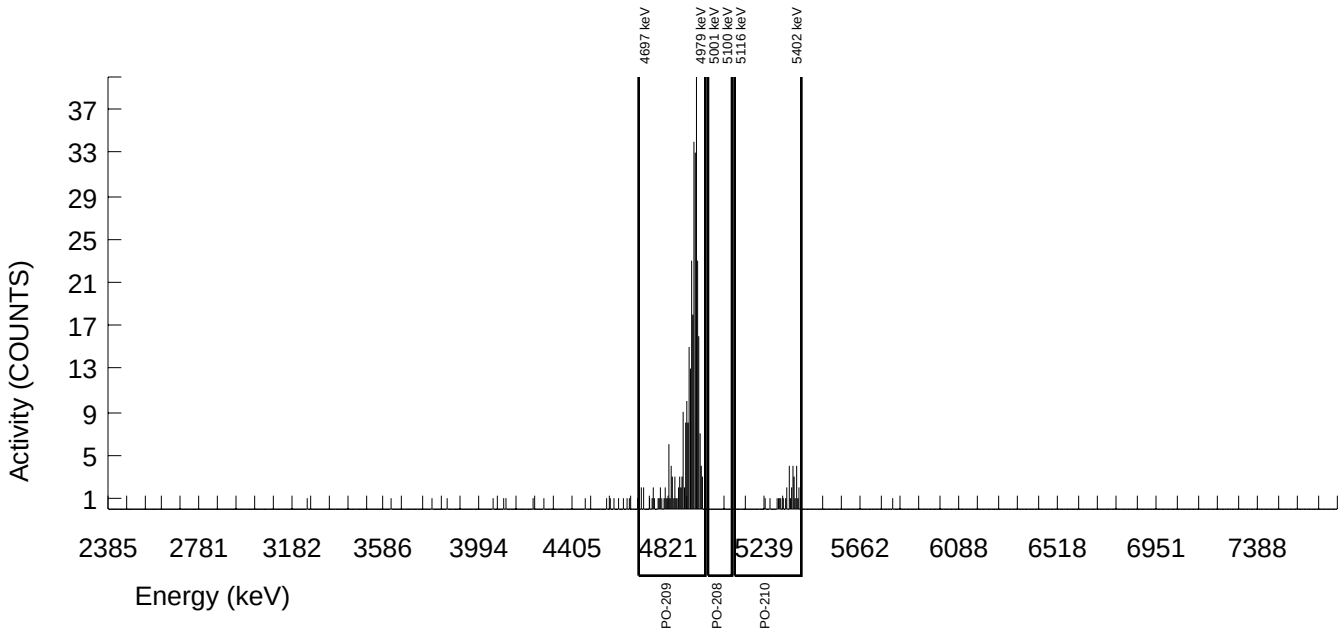
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 029	LIB FILE : PO
SAMPLE ID : S1202512211_PO	DETECTOR S/N : 33454	BKG FILE : B029.CNF;1309
SAMPLE QTY : 0.113 G +/-2.859 %	AVERAGE %EFFICIENCY : 31.0402	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9090	BKG LIVE TIME(SEC) : 60000.00
ANALYST : LYS1	COUNT DATE : 01-Nov-2011 14:37:19	EFF FILE : W029.CNF;364
% YIELD : 79.0 +/-7.042 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 06-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6173E+01	1437-B	PO-210	1.6173E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.2350E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.470	0.000	0.000	-0.240	0.240	0.4899	100.000	-1.65E-02	1.39E-01	3.29E-01	6.15E-02	1.38E-01
PO-209	4882.000	4920.335	28.283	316.000	314.560	1.440	1.2000	99.740	2.14E+01	4.15E+00	5.02E-01	1.49E-01	2.37E+00
PO-210	5304.380	5355.027	35.383	32.000	31.040	0.960	0.9798	100.000	2.31E+00	9.06E-01	4.90E-01	1.34E-01	8.28E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 040	LIB FILE : PO
SAMPLE ID : S1202512212_PO	DETECTOR S/N : 78773	BKG FILE : B040.CNF;1303
SAMPLE QTY : 0.105 G +/-3.076 %	AVERAGE %EFFICIENCY : 32.6029	BKG DATE : 23-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9544	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:56	EFF FILE : W040.CNF;357
% YIELD : 79.9 +/-6.903 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

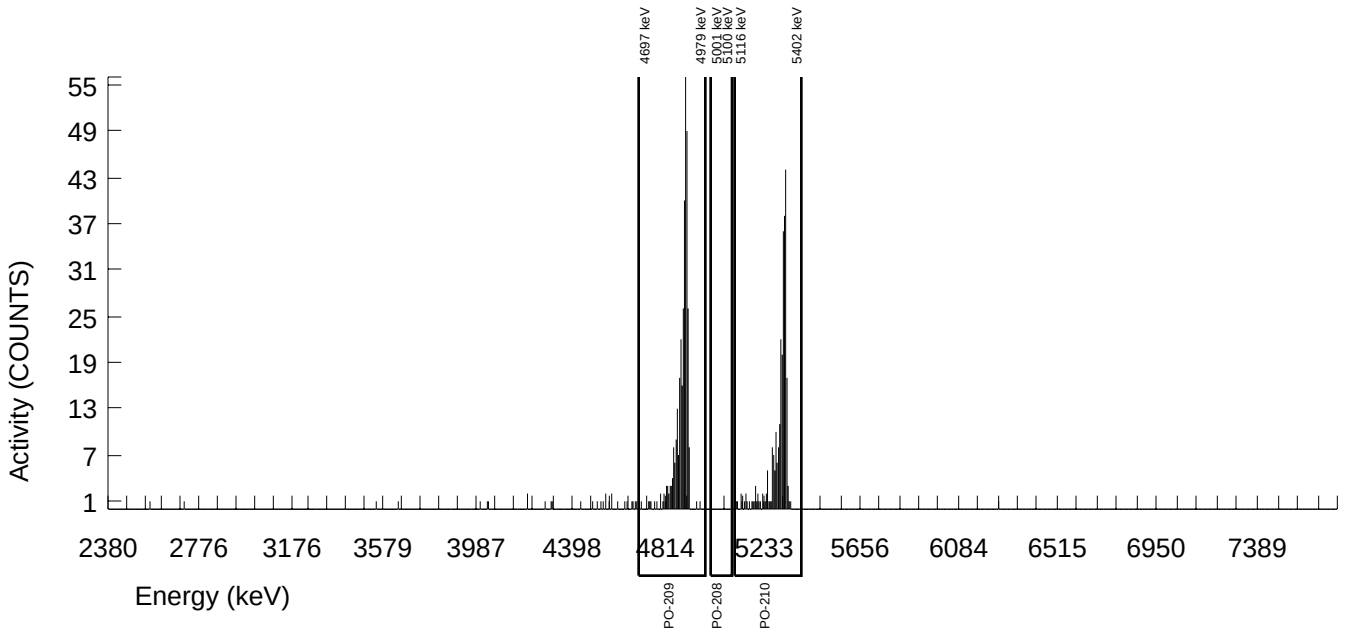
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3610E+00 dpm
RESULTS : 4.2814E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G	% RECOVERY
1437-B	PO-210	1.7405E+01	103.473

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.7405E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5101.755	0.000	1.000	0.760	0.240	0.4899	100.000	5.27E-02	1.40E-01	3.32E-01	6.22E-02	1.40E-01
PO-209	4882.000	4886.489	18.557	335.000	334.040	0.960	0.9798	99.740	2.30E+01	4.41E+00	4.54E-01	1.24E-01	2.47E+00
PO-210	5304.380	5309.622	18.161	272.000	270.320	1.680	1.2961	100.000	2.00E+01	3.97E+00	5.73E-01	1.75E-01	2.39E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151775	CHAMBER : 042	LIB FILE : PO
SAMPLE ID : S1202512213_PO	DETECTOR S/N : 78793	BKG FILE : B042.CNF;1297
SAMPLE QTY : 0.128 G +/-2.525 %	AVERAGE %EFFICIENCY : 33.2946	BKG DATE : 23-Oct-2011
SAMPLE DATE : 21-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9750	BKG LIVE TIME(SEC) : 59999.99
ANALYST : LYS1	COUNT DATE : 28-Oct-2011 15:04:56	EFF FILE : W042.CNF;334
% YIELD : 76.0 +/-6.979 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

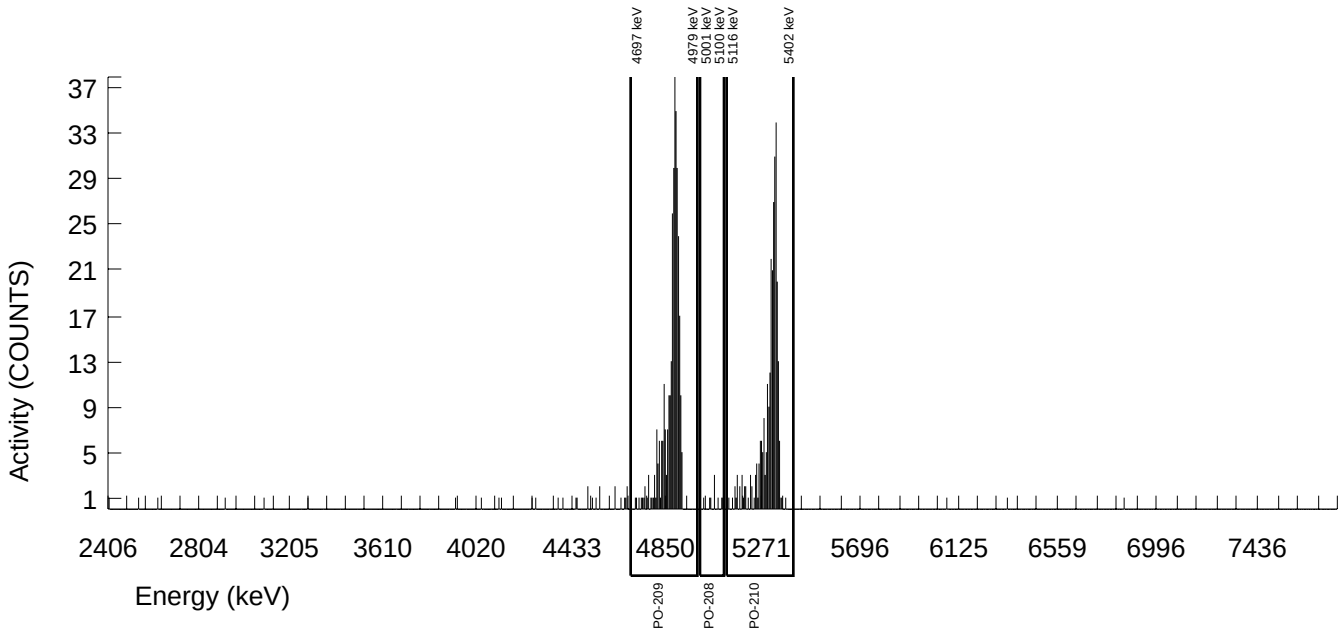
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3603E+00 dpm
RESULTS : 4.0734E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.3786E+01

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G	% RECOVERY
1437-B	PO-210	1.3786E+01	121.491

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5065.490	4.942	9.000	8.520	0.480	0.6928	100.000	4.96E-01	3.53E-01	3.23E-01	7.39E-02	3.45E-01
PO-209	4882.000	4875.978	30.904	327.000	324.600	2.400	1.5492	99.740	1.89E+01	3.60E+00	5.04E-01	1.65E-01	2.06E+00
PO-210	5304.380	5304.963	29.301	279.000	278.040	0.960	0.9798	100.000	1.67E+01	3.28E+00	3.97E-01	1.08E-01	1.97E+00



Radiochemistry Batch Checklist

02-Nov-2011

Batch# 1151711 Product: Po Date: 11/2/11

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required). Blank correction reported included (if required).			NA
If activity less than 10x MDA/MDC, error is less than or equal to 150% of sample activity. If greater than 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are: Less than 5* MDA/ MDC, then RPD is 100% or less, If greater 5* MDA/ MDC, then RPD 20% or less, If below the MDA/ MDC, the RPD is 0%, Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. (Or meets the client's contract acceptance criteria).	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% (or meets the client's contract acceptance criteria).	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
MS, LCS, and Duplicate RPD/RER values uploaded to LIMS and values verified	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed. Disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

Primary Review Performed By: [signature] 11/2/11

Secondary Review Performed By: [signature] 11/2/11

10/29 (11/8)

JLTR

Polonium Queue Sheet

18-OCT-11

Batch #: 1151771 Analyst:MXS2 First Client Due Date:08-NOV-11 Internal Due Date:29-OCT-11

Tracer Isotope: Po-209 Tracer Code: 1423-D Expiration Date: 5-12-12 Vol: 0.1

LCS Isotope: Po-210 LCS Code: 1437-B Expiration Date: 11-23-11 Vol: 0.2

Spike Isotope: Po-210 Spike Code: 1437-B Expiration Date: 11-23-11 Vol: 0.2

Prep Date: 10-25-11 Initials: MSD Pipet ID: 1840027 Balance ID: 50410272 Witness: KM 10.25.11

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) l / f)	Po Det #
288297001-1	DYS-SD-GP01-0102	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	1	1	0.114	33
288297002-1	DYS-SD-GP01-0304	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	2	2	0.103	36
288297003-1	DYS-SD-GP01-0809	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	3	3	0.105	72
288297004-1	DYS-SD-GP01-1112	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	4	4	0.114	38 75 mma 11/4
288297005-1	DYS-SD-GP01-1314	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	5	5	0.116	74
288297006-1	DYS-SD-GP01-1516	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	6	6	0.107	75
288297007-1	DYS-SD-GP01-2223	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	7	7	0.113	34 76 mma 11/2/4
288297008-1	DYS-SD-GP01-2728	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	8	8	0.114	89
288297009-1	DYS-SD-GP02-0102	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	9	9	0.102	90 mma 11/4
288297010-1	DYS-SD-GP02-0708	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	10	10	0.111	40 91
288297011-1	DYS-SD-GP02-1112	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	11	11	0.118	92
288297012-1	DYS-SD-GP02-1718	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	12	12	0.132	42 93 mma 11/4
288297013-1	DYS-SD-GP03-0102	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	13	13	0.105	109 94
288297014-1	DYS-SD-GP03-0910	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	14	14	0.109	109 113
288297015-1	DYS-SD-GP03-1718	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	15	15	0.117	114
288297016-1	DYS-SD-GP03-2122	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	16	16	0.108	33 115 mma 11/2/4
288297017-1	DYS-SD-GP04-0102	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	17	17	0.103	116
288297018-1	DYS-SD-GP04-0708	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	18	18	0.109	117
288297019-1	DYS-SD-GP04-1415	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	19	19	0.111	118
288297020-1	DYS-SD-GP04-2122	SAMPLE		1 pCi/g	SOIL	TETR038	11-OCT-11	20	20	0.124	119
1202512206-1	MB for batch 1151771	MB		1 pCi/g	SOIL	QC ACCOUNT		21	21	0.132	120
1202512207-1	DYS-SD-GP01-0102(288297001DUP)	DUP		1 pCi/g	SOIL	QC ACCOUNT	11-OCT-11	22	22	0.131	110 121 mma 10/31/11
1202512208-1	DYS-SD-GP01-0102(288297001MS)	MS		1 pCi/g	SOIL	QC ACCOUNT	11-OCT-11	23	23	0.120	122 122 mma 11/1/11
1202512209-1	LCS for batch 1151771	LCS		1 pCi/g	SOIL	QC ACCOUNT		24	24	0.132	127

Solid Sample Dissolution by: (LEACH) or DIGESTION Data Reviewed By: Marcus Clark 11/2/11

Circle One

Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

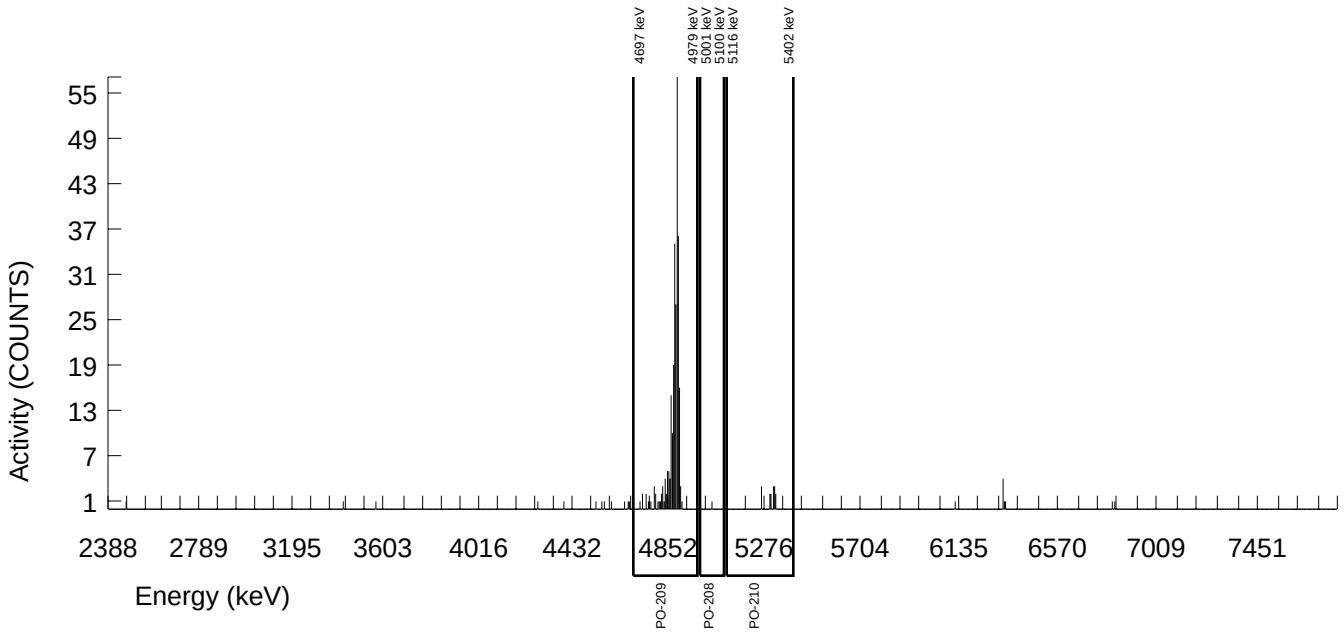
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 033	LIB FILE : PO
SAMPLE ID : S0288297001_PO	DETECTOR S/N : 83293	BKG FILE : B033.CNF;1301
SAMPLE QTY : 0.114 G +/-2.834 %	AVERAGE %EFFICIENCY : 30.9740	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9072	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:55	EFF FILE : W033.CNF;381
% YIELD : 65.6 +/-7.489 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6274E+01	1437-B	PO-210	1.6274E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.5148E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5053.269	4.994	1.000	0.760	0.240	0.4899	100.000	6.23E-02	1.66E-01	3.93E-01	7.36E-02	1.65E-01
PO-209	4882.000	4884.435	18.884	261.000	260.520	0.480	0.6928	99.740	2.12E+01	4.38E+00	4.50E-01	1.03E-01	2.58E+00
PO-210	5304.380	5312.411	63.676	15.000	14.520	0.480	0.6928	100.000	1.29E+00	7.09E-01	4.91E-01	1.12E-01	6.75E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

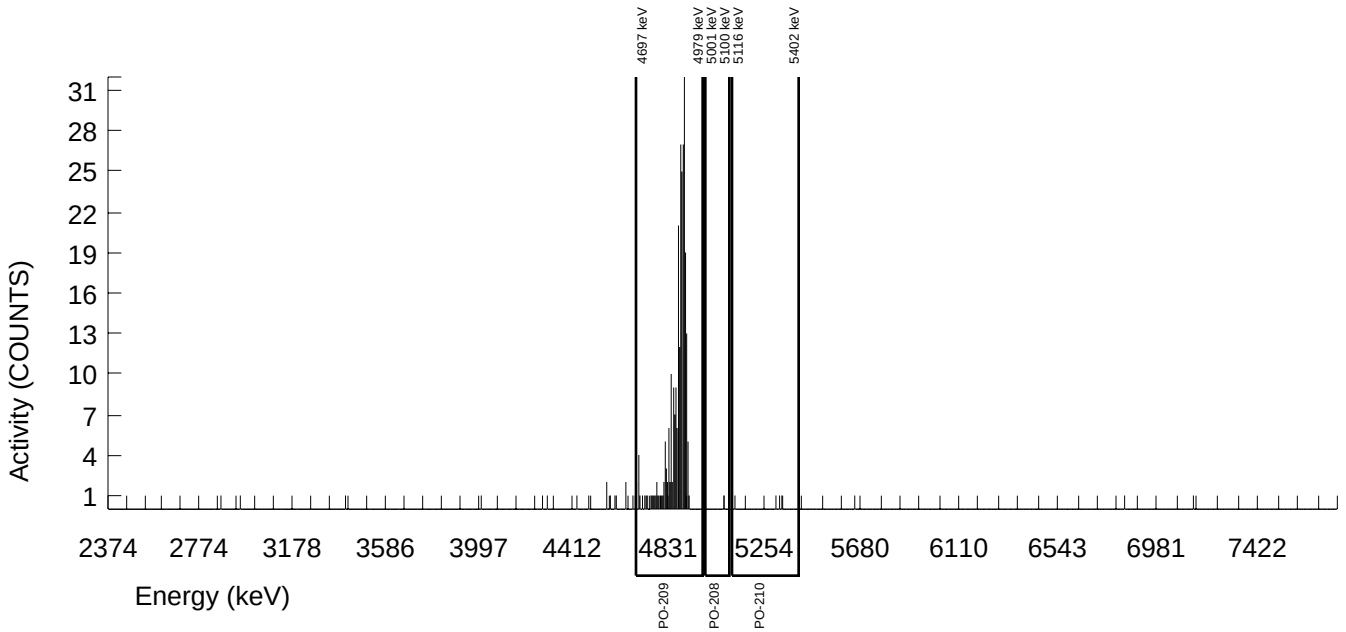
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 036	LIB FILE : PO
SAMPLE ID : S0288297002_PO	DETECTOR S/N : 78267	BKG FILE : B036.CNF;1295
SAMPLE QTY : 0.103 G +/-3.136 %	AVERAGE %EFFICIENCY : 33.3777	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9769	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:55	EFF FILE : W036.CNF;375
% YIELD : 62.8 +/-7.406 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8012E+01	1437-B	PO-210	1.8012E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.3649E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5084.326	4.981	1.000	0.760	0.240	0.4899	100.000	6.69E-02	1.78E-01	4.22E-01	7.90E-02	1.77E-01
PO-209	4882.000	4878.512	34.037	269.000	268.760	0.240	0.4899	99.740	2.34E+01	4.83E+00	4.18E-01	7.83E-02	2.80E+00
PO-210	5304.380	5277.649	199.239	4.000	2.560	1.440	1.2000	100.000	2.43E-01	3.91E-01	7.03E-01	2.09E-01	3.88E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

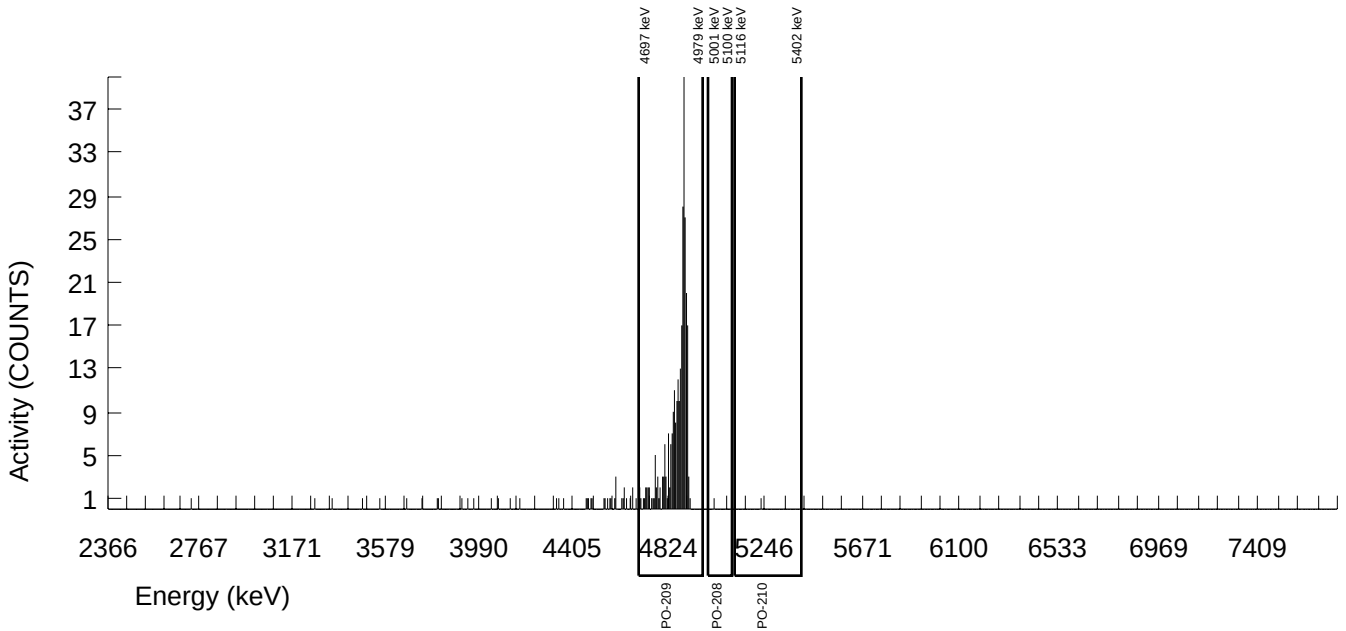
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 072	LIB FILE : PO
SAMPLE ID : S0288297003_PO	DETECTOR S/N : 67584	BKG FILE : B072.CNF;1286
SAMPLE QTY : 0.105 G +/-3.076 %	AVERAGE %EFFICIENCY : 31.3082	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9150	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:57	EFF FILE : W072.CNF;320
% YIELD : 73.3 +/-7.188 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.7668E+01	1437-B	PO-210	1.7668E+01
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.9279E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5029.154	4.989	1.000	0.040	0.960	0.9798	100.000	3.15E-03	1.72E-01	5.20E-01	1.41E-01	1.71E-01
PO-209	4882.000	4866.623	18.596	295.000	294.280	0.720	0.8485	99.740	2.30E+01	4.59E+00	4.77E-01	1.21E-01	2.63E+00
PO-210	5304.380	5235.275	4.989	1.000	0.520	0.480	0.6928	100.000	4.43E-02	1.77E-01	4.72E-01	1.08E-01	1.76E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

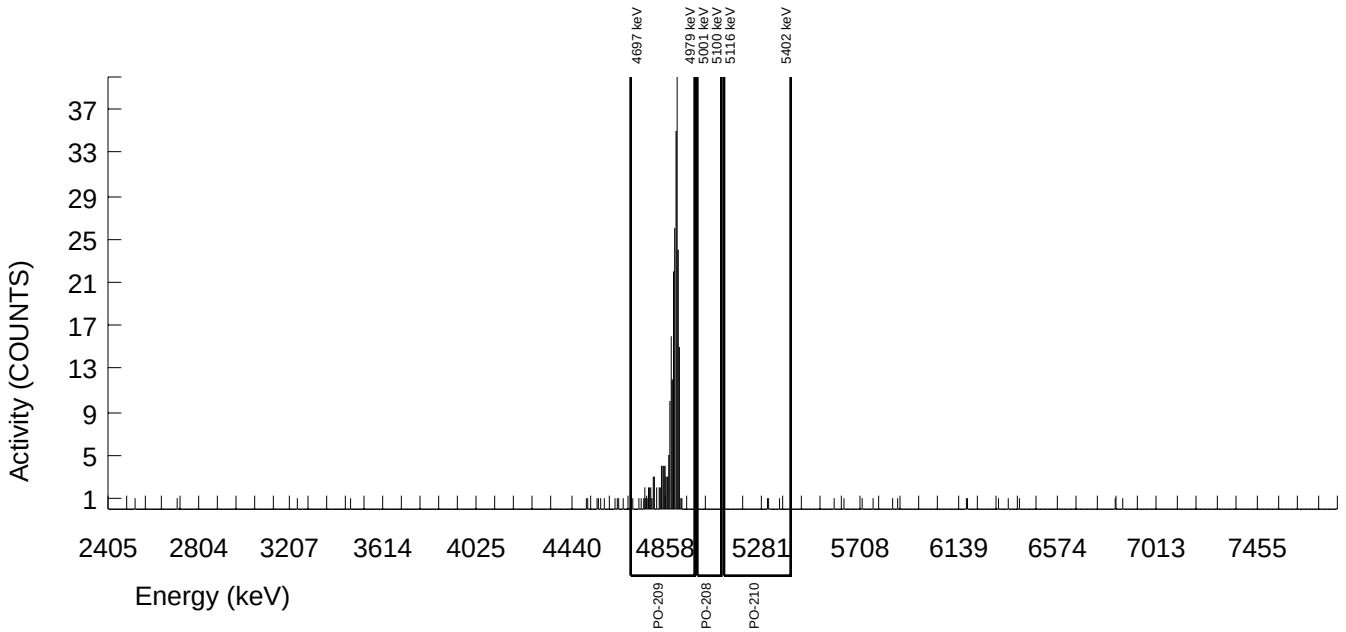
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 038	LIB FILE : PO
SAMPLE ID : S0288297004_PO	DETECTOR S/N : 72532	BKG FILE : B038.CNF;1302
SAMPLE QTY : 0.114 G +/-2.834 %	AVERAGE %EFFICIENCY : 34.7216	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 1.0153	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 31-Oct-2011 22:24:25	EFF FILE : W038.CNF;361
% YIELD : 57.3 +/-7.543 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
	ID	NUCLIDE	NOMINAL pCi/G	ID	NUCLIDE	NOMINAL pCi/G
ID : 1423-D	1437-B	PO-210	1.6274E+01	1437-B	PO-210	1.6274E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.0726E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.468	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.65E-01	2.52E-01	0.00E+00	1.64E-01
PO-209	4882.000	4887.439	23.045	256.000	255.280	0.720	0.8485	99.740	2.12E+01	4.41E+00	5.07E-01	1.29E-01	2.60E+00
PO-210	5304.380	5327.362	54.581	3.000	2.280	0.720	0.8485	100.000	2.10E-01	3.23E-01	5.62E-01	1.43E-01	3.21E-01



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

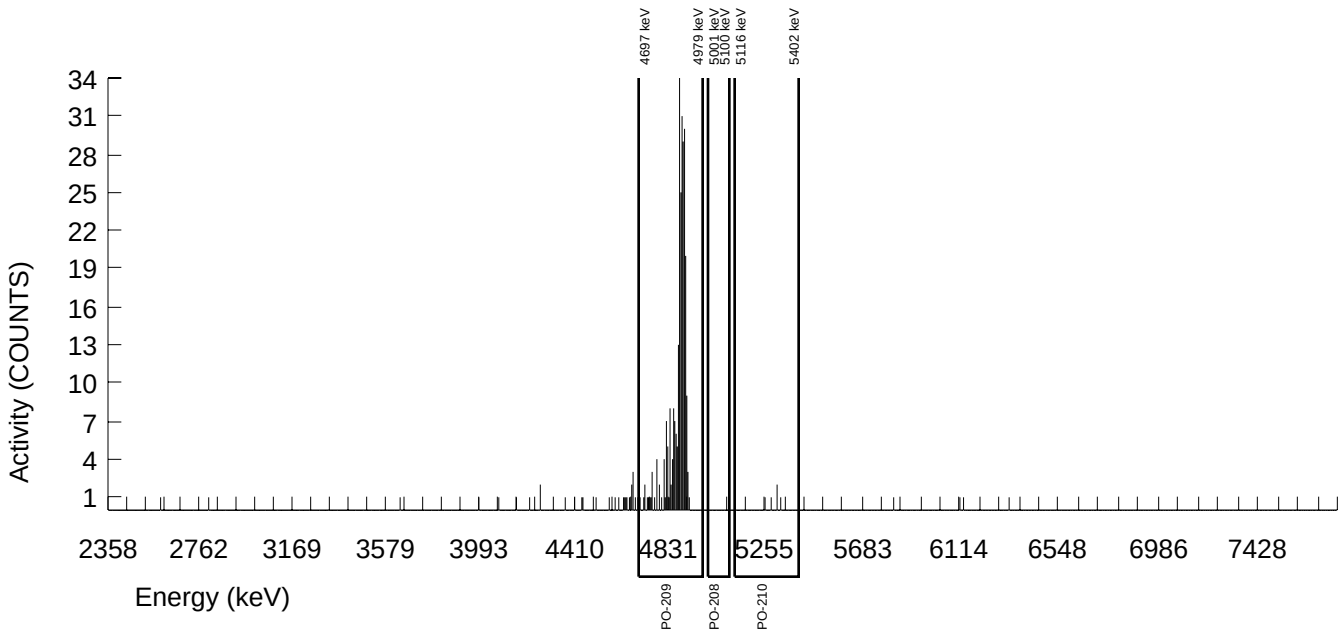
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 074	LIB FILE : PO
SAMPLE ID : S0288297005_PO	DETECTOR S/N : 83296	BKG FILE : B074.CNF;1312
SAMPLE QTY : 0.116 G +/-2.785 %	AVERAGE %EFFICIENCY : 30.7335	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.8981	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:57	EFF FILE : W074.CNF;376
% YIELD : 69.1 +/-7.377 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.5993E+01	1437-B	PO-210	1.5993E+01
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.7023E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.472	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.52E-01	2.31E-01	0.00E+00	1.51E-01
PO-209	4882.000	4875.888	30.540	273.000	272.280	0.720	0.8485	99.740	2.08E+01	4.23E+00	4.67E-01	1.19E-01	2.48E+00
PO-210	5304.380	5300.902	5.021	5.000	4.280	0.720	0.8485	100.000	3.57E-01	3.76E-01	5.09E-01	1.29E-01	3.71E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 075	LIB FILE : PO
SAMPLE ID : S0288297006_PO	DETECTOR S/N : 80010	BKG FILE : B075.CNF;1295
SAMPLE QTY : 0.107 G +/-3.019 %	AVERAGE %EFFICIENCY : 31.4718	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9192	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:57	EFF FILE : W075.CNF;337
% YIELD : 83.6 +/-6.888 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

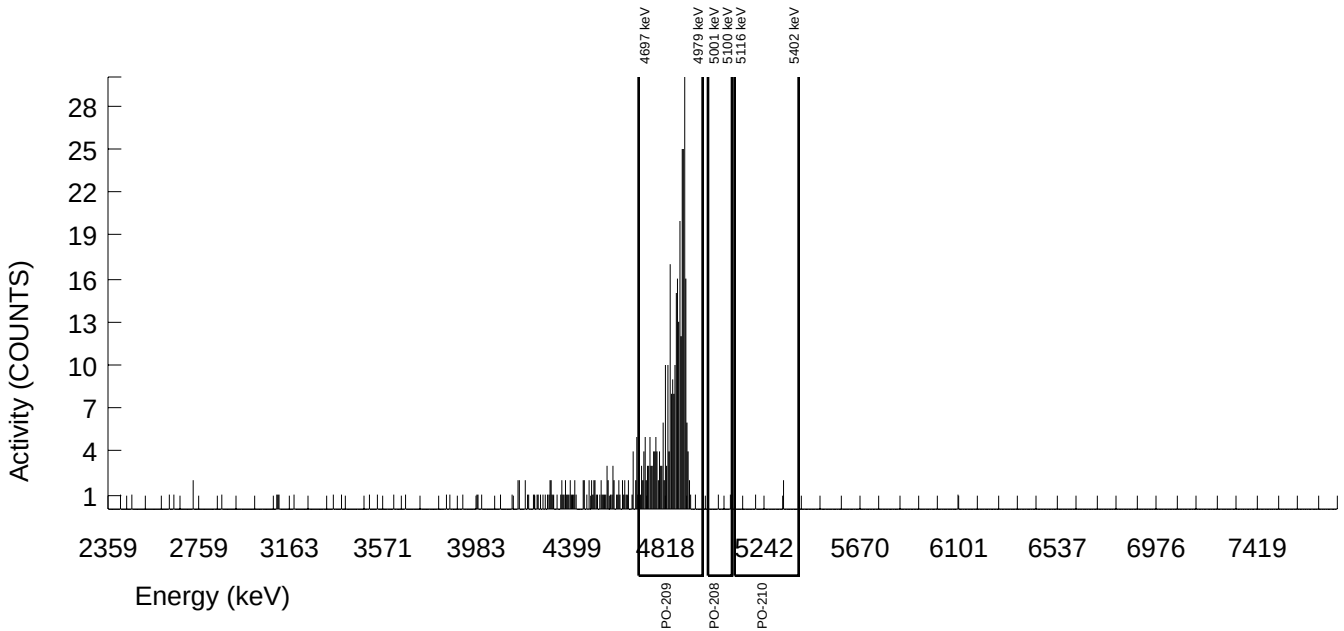
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3613E+00 dpm
RESULTS : 4.4827E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.7338E+01

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.7338E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5051.010	4.976	1.000	0.280	0.720	0.8485	100.000	1.89E-02	1.44E-01	4.12E-01	1.05E-01	1.43E-01
PO-209	4882.000	4850.828	65.955	340.000	337.600	2.400	1.5492	99.740	2.26E+01	4.31E+00	5.80E-01	1.90E-01	2.42E+00
PO-210	5304.380	5297.140	4.976	3.000	2.760	0.240	0.4899	100.000	2.01E-01	2.52E-01	3.49E-01	6.54E-02	2.50E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

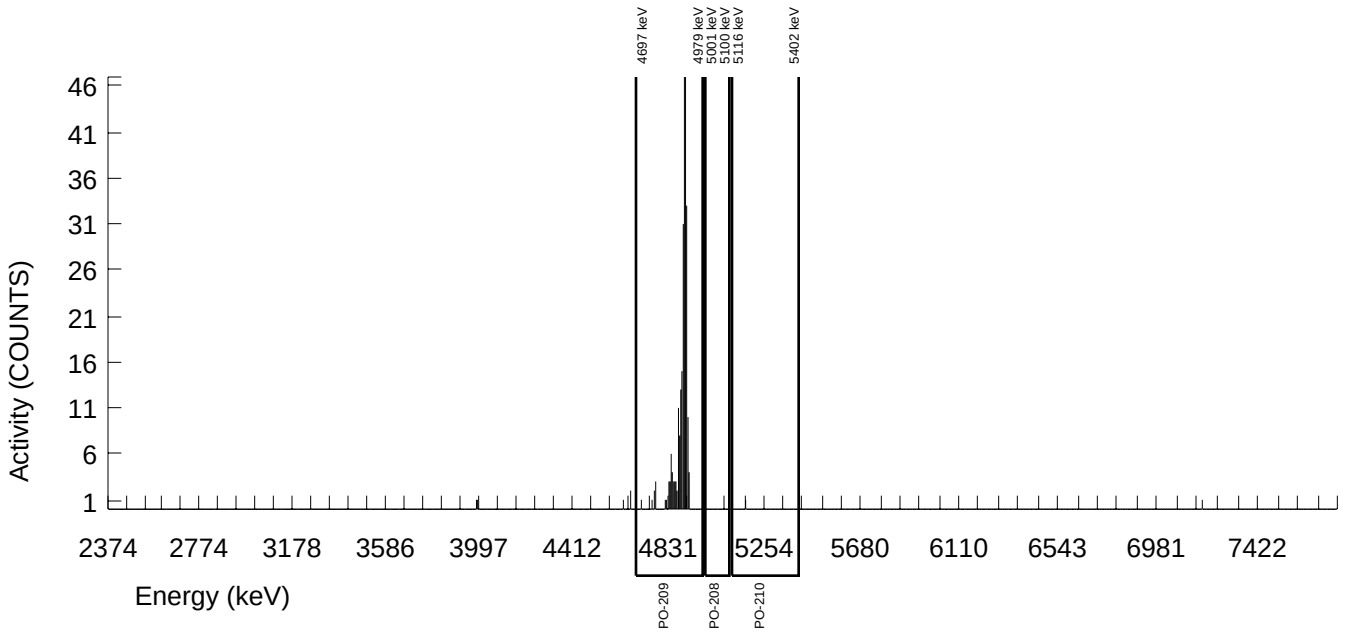
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 036	LIB FILE : PO
SAMPLE ID : S0288297007_PO	DETECTOR S/N : 78267	BKG FILE : B036.CNF;1297
SAMPLE QTY : 0.113 G +/-2.859 %	AVERAGE %EFFICIENCY : 33.3777	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9769	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 01-Nov-2011 19:27:15	EFF FILE : W036.CNF;375
% YIELD : 59.5 +/-7.543 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6418E+01	1437-B	PO-210	1.6418E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.1899E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.470	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.67E-01	2.55E-01	0.00E+00	1.66E-01
PO-209	4882.000	4899.689	19.335	255.000	254.760	0.240	0.4899	99.740	2.14E+01	4.45E+00	4.02E-01	7.53E-02	2.63E+00
PO-210	5304.380	5179.567	4.981	1.000	0.760	0.240	0.4899	100.000	7.09E-02	1.89E-01	4.48E-01	8.38E-02	1.88E-01



Alpha Spectroscopy Software Version 3.0
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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 089	LIB FILE : PO
SAMPLE ID : S0288297008_PO	DETECTOR S/N : 79988	BKG FILE : B089.CNF;907
SAMPLE QTY : 0.114 G +/-2.834 %	AVERAGE %EFFICIENCY : 30.5251	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.8940	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:59	EFF FILE : W089.CNF;255
% YIELD : 62.2 +/-7.679 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

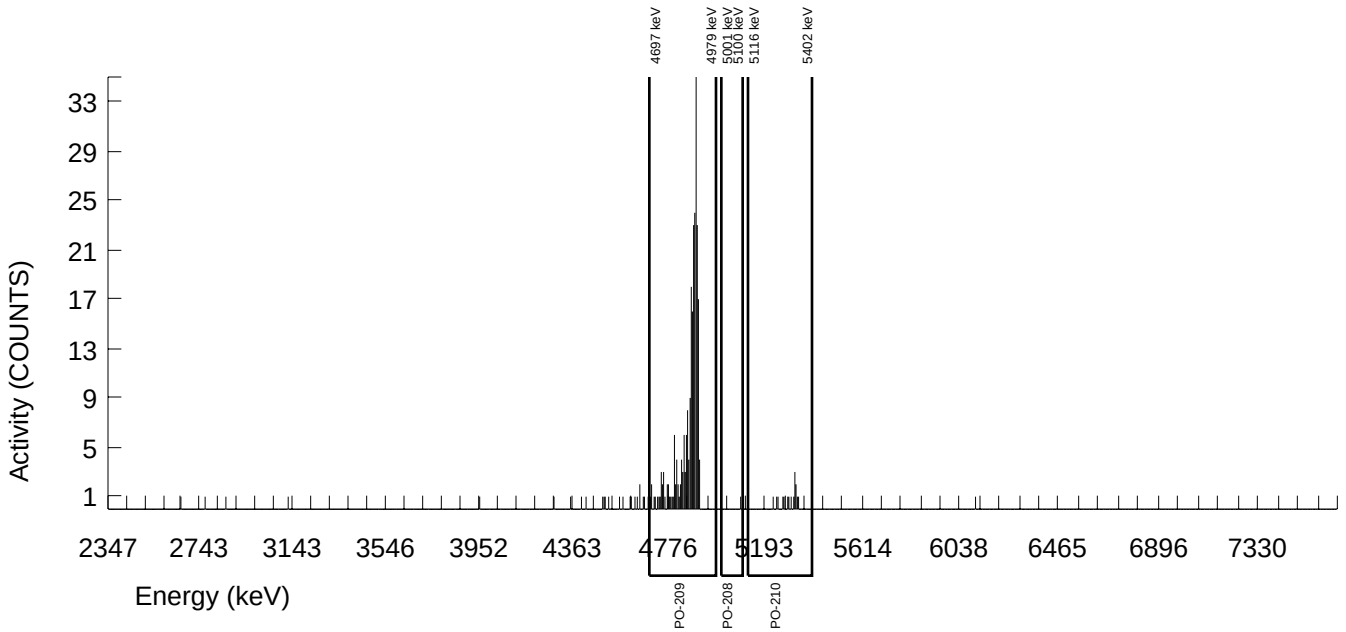
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3613E+00 dpm
RESULTS : 3.3344E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.6274E+01

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.6274E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5093.741	4.930	1.000	0.760	0.240	0.4899	100.000	6.67E-02	1.77E-01	4.21E-01	7.87E-02	1.77E-01
PO-209	4882.000	4870.281	29.445	245.000	243.560	1.440	1.2000	99.740	2.12E+01	4.49E+00	6.43E-01	1.91E-01	2.67E+00
PO-210	5304.380	5305.109	11.093	16.000	13.840	2.160	1.4697	100.000	1.31E+00	7.87E-01	7.95E-01	2.55E-01	7.55E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

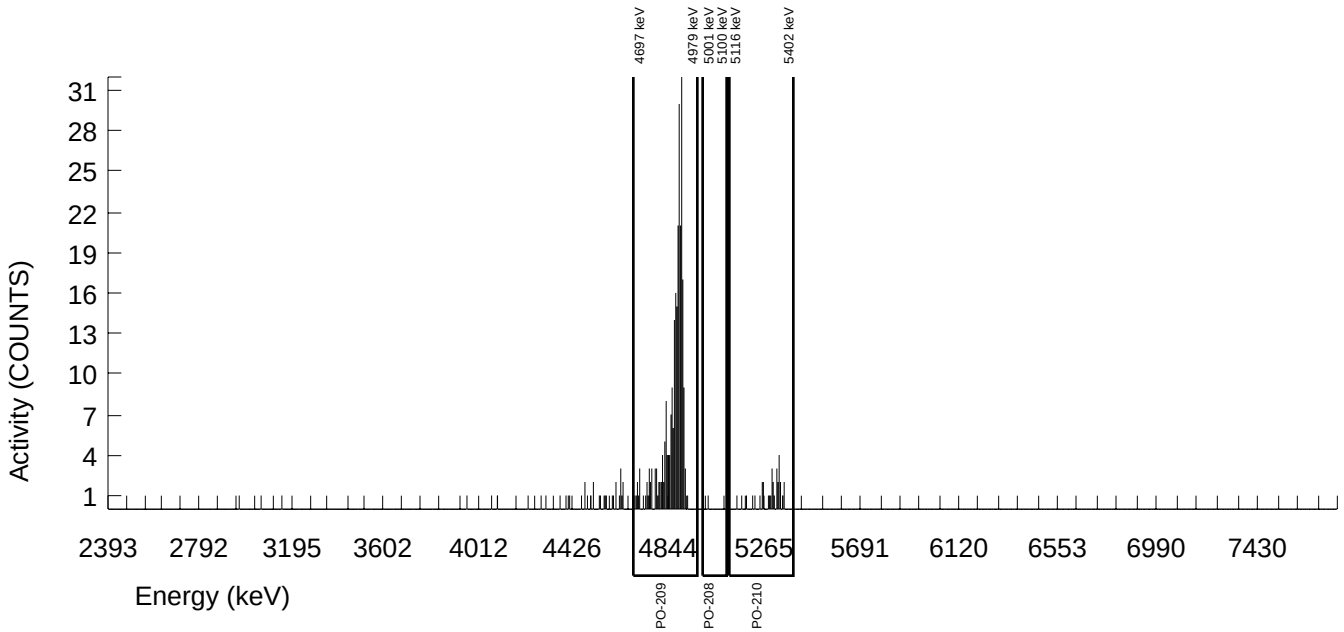
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 090	LIB FILE : PO
SAMPLE ID : S0288297009_PO	DETECTOR S/N : 78263	BKG FILE : B090.CNF;912
SAMPLE QTY : 0.102 G +/-3.166 %	AVERAGE %EFFICIENCY : 32.4922	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9504	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:59	EFF FILE : W090.CNF;241
% YIELD : 63.5 +/-7.455 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8188E+01	1437-B	PO-210	1.8188E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.4057E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5027.827	4.963	1.000	1.000	0.000	0.0000	100.000	9.02E-02	1.77E-01	2.71E-01	0.00E+00	1.77E-01
PO-209	4882.000	4876.520	24.606	266.000	264.800	1.200	1.0954	99.740	2.37E+01	4.91E+00	6.27E-01	1.79E-01	2.86E+00
PO-210	5304.380	5293.193	37.219	34.000	33.280	0.720	0.8485	100.000	3.24E+00	1.24E+00	5.95E-01	1.51E-01	1.12E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

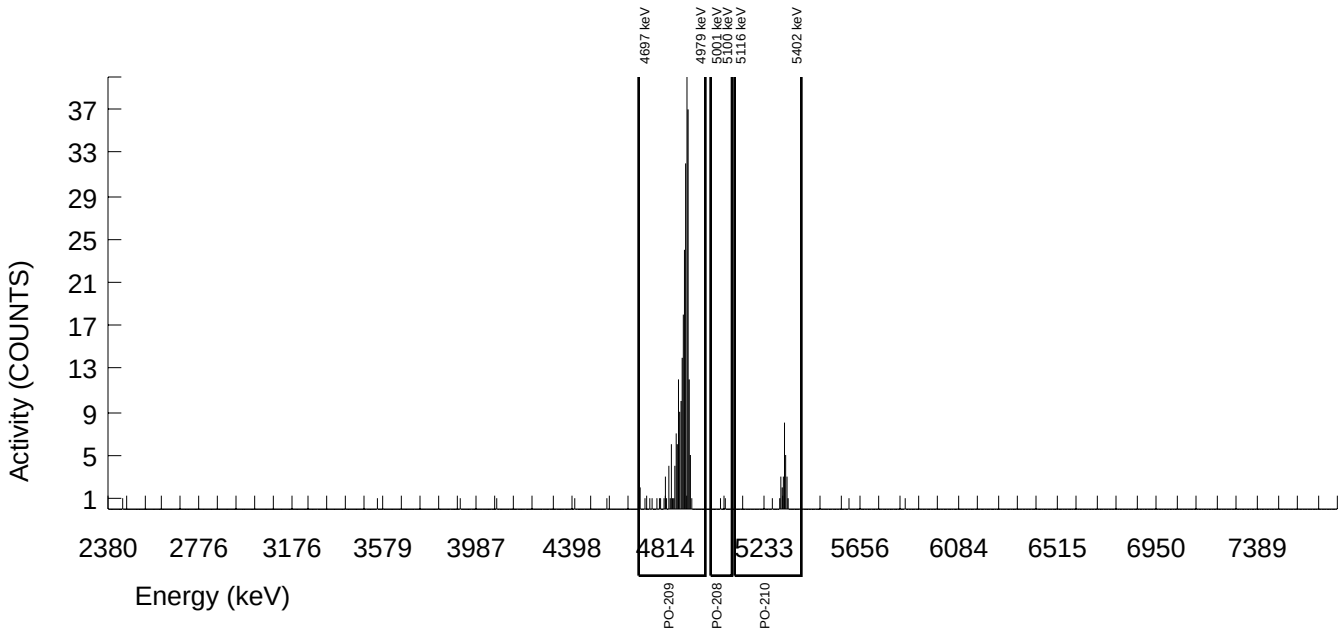
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 040	LIB FILE : PO
SAMPLE ID : S0288297010_PO	DETECTOR S/N : 78773	BKG FILE : B040.CNF;1305
SAMPLE QTY : 0.111 G +/-2.910 %	AVERAGE %EFFICIENCY : 32.6029	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9544	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 31-Oct-2011 22:24:25	EFF FILE : W040.CNF;357
% YIELD : 61.2 +/-7.540 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.6713E+01	1437-B	PO-210	1.6713E+01
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.2820E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5065.015	24.610	2.000	2.000	0.000	0.0000	100.000	1.72E-01	2.40E-01	2.58E-01	0.00E+00	2.38E-01
PO-209	4882.000	4888.431	21.394	257.000	256.040	0.960	0.9798	99.740	2.18E+01	4.54E+00	5.60E-01	1.53E-01	2.67E+00
PO-210	5304.380	5330.257	11.321	27.000	26.520	0.480	0.6928	100.000	2.50E+00	1.05E+00	5.21E-01	1.19E-01	9.61E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

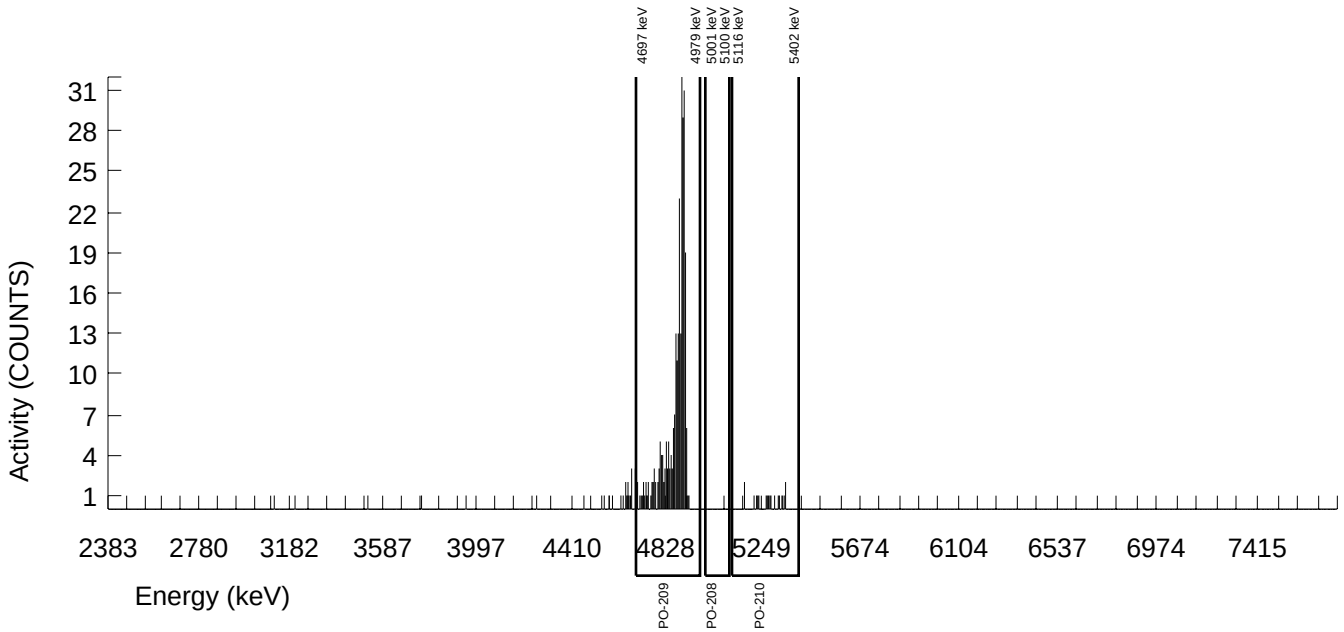
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 092	LIB FILE : PO
SAMPLE ID : S0288297011_PO	DETECTOR S/N : 80063	BKG FILE : B092.CNF;914
SAMPLE QTY : 0.118 G +/-2.738 %	AVERAGE %EFFICIENCY : 32.0987	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9394	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:04:59	EFF FILE : W092.CNF;277
% YIELD : 66.7 +/-7.372 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 11-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5722E+01	1437-B	PO-210	1.5722E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.5781E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.468	0.000	0.000	-0.240	0.240	0.4899	100.000	-1.80E-02	1.52E-01	3.60E-01	6.74E-02	1.51E-01
PO-209	4882.000	4872.401	29.321	277.000	274.840	2.160	1.4697	99.740	2.05E+01	4.15E+00	6.24E-01	2.00E-01	2.43E+00
PO-210	5304.380	5279.314	173.038	18.000	17.760	0.240	0.4899	100.000	1.44E+00	7.16E-01	3.89E-01	7.28E-02	6.76E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

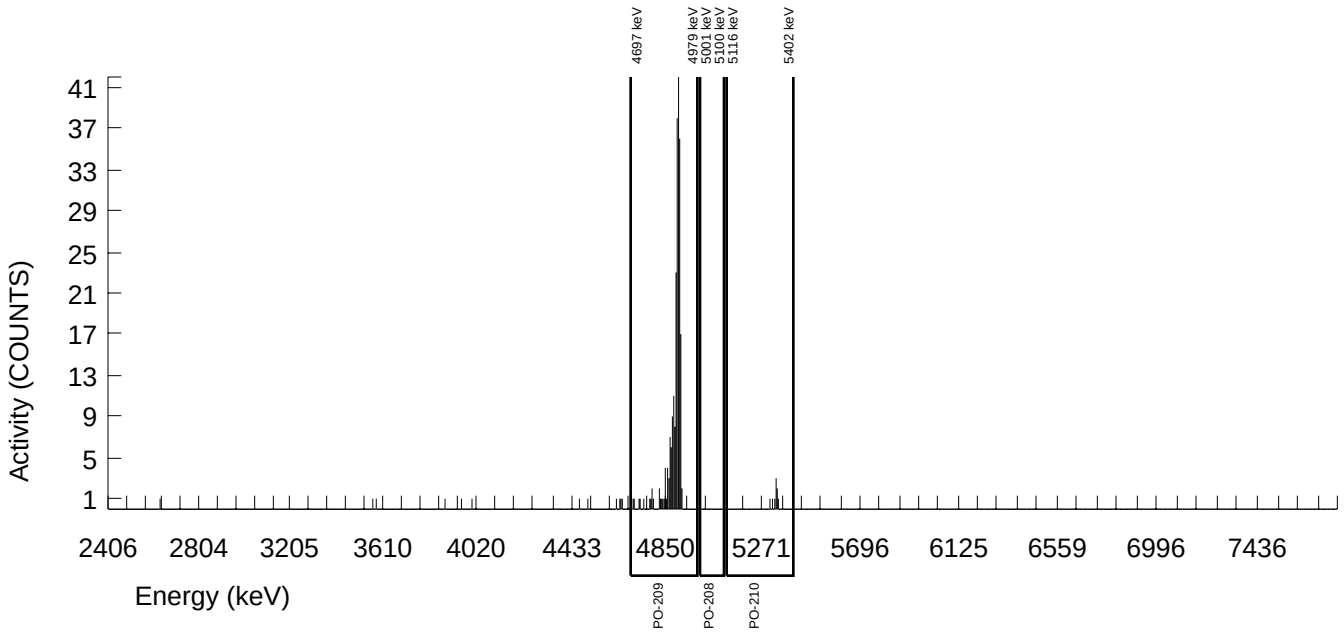
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 042	LIB FILE : PO
SAMPLE ID : S0288297012_PO	DETECTOR S/N : 78793	BKG FILE : B042.CNF;1299
SAMPLE QTY : 0.132 G +/-2.449 %	AVERAGE %EFFICIENCY : 33.2946	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9750	BKG LIVE TIME(SEC) : 59999.99
ANALYST : MXS2	COUNT DATE : 31-Oct-2011 22:24:25	EFF FILE : W042.CNF;334
% YIELD : 53.0 +/-7.873 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4054E+01	1437-B	PO-210	1.4054E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 2.8403E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.468	0.000	0.000	-0.480	0.480	0.6928	100.000	-3.92E-02	1.70E-01	4.53E-01	1.04E-01	1.69E-01
PO-209	4882.000	4891.940	19.388	227.000	226.280	0.720	0.8485	99.740	1.83E+01	3.94E+00	4.94E-01	1.26E-01	2.39E+00
PO-210	5304.380	5331.873	11.120	9.000	8.040	0.960	0.9798	100.000	7.20E-01	5.47E-01	5.90E-01	1.61E-01	5.33E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

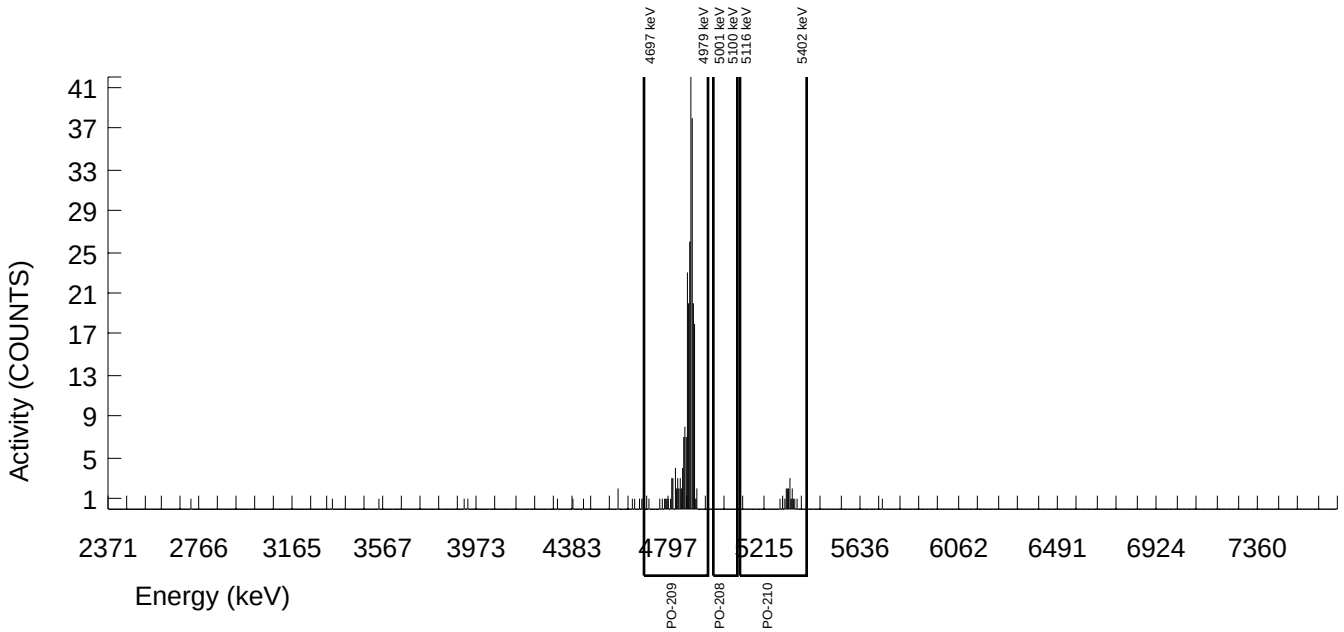
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 108	LIB FILE : PO
SAMPLE ID : S0288297013_PO	DETECTOR S/N : 78778	BKG FILE : B108.CNF;868
SAMPLE QTY : 0.105 G +/-3.076 %	AVERAGE %EFFICIENCY : 33.7968	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9886	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 01-Nov-2011 08:37:51	EFF FILE : W108.CNF;253
% YIELD : 57.1 +/-7.616 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 11-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.7668E+01	1437-B	PO-210	1.7668E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.0637E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.469	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.85E-01	2.82E-01	0.00E+00	1.84E-01
PO-209	4882.000	4892.844	24.902	248.000	247.760	0.240	0.4899	99.740	2.30E+01	4.86E+00	4.45E-01	8.33E-02	2.87E+00
PO-210	5304.380	5332.269	29.473	18.000	17.520	0.480	0.6928	100.000	1.81E+00	9.13E-01	5.71E-01	1.31E-01	8.60E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

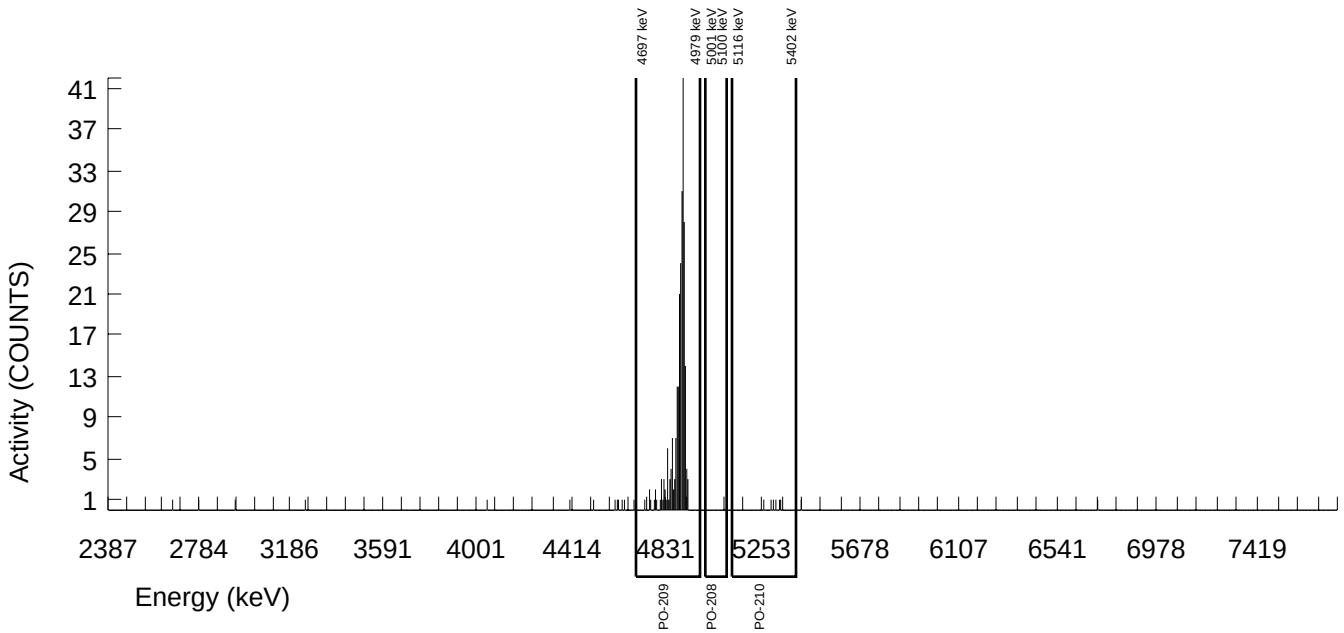
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 109	LIB FILE : PO
SAMPLE ID : S0288297014_PO	DETECTOR S/N : 79463	BKG FILE : B109.CNF;866
SAMPLE QTY : 0.109 G +/-2.964 %	AVERAGE %EFFICIENCY : 34.6537	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 1.0136	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 01-Nov-2011 08:37:51	EFF FILE : W109.CNF;234
% YIELD : 54.8 +/-7.659 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 11-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.7020E+01	1437-B	PO-210	1.7020E+01
NOMINAL : 5.3613E+00 dpm						
RESULTS : 2.9397E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.468	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.81E-01	2.76E-01	0.00E+00	1.80E-01
PO-209	4882.000	4890.633	22.246	244.000	243.760	0.240	0.4899	99.740	2.22E+01	4.70E+00	4.36E-01	8.16E-02	2.78E+00
PO-210	5304.380	5308.334	74.155	6.000	5.040	0.960	0.9798	100.000	5.09E-01	5.01E-01	6.65E-01	1.81E-01	4.94E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

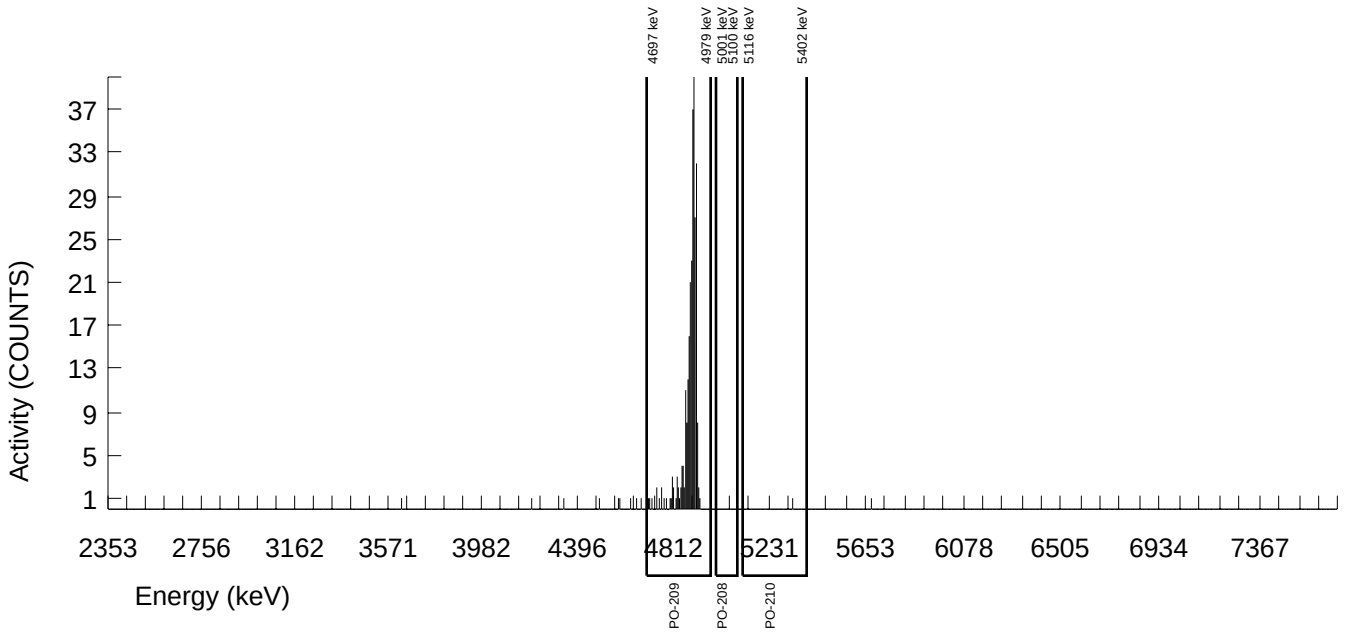
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 114	LIB FILE : PO
SAMPLE ID : S0288297015_PO	DETECTOR S/N : 78258	BKG FILE : B114.CNF;643
SAMPLE QTY : 0.117 G +/-2.762 %	AVERAGE %EFFICIENCY : 24.7962	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7248	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:18	EFF FILE : W114.CNF;170
% YIELD : 85.7 +/-7.383 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5856E+01	1437-B	PO-210	1.5856E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 4.5935E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.477	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.50E-01	2.29E-01	0.00E+00	1.50E-01
PO-209	4882.000	4894.105	28.631	274.000	272.560	1.440	1.2000	99.740	2.06E+01	4.20E+00	5.60E-01	1.66E-01	2.46E+00
PO-210	5304.380	5341.703	5.023	1.000	0.760	0.240	0.4899	100.000	6.27E-02	1.67E-01	3.96E-01	7.40E-02	1.66E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

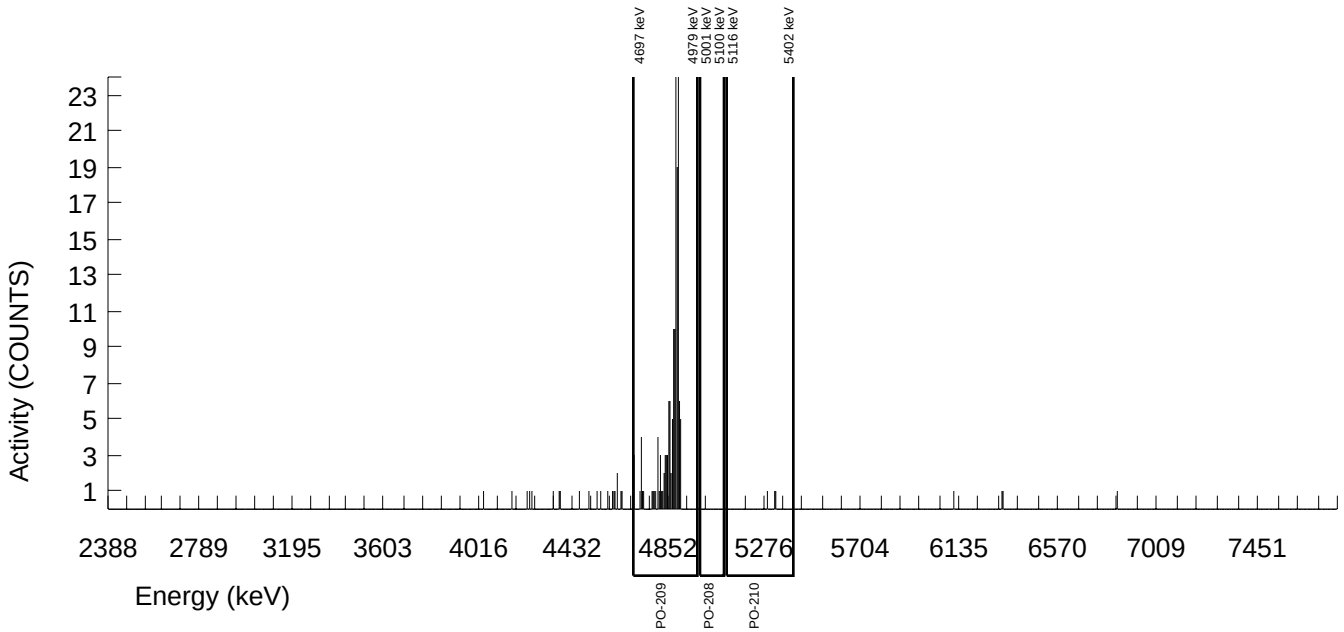
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 033	LIB FILE : PO
SAMPLE ID : S0288297016_PO	DETECTOR S/N : 83293	BKG FILE : B033.CNF;1303
SAMPLE QTY : 0.108 G +/-2.991 %	AVERAGE %EFFICIENCY : 30.9740	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.9072	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 01-Nov-2011 19:27:15	EFF FILE : W033.CNF;381
% YIELD : 38.5 +/-9.109 %	ELAPSED LIVE TIME(SEC) : 14399.99	CAL DATE : 05-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.7178E+01	1437-B	PO-210	1.7178E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 2.0644E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.470	0.000	0.000	-0.240	0.240	0.4899	100.000	-3.55E-02	2.99E-01	7.09E-01	1.33E-01	2.98E-01
PO-209	4882.000	4871.951	17.599	153.000	153.000	0.000	0.0000	99.740	2.24E+01	5.64E+00	4.38E-01	0.00E+00	3.54E+00
PO-210	5304.380	5320.576	39.954	3.000	2.760	0.240	0.4899	100.000	4.49E-01	5.64E-01	7.80E-01	1.46E-01	5.57E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

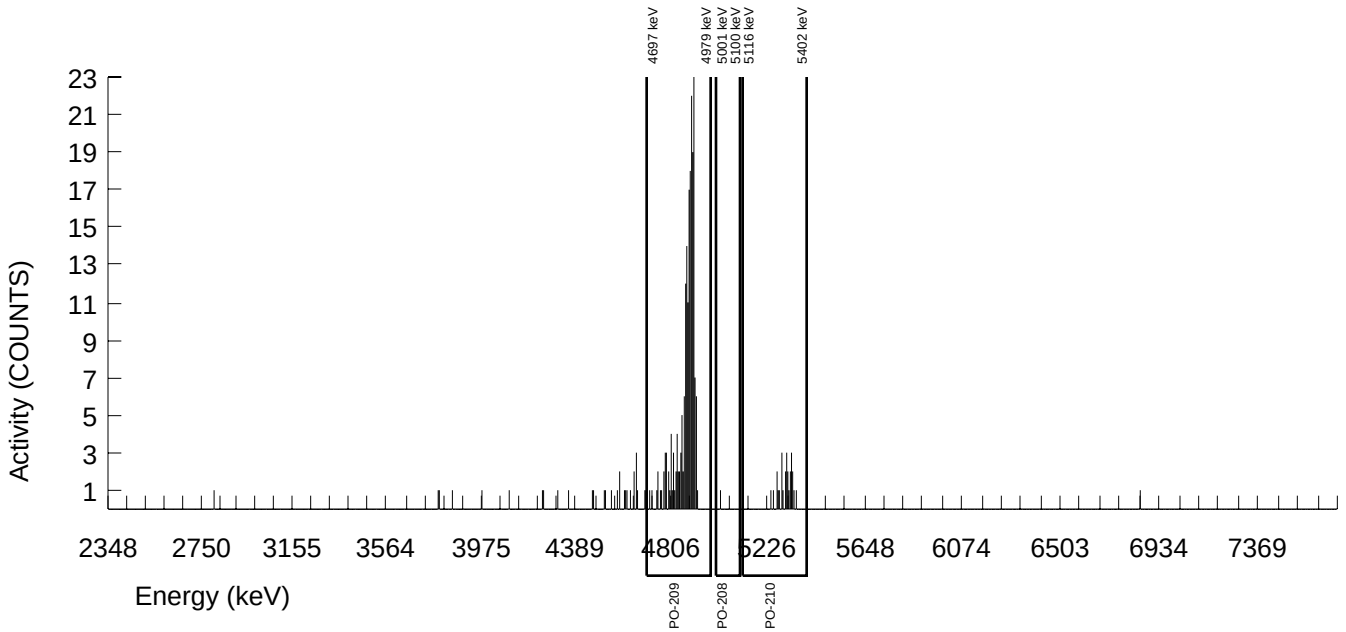
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 116	LIB FILE : PO
SAMPLE ID : S0288297017_PO	DETECTOR S/N : 80004	BKG FILE : B116.CNF;635
SAMPLE QTY : 0.103 G +/-3.136 %	AVERAGE %EFFICIENCY : 25.9266	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7577	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:22	EFF FILE : W116.CNF;158
% YIELD : 61.6 +/-8.163 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8012E+01	1437-B	PO-210	1.8012E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.3049E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5025.799	5.012	1.000	0.760	0.240	0.4899	100.000	8.77E-02	2.33E-01	5.53E-01	1.04E-01	2.32E-01
PO-209	4882.000	4874.243	39.101	206.000	205.040	0.960	0.9798	99.740	2.34E+01	5.32E+00	7.54E-01	2.05E-01	3.22E+00
PO-210	5304.380	5310.509	68.910	27.000	24.840	2.160	1.4697	100.000	3.09E+00	1.40E+00	1.04E+00	3.35E-01	1.28E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

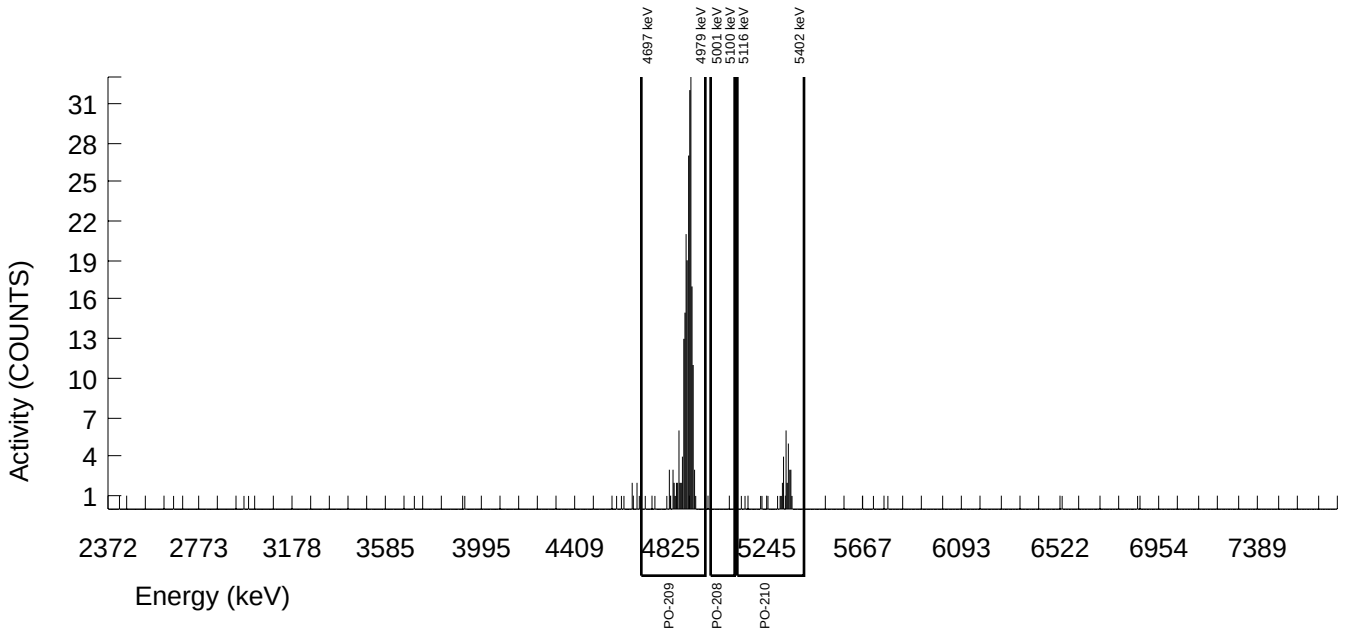
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 117	LIB FILE : PO
SAMPLE ID : S0288297018_PO	DETECTOR S/N : 80003	BKG FILE : B117.CNF;644
SAMPLE QTY : 0.109 G +/-2.964 %	AVERAGE %EFFICIENCY : 26.4928	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7739	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:25	EFF FILE : W117.CNF;171
% YIELD : 65.6 +/-7.922 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.7020E+01	1437-B	PO-210	1.7020E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.5144E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.474	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.97E-01	3.01E-01	0.00E+00	1.97E-01
PO-209	4882.000	4900.889	29.135	224.000	222.800	1.200	1.0954	99.740	2.22E+01	4.86E+00	6.97E-01	2.00E-01	2.92E+00
PO-210	5304.380	5315.745	27.470	34.000	27.760	6.240	2.4980	100.000	3.01E+00	1.37E+00	1.32E+00	4.96E-01	1.27E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

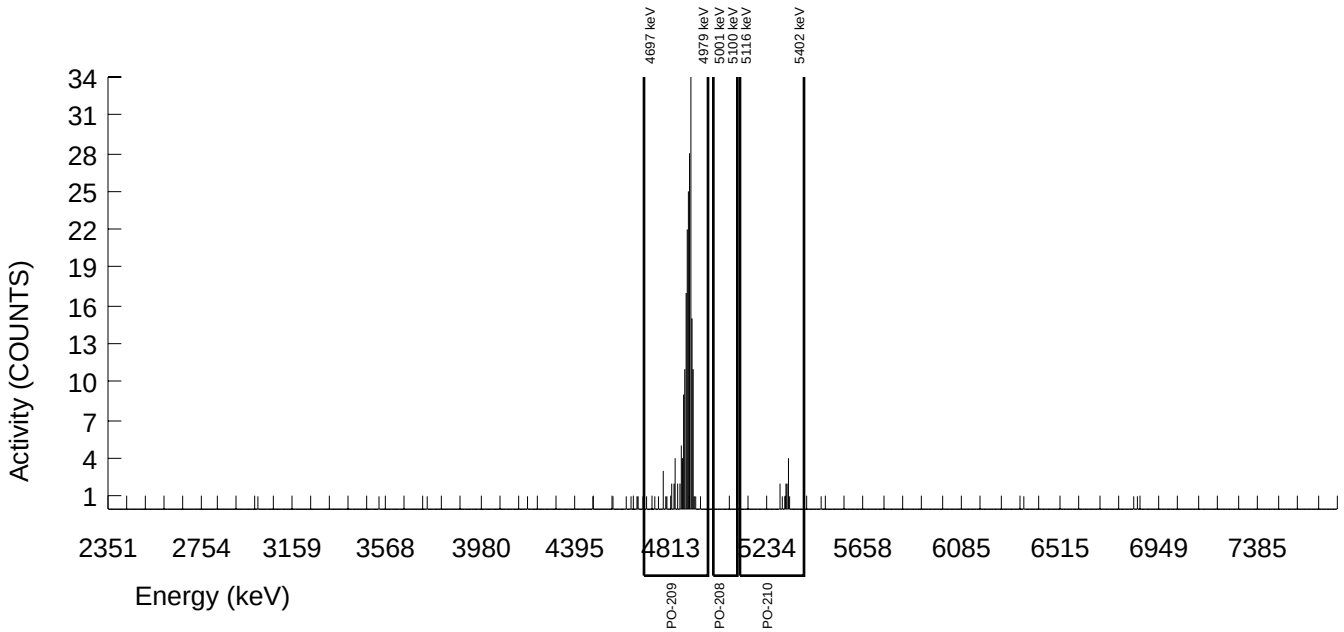
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 118	LIB FILE : PO
SAMPLE ID : S0288297019_PO	DETECTOR S/N : 80061	BKG FILE : B118.CNF;655
SAMPLE QTY : 0.111 G +/-2.910 %	AVERAGE %EFFICIENCY : 25.2694	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7385	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:26	EFF FILE : W118.CNF;185
% YIELD : 63.0 +/-8.170 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.6713E+01	1437-B	PO-210	1.6713E+01
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.3783E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.474	0.000	0.000	-0.480	0.480	0.6928	100.000	-5.16E-02	2.23E-01	5.95E-01	1.36E-01	2.22E-01
PO-209	4882.000	4888.185	24.529	205.000	204.280	0.720	0.8485	99.740	2.18E+01	4.92E+00	6.51E-01	1.66E-01	2.99E+00
PO-210	5304.380	5322.981	8.352	13.000	11.080	1.920	1.3856	100.000	1.29E+00	8.66E-01	9.37E-01	2.95E-01	8.34E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

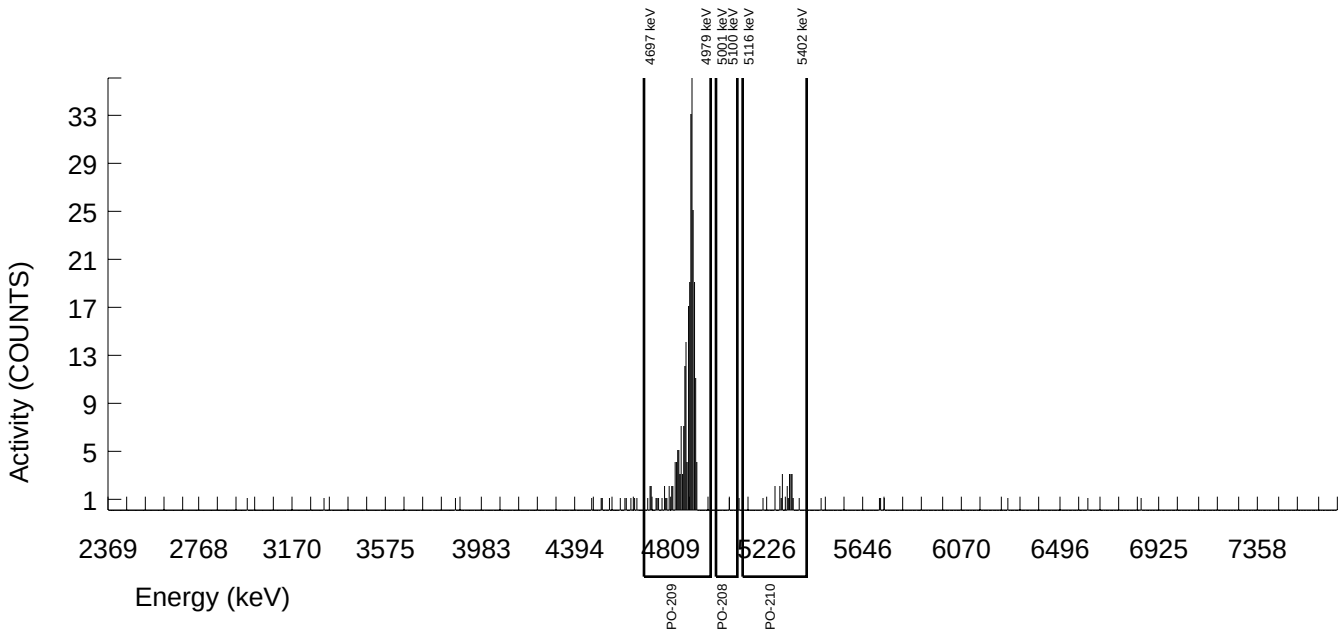
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 119	LIB FILE : PO
SAMPLE ID : S0288297020_PO	DETECTOR S/N : 79450	BKG FILE : B119.CNF;654
SAMPLE QTY : 0.124 G +/-2.606 %	AVERAGE %EFFICIENCY : 25.6231	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7487	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:28	EFF FILE : W119.CNF;176
% YIELD : 76.2 +/-7.601 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4961E+01	1437-B	PO-210	1.4961E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 4.0864E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5068.960	4.969	1.000	0.760	0.240	0.4899	100.000	5.96E-02	1.59E-01	3.76E-01	7.04E-02	1.58E-01
PO-209	4882.000	4885.094	22.980	252.000	250.560	1.440	1.2000	99.740	1.95E+01	4.06E+00	5.75E-01	1.71E-01	2.42E+00
PO-210	5304.380	5314.182	74.529	23.000	21.320	1.680	1.2961	100.000	1.81E+00	8.58E-01	6.56E-01	2.01E-01	8.03E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

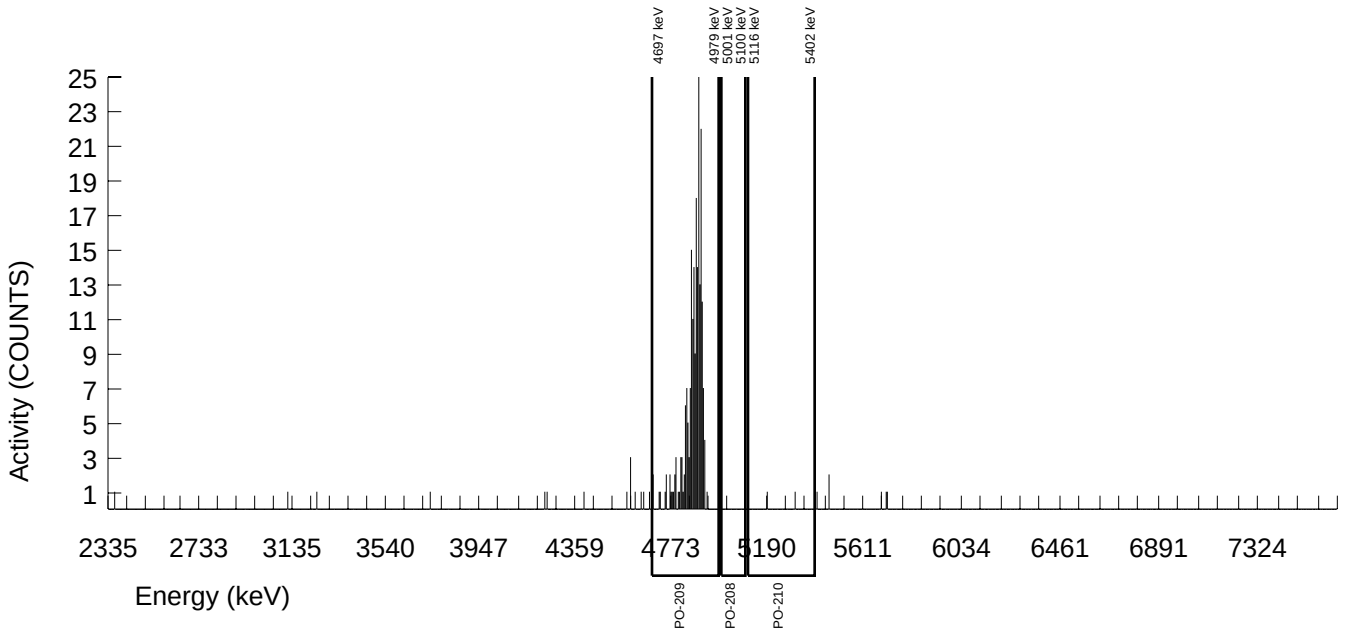
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 120	LIB FILE : PO
SAMPLE ID : S1202512206_PO	DETECTOR S/N : 74430	BKG FILE : B120.CNF;656
SAMPLE QTY : 0.132 G +/-2.449 %	AVERAGE %EFFICIENCY : 25.9854	BKG DATE : 23-Oct-2011
SAMPLE DATE : 25-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7591	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:30	EFF FILE : W120.CNF;175
% YIELD : 66.1 +/-7.947 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.3103E+01	1437-B	PO-210	1.3103E+01
NUCLIDE : PO-209						
NOMINAL : 5.3599E+00 dpm						
RESULTS : 3.5416E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.473	0.000	0.000	-0.240	0.240	0.4899	100.000	-1.99E-02	1.68E-01	3.98E-01	7.45E-02	1.67E-01
PO-209	4882.000	4879.882	45.950	221.000	220.280	0.720	0.8485	99.740	1.83E+01	3.98E+00	5.07E-01	1.29E-01	2.42E+00
PO-210	5304.380	5260.899	119.061	2.000	0.560	1.440	1.2000	100.000	4.72E-02	2.54E-01	6.24E-01	1.85E-01	2.53E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

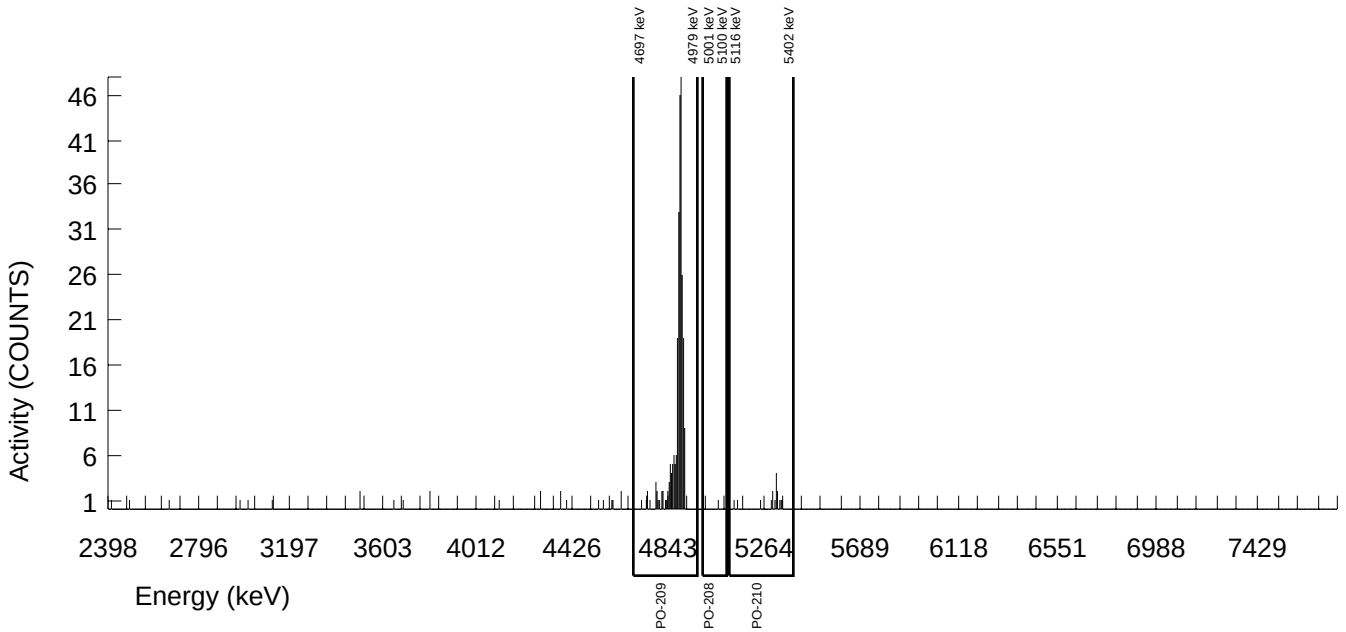
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 110	LIB FILE : PO
SAMPLE ID : S1202512207_PO	DETECTOR S/N : 83292	BKG FILE : B110.CNF;872
SAMPLE QTY : 0.131 G +/-2.468 %	AVERAGE %EFFICIENCY : 30.5983	BKG DATE : 30-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.8421	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 01-Nov-2011 08:37:51	EFF FILE : W110.CNF;257
% YIELD : 64.6 +/-7.493 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 11-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4162E+01	1437-B	PO-210	1.4162E+01
NUCLIDE : PO-209						
NOMINAL : 5.3613E+00 dpm						
RESULTS : 3.4626E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5074.304	4.947	1.000	0.760	0.240	0.4899	100.000	5.59E-02	1.49E-01	3.53E-01	6.60E-02	1.48E-01
PO-209	4882.000	4896.897	19.436	254.000	253.520	0.480	0.6928	99.740	1.84E+01	3.78E+00	4.03E-01	9.23E-02	2.27E+00
PO-210	5304.380	5302.345	8.245	16.000	15.760	0.240	0.4899	100.000	1.27E+00	6.67E-01	3.87E-01	7.24E-02	6.34E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 122	LIB FILE : PO
SAMPLE ID : S1202512208_PO	DETECTOR S/N : 75546	BKG FILE : B122.CNF;646
SAMPLE QTY : 0.120 G +/-2.693 %	AVERAGE %EFFICIENCY : 26.3514	BKG DATE : 23-Oct-2011
SAMPLE DATE : 11-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7698	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:34	EFF FILE : W122.CNF;180
% YIELD : 59.6 +/-8.223 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

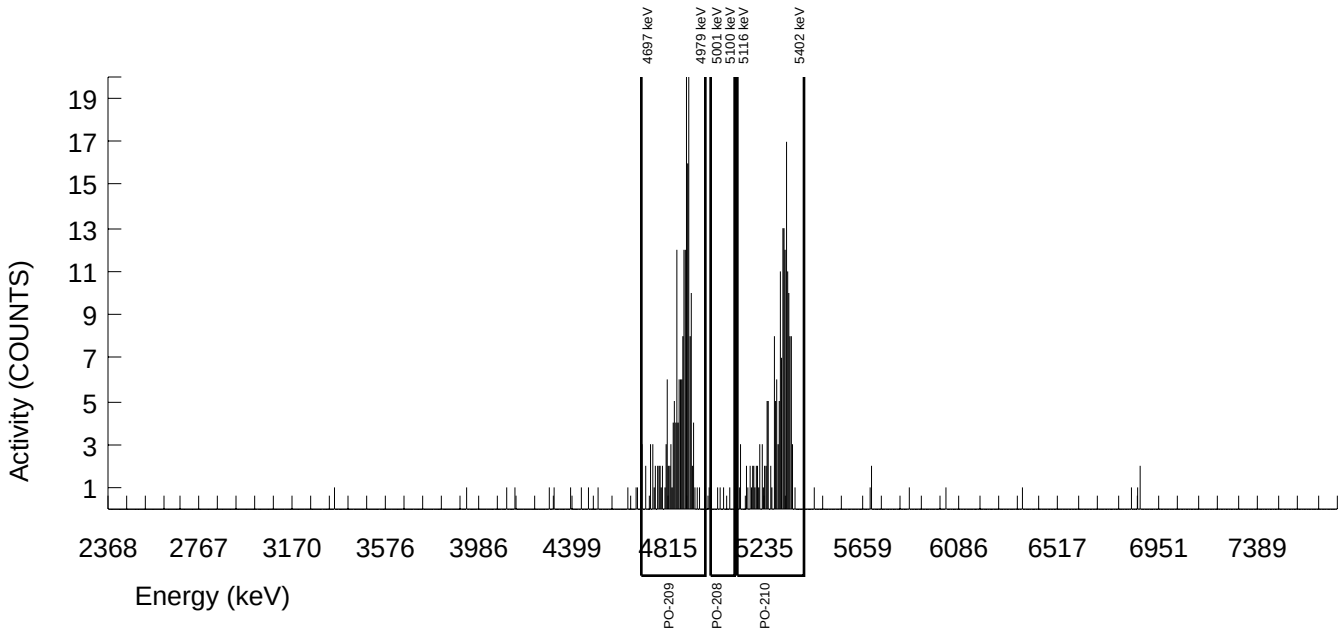
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3613E+00 dpm
RESULTS : 3.1964E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G	% RECOVERY
1437-B	PO-210	1.5460E+01	120.679

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.5460E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5045.984	0.000	5.000	4.520	0.480	0.6928	100.000	4.55E-01	4.54E-01	5.58E-01	1.28E-01	4.46E-01
PO-209	4882.000	4869.981	55.038	203.000	201.560	1.440	1.2000	99.740	2.01E+01	4.56E+00	7.38E-01	2.19E-01	2.79E+00
PO-210	5304.380	5299.246	40.554	185.000	183.320	1.680	1.2961	100.000	1.99E+01	4.60E+00	8.43E-01	2.58E-01	2.90E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1151771	CHAMBER : 127	LIB FILE : PO
SAMPLE ID : S1202512209_PO	DETECTOR S/N : 78770	BKG FILE : B127.CNF;642
SAMPLE QTY : 0.132 G +/-2.449 %	AVERAGE %EFFICIENCY : 25.7319	BKG DATE : 23-Oct-2011
SAMPLE DATE : 25-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7518	BKG LIVE TIME(SEC) : 60000.00
ANALYST : MXS2	COUNT DATE : 28-Oct-2011 15:05:36	EFF FILE : W127.CNF;172
% YIELD : 59.4 +/-8.300 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

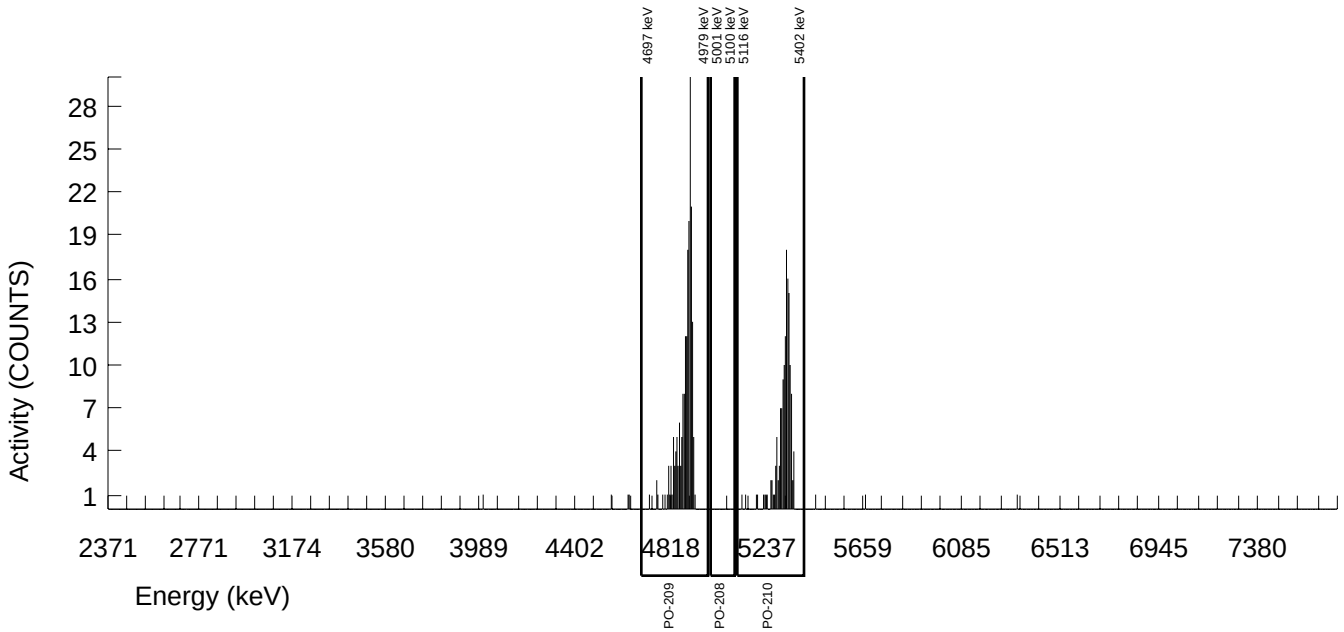
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3599E+00 dpm
RESULTS : 3.1829E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.3103E+01

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G	% RECOVERY
1437-B	PO-210	1.3103E+01	104.040

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.473	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.84E-01	2.80E-01	0.00E+00	1.83E-01
PO-209	4882.000	4889.897	21.155	197.000	196.040	0.960	0.9798	99.740	1.83E+01	4.16E+00	6.15E-01	1.67E-01	2.57E+00
PO-210	5304.380	5319.362	32.355	145.000	143.800	1.200	1.0954	100.000	1.36E+01	3.31E+00	6.65E-01	1.90E-01	2.24E+00



Batch# 1156276 Product: Po Date: 11/7/11

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required). Blank correction reported included (if required).			N/A
If activity less than 10x MDA/MDC, error is less than or equal to 150% of sample activity. If greater than 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are: Less than 5* MDA/ MDC, then RPD is 100% or less, If greater 5* MDA/ MDC, then RPD 20% or less, If below the MDA/ MDC, the RPD is 0%, Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. (Or meets the client's contract acceptance criteria).	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% (or meets the client's contract acceptance criteria).	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
MS, LCS, and Duplicate RPD/RER values uploaded to LIMS and values verified	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed. Disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

Primary Review Performed By: Melanie Clynk 11/7/11

Secondary Review Performed By: [signature] 11/7/11

11/3 - 11/8

Polonium Queue Sheet

01-NOV-11

Batch #: 1156276 Analyst:HAKB First Client Due Date:08-NOV-11 Internal Due Date:03-NOV-11

Tracer Isotope: Po-209 Tracer Code: 1423-D Expiration Date: 5/12/12 Vol: 0.1

LCS Isotope: Po-210 LCS Code: 1437-B Expiration Date: 11/23/11 Vol: 0.2

Spike Isotope: Po-210 Spike Code: 1437-B Expiration Date: 11/23/11 Vol: 0.2

Prep Date: 10/14/11 Initials: AMD Pipet ID: 1840022 Balance ID: 5041027 2 Witness: JEH 11-1-11

#0764497

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g l / f)	Po Det #
288297041-2	DYS-SD-GP09-1516	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	1	1	0.116	123
288297042-2	DYS-SD-GP09-2021	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	2	2	0.112	124
288297043-2	DYS-SD-GP09-2627	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	3	3	0.112	125
288297044-2	DYS-SD-GP10-0102	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	4	4	0.100	126
288297045-2	DYS-SD-GP10-0304	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	5	5	0.148	127
288297046-2	DYS-SD-GP10-0809	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	6	6	0.111	128
288297047-2	DYS-SD-GP10-1112	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	7	7	0.129	~~124~~ 135 ma 11/7/11
288297048-2	DYS-SD-GP10-1617	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	8	8	0.173	130
288297049-2	DYS-SD-GP10-2122	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	9	9	0.129	131
288297050-2	DYS-SD-GP10-2627	SAMPLE		1 pCi/g	SOIL	TETR038	14-OCT-11	10	10	0.119	132
1202523258-1	MB for batch 1156276	MB		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		11	11	0.173	~~133~~ 128 ma 11/7/11
1202523259-2	DYS-SD-GP09-2021(288297042DUP)	DUP		1 pCi/g	SOIL	QC ACCOUNT	14-OCT-11	12	12	0.126	134
1202523260-2	DYS-SD-GP09-2021(288297042MS)	MS		1 pCi/g	SOIL	QC ACCOUNT	14-OCT-11	13	13	0.113	135
1202523261-1	LCS for batch 1156276	LCS		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		14	14	0.173	136

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 11/7/11

Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

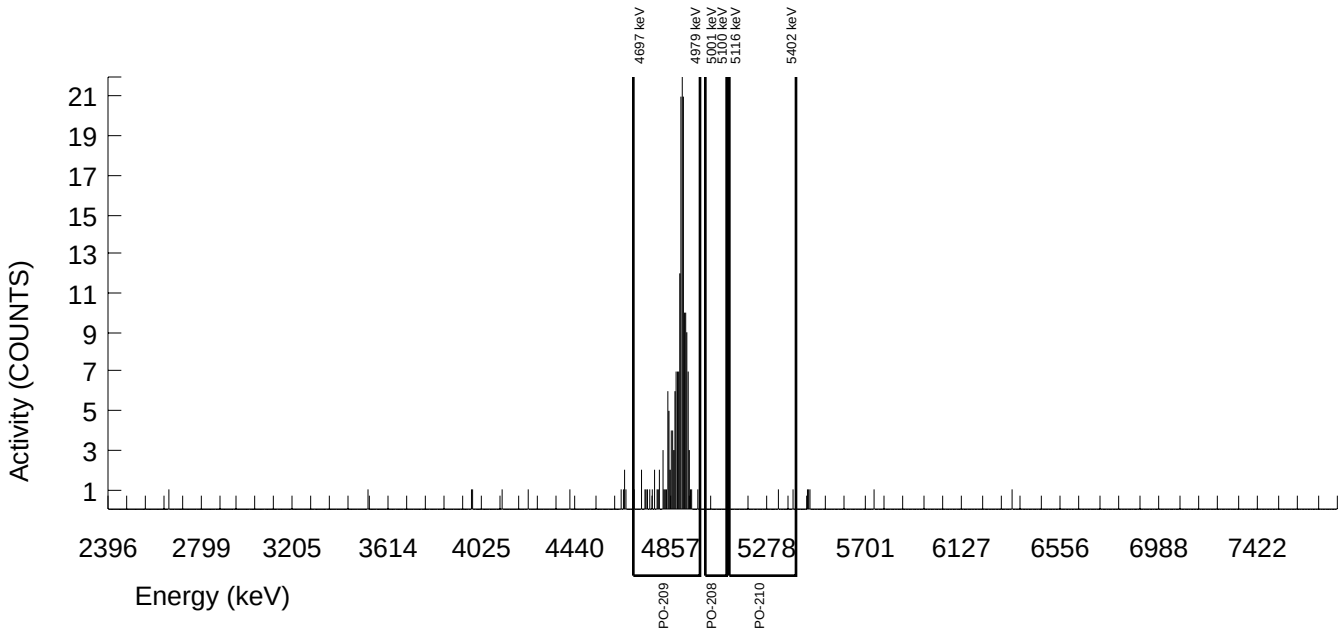
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 123	LIB FILE : PO
SAMPLE ID : S0288297041_PO	DETECTOR S/N : 45-142V3	BKG FILE : B123.CNF;638
SAMPLE QTY : 0.116 G +/-2.785 %	AVERAGE %EFFICIENCY : 26.7813	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7827	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:10:51	EFF FILE : W123.CNF;165
% YIELD : 55.0 +/-8.396 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.5754E+01	1437-B	PO-210	1.5754E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 2.9493E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.476	0.000	0.000	-0.240	0.240	0.4899	100.000	-2.67E-02	2.25E-01	5.34E-01	9.99E-02	2.24E-01
PO-209	4882.000	4890.950	20.630	189.000	189.000	0.000	0.0000	99.740	2.08E+01	4.82E+00	3.30E-01	0.00E+00	2.97E+00
PO-210	5304.380	5362.120	65.269	2.000	0.320	1.680	1.2961	100.000	3.89E-02	3.70E-01	9.43E-01	2.89E-01	3.70E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

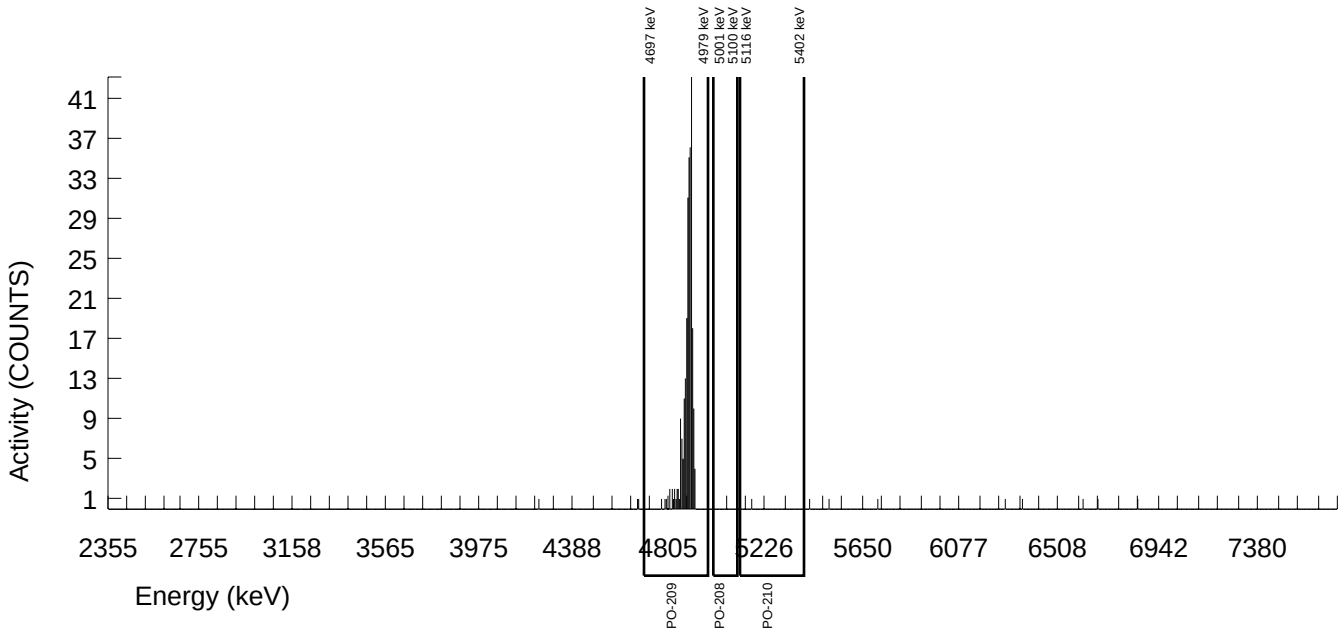
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 124	LIB FILE : PO
SAMPLE ID : S0288297042_PO	DETECTOR S/N : 80053	BKG FILE : B124.CNF;636
SAMPLE QTY : 0.112 G +/-2.885 %	AVERAGE %EFFICIENCY : 25.5621	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7468	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:10:52	EFF FILE : W124.CNF;163
% YIELD : 78.2 +/-7.526 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6317E+01	1437-B	PO-210	1.6317E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.1938E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.472	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.67E-01	2.55E-01	0.00E+00	1.66E-01
PO-209	4882.000	4894.069	23.135	257.000	256.520	0.480	0.6928	99.740	2.16E+01	4.48E+00	4.66E-01	1.07E-01	2.64E+00
PO-210	5304.380	5172.832	4.973	1.000	0.760	0.240	0.4899	100.000	7.06E-02	1.88E-01	4.45E-01	8.33E-02	1.87E-01



Alpha Spectroscopy Software Version 3.0
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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

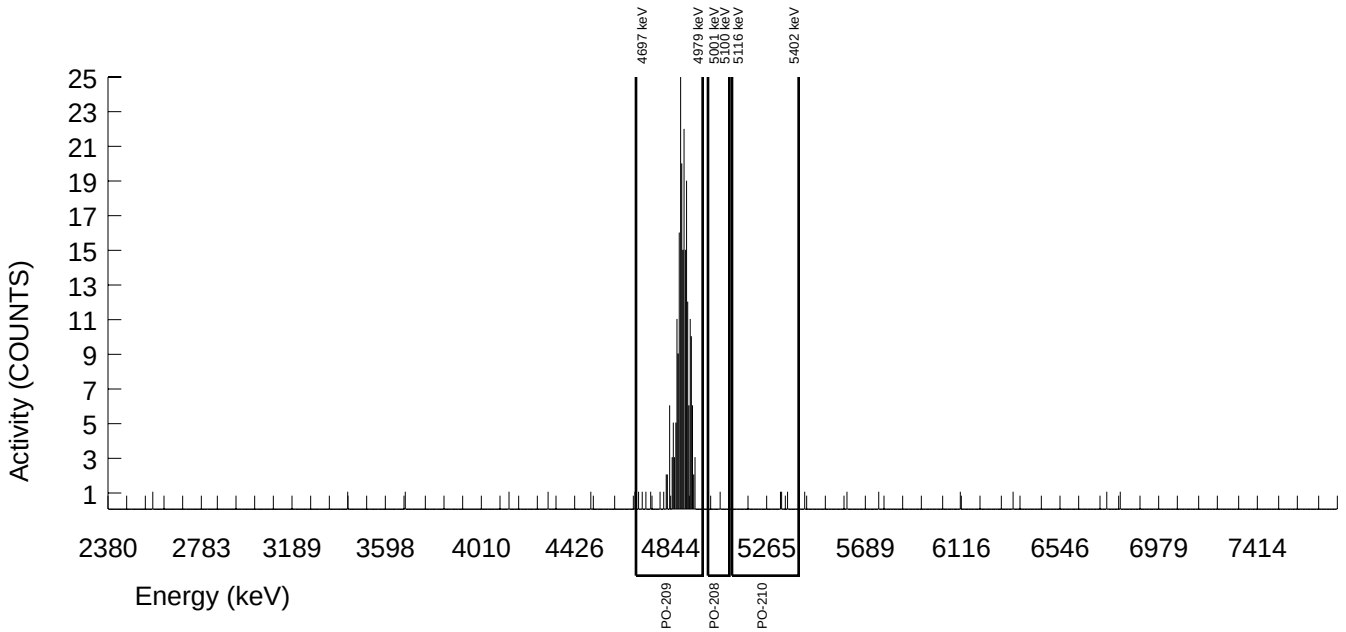
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 125	LIB FILE : PO
SAMPLE ID : S0288297043_PO	DETECTOR S/N : 75547	BKG FILE : B125.CNF;646
SAMPLE QTY : 0.112 G +/-2.885 %	AVERAGE %EFFICIENCY : 25.5522	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7467	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:10:54	EFF FILE : W125.CNF;185
% YIELD : 70.9 +/-7.804 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6317E+01	1437-B	PO-210	1.6317E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.8036E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5064.277	5.020	1.000	1.000	0.000	0.0000	100.000	9.37E-02	1.84E-01	2.81E-01	0.00E+00	1.84E-01
PO-209	4882.000	4897.016	37.295	234.000	232.560	1.440	1.2000	99.740	2.16E+01	4.65E+00	6.86E-01	2.04E-01	2.78E+00
PO-210	5304.380	5340.388	35.143	3.000	2.280	0.720	0.8485	100.000	2.33E-01	3.60E-01	6.25E-01	1.59E-01	3.57E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

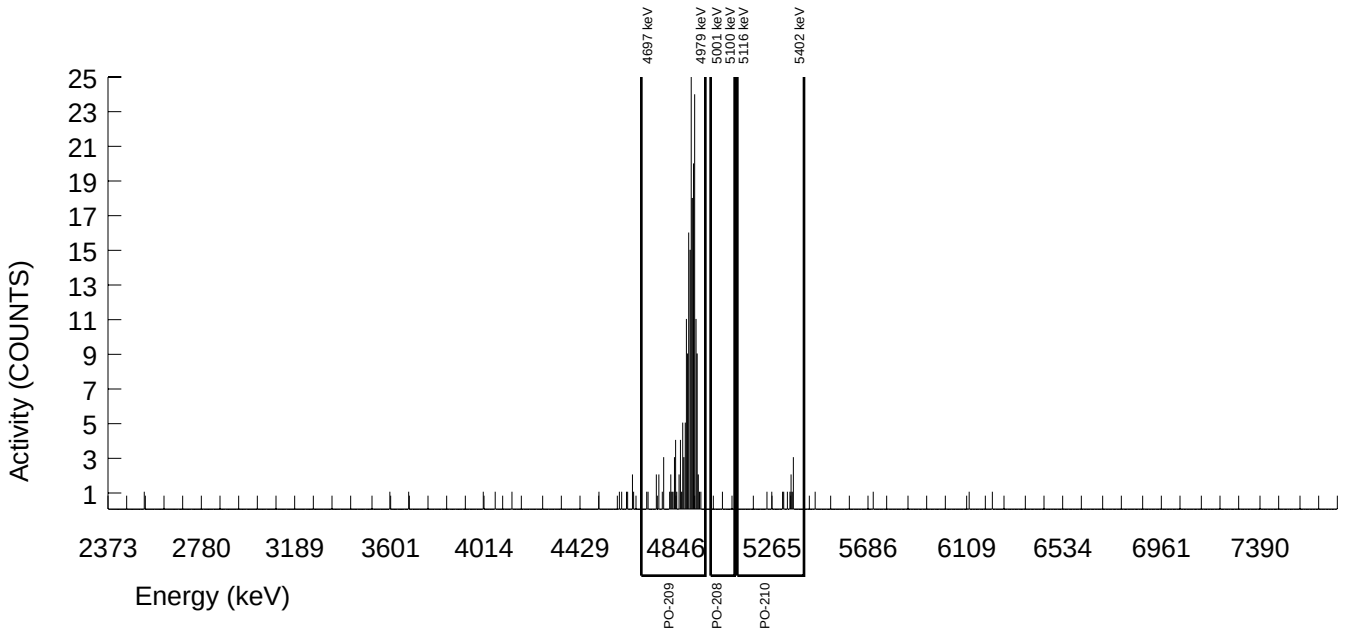
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 126	LIB FILE : PO
SAMPLE ID : S0288297044_PO	DETECTOR S/N : 75548	BKG FILE : B126.CNF;640
SAMPLE QTY : 0.100 G +/-0.437 %	AVERAGE %EFFICIENCY : 25.3985	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7426	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:10:57	EFF FILE : W126.CNF;181
% YIELD : 62.6 +/-8.178 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.8275E+01	1437-B	PO-210	1.8275E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.3573E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5055.077	5.076	1.000	1.000	0.000	0.0000	100.000	1.20E-01	2.35E-01	3.59E-01	0.00E+00	2.34E-01
PO-209	4882.000	4906.714	32.408	205.000	204.040	0.960	0.9798	99.740	2.41E+01	5.29E+00	7.80E-01	2.12E-01	3.32E+00
PO-210	5304.380	5334.024	15.228	12.000	10.800	1.200	1.0954	100.000	1.41E+00	9.30E-01	9.17E-01	2.62E-01	8.98E-01



Alpha Spectroscopy Software Version 3.0
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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

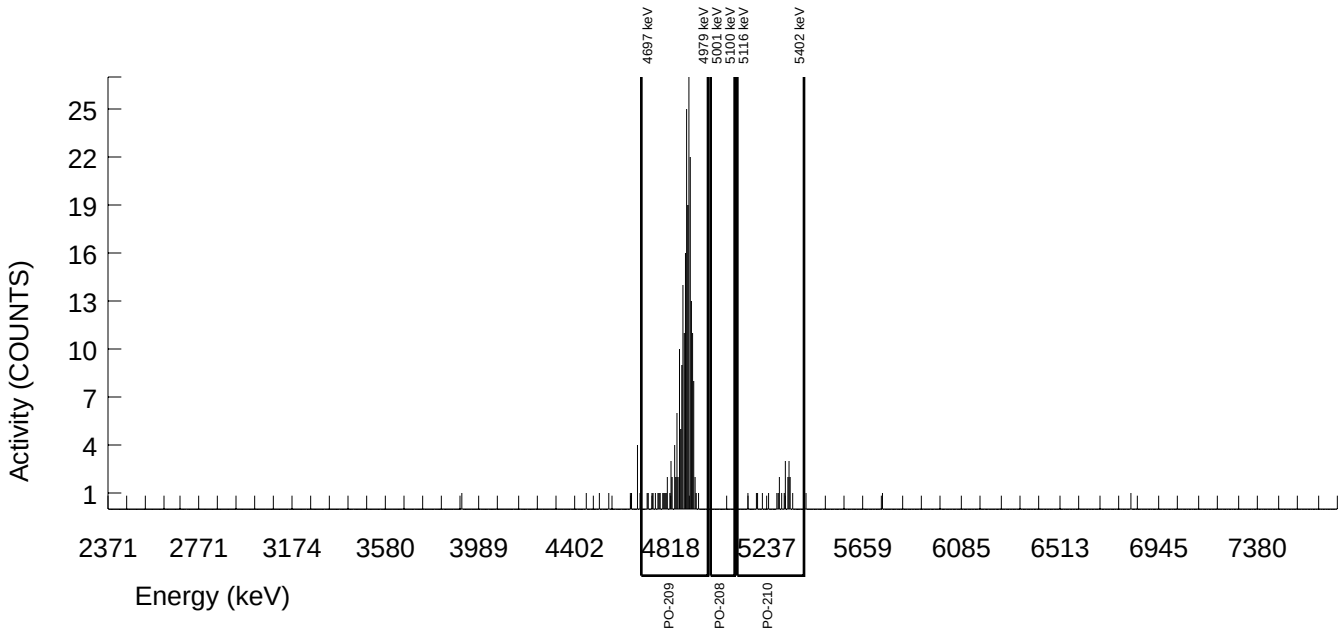
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 127	LIB FILE : PO
SAMPLE ID : S0288297045_PO	DETECTOR S/N : 78770	BKG FILE : B127.CNF;644
SAMPLE QTY : 0.148 G +/-2.185 %	AVERAGE %EFFICIENCY : 25.7319	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7518	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:10:58	EFF FILE : W127.CNF;172
% YIELD : 69.3 +/-7.832 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.2348E+01	1437-B	PO-210	1.2348E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.7153E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.473	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.42E-01	2.16E-01	0.00E+00	1.41E-01
PO-209	4882.000	4886.383	35.065	229.000	228.760	0.240	0.4899	99.740	1.63E+01	3.48E+00	3.42E-01	6.40E-02	2.12E+00
PO-210	5304.380	5299.878	48.533	22.000	21.520	0.480	0.6928	100.000	1.70E+00	7.81E-01	4.36E-01	1.00E-01	7.26E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

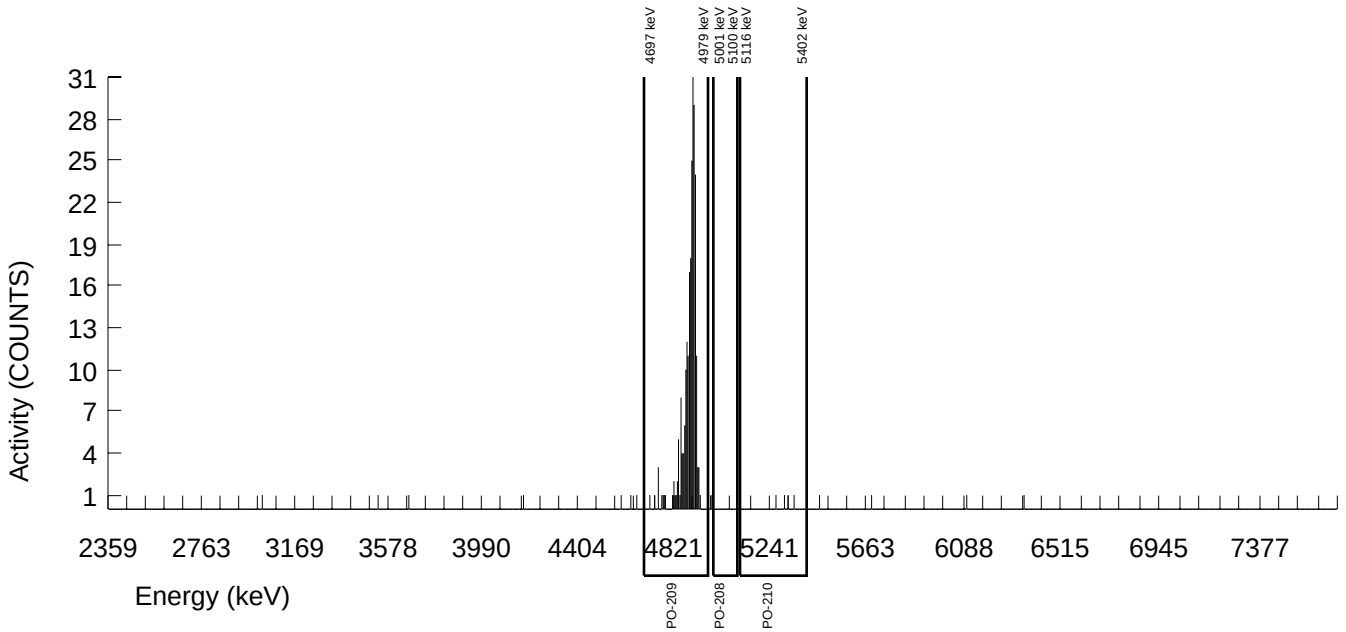
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 128	LIB FILE : PO
SAMPLE ID : S0288297046_PO	DETECTOR S/N : 75549	BKG FILE : B128.CNF;650
SAMPLE QTY : 0.111 G +/-2.910 %	AVERAGE %EFFICIENCY : 25.4337	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7436	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:01	EFF FILE : W128.CNF;182
% YIELD : 73.3 +/-7.716 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.6464E+01	1437-B	PO-210	1.6464E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.9317E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.478	0.000	0.000	-0.240	0.240	0.4899	100.000	-2.20E-02	1.86E-01	4.40E-01	8.24E-02	1.85E-01
PO-209	4882.000	4898.199	29.707	240.000	239.280	0.720	0.8485	99.740	2.18E+01	4.64E+00	5.55E-01	1.41E-01	2.76E+00
PO-210	5304.380	5319.742	80.508	4.000	3.760	0.240	0.4899	100.000	3.78E-01	4.02E-01	4.81E-01	9.01E-02	3.96E-01



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

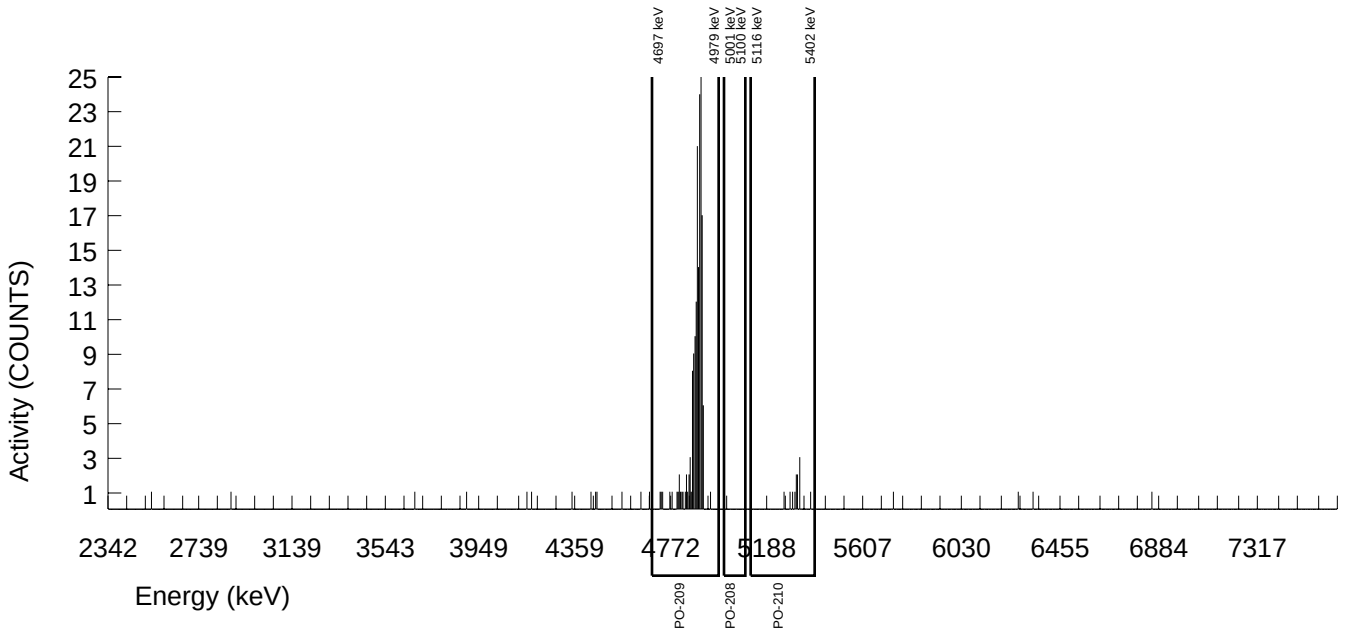
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 135	LIB FILE : PO
SAMPLE ID : S0288297047_PO	DETECTOR S/N : 80005	BKG FILE : B135.CNF;635
SAMPLE QTY : 0.129 G +/-2.506 %	AVERAGE %EFFICIENCY : 26.3237	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7691	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 04-Nov-2011 10:59:49	EFF FILE : W135.CNF;195
% YIELD : 49.8 +/-8.804 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD		NOMINAL	LCS/LCSD		NOMINAL
ID : 1423-D	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
NUCLIDE : PO-209	1437-B	PO-210	1.4167E+01	1437-B	PO-210	1.4167E+01
NOMINAL : 5.3610E+00 dpm						
RESULTS : 2.6678E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.473	0.000	0.000	-0.960	0.960	0.9798	100.000	-1.08E-01	2.46E-01	7.42E-01	2.02E-01	2.45E-01
PO-209	4882.000	4891.465	26.448	169.000	168.040	0.960	0.9798	99.740	1.87E+01	4.53E+00	7.34E-01	2.00E-01	2.84E+00
PO-210	5304.380	5325.488	19.761	12.000	11.760	0.240	0.4899	100.000	1.45E+00	8.86E-01	5.93E-01	1.11E-01	8.42E-01



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

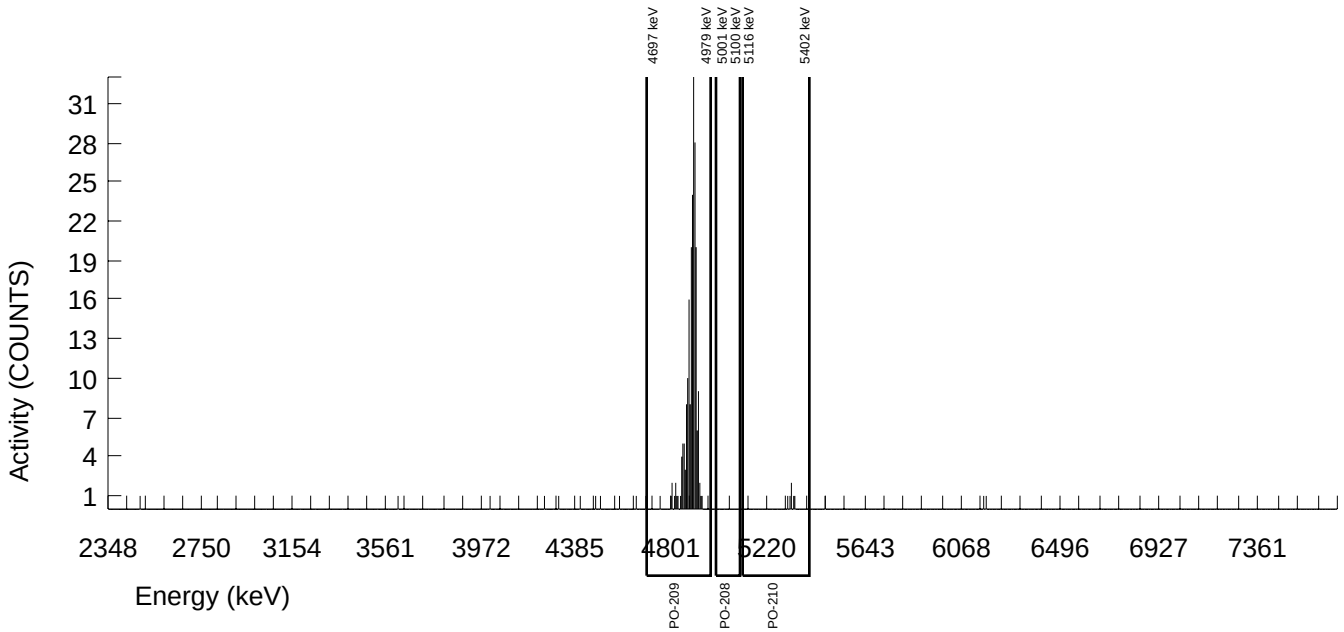
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 130	LIB FILE : PO
SAMPLE ID : S0288297048_PO	DETECTOR S/N : 76228	BKG FILE : B130.CNF;641
SAMPLE QTY : 0.173 G +/-1.871 %	AVERAGE %EFFICIENCY : 25.3670	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7414	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:05	EFF FILE : W130.CNF;185
% YIELD : 65.7 +/-8.027 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.0564E+01	1437-B	PO-210	1.0564E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.5216E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.475	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.30E-01	1.98E-01	0.00E+00	1.29E-01
PO-209	4882.000	4894.468	22.699	214.000	213.760	0.240	0.4899	99.740	1.40E+01	3.04E+00	3.13E-01	5.86E-02	1.87E+00
PO-210	5304.380	5331.782	7.497	6.000	5.040	0.960	0.9798	100.000	3.63E-01	3.58E-01	4.75E-01	1.29E-01	3.53E-01



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effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

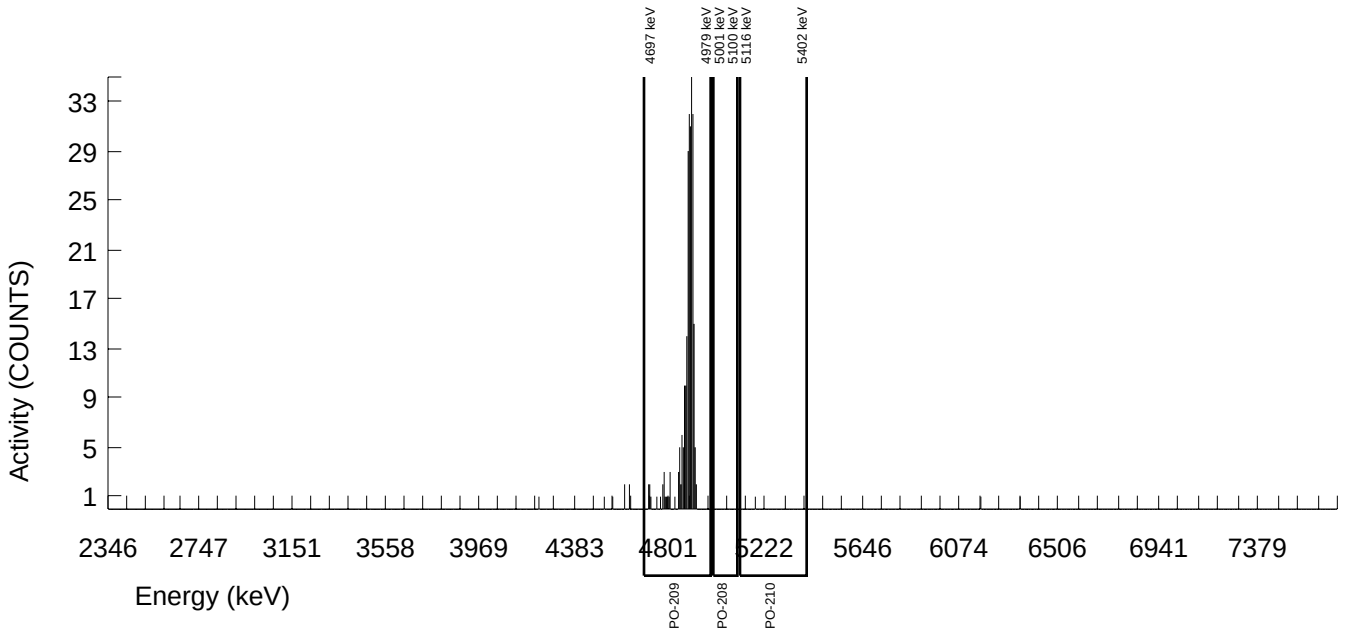
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 131	LIB FILE : PO
SAMPLE ID : S0288297049_PO	DETECTOR S/N : 80008	BKG FILE : B131.CNF;639
SAMPLE QTY : 0.129 G +/-2.506 %	AVERAGE %EFFICIENCY : 25.2920	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7391	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:07	EFF FILE : W131.CNF;183
% YIELD : 78.8 +/-7.531 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4167E+01	1437-B	PO-210	1.4167E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 4.2260E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.472	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.45E-01	2.22E-01	0.00E+00	1.45E-01
PO-209	4882.000	4886.143	28.007	256.000	255.760	0.240	0.4899	99.740	1.87E+01	3.86E+00	3.51E-01	6.57E-02	2.30E+00
PO-210	5304.380	5184.700	4.984	1.000	0.520	0.480	0.6928	100.000	4.20E-02	1.68E-01	4.48E-01	1.03E-01	1.67E-01



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 132	LIB FILE : PO
SAMPLE ID : S0288297050_PO	DETECTOR S/N : 67579	BKG FILE : B132.CNF;633
SAMPLE QTY : 0.119 G +/-2.715 %	AVERAGE %EFFICIENCY : 25.3191	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7402	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:09	EFF FILE : W132.CNF;179
% YIELD : 72.4 +/-7.755 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

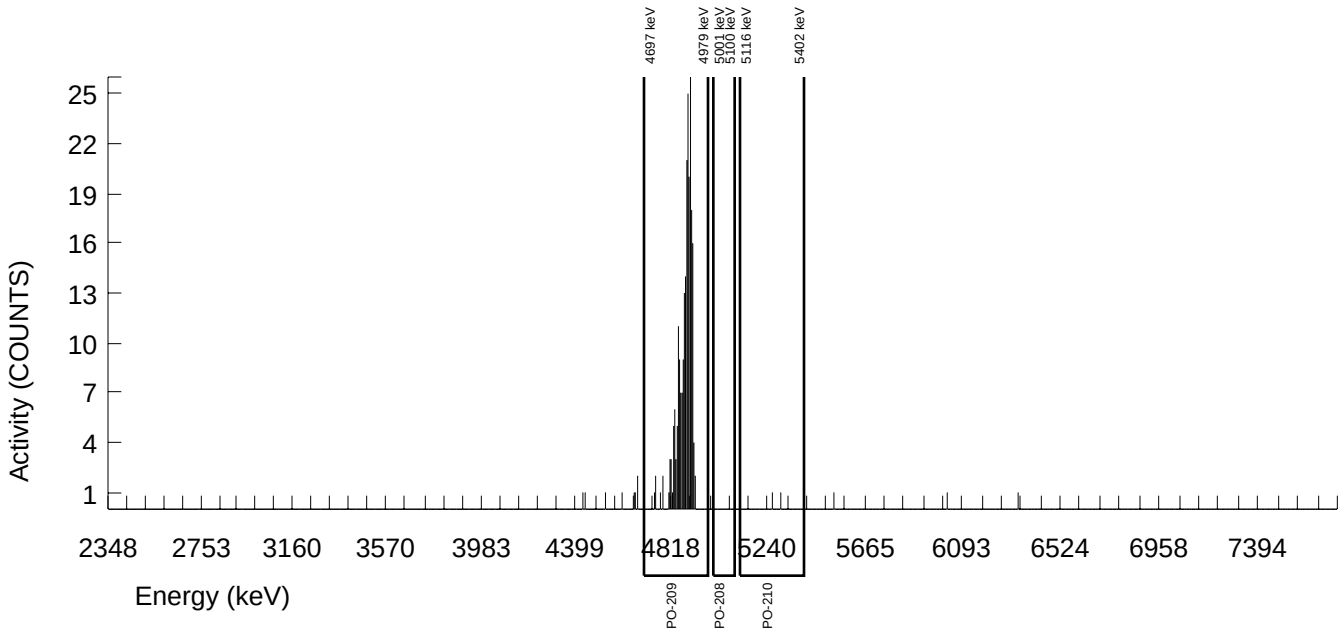
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3610E+00 dpm
RESULTS : 3.8789E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.5357E+01

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.5357E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.475	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.72E-01	2.62E-01	0.00E+00	1.71E-01
PO-209	4882.000	4883.953	36.509	235.000	235.000	0.000	0.0000	99.740	2.03E+01	4.33E+00	2.59E-01	0.00E+00	2.59E+00
PO-210	5304.380	5285.334	40.286	2.000	1.520	0.480	0.6928	100.000	1.45E-01	2.73E-01	5.28E-01	1.21E-01	2.72E-01



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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

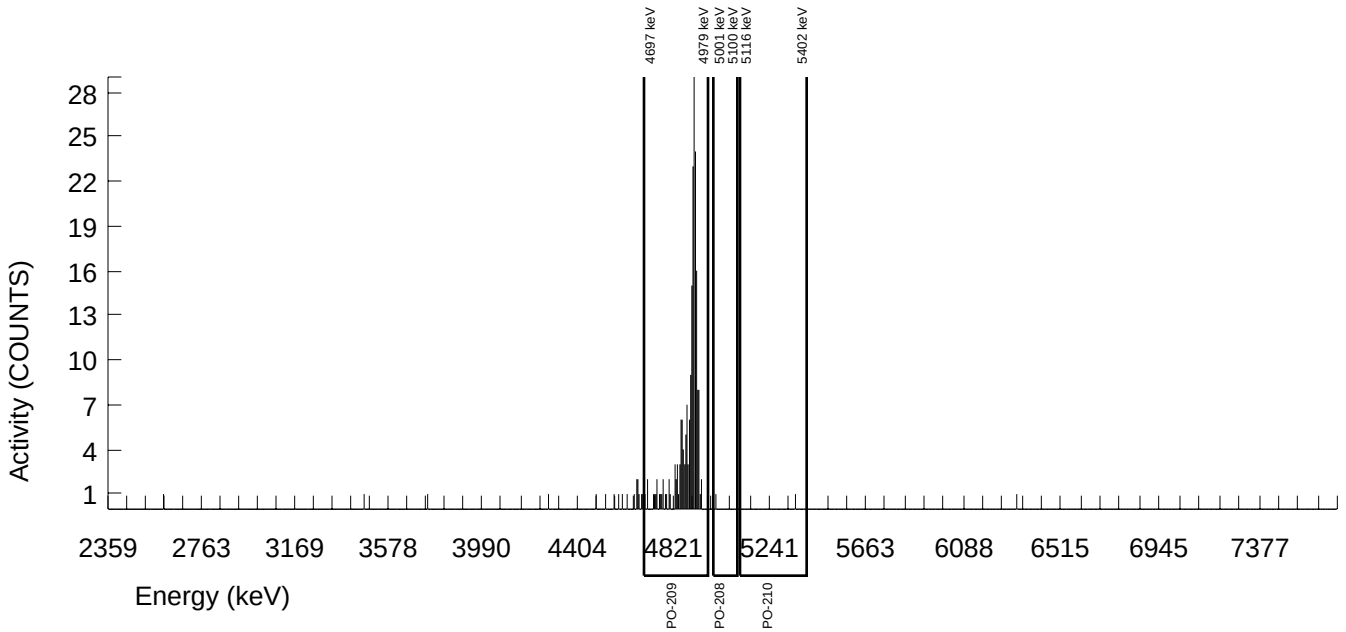
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 128	LIB FILE : PO
SAMPLE ID : S1202523258_PO	DETECTOR S/N : 75549	BKG FILE : B128.CNF;650
SAMPLE QTY : 0.173 G +/-1.871 %	AVERAGE %EFFICIENCY : 25.4337	BKG DATE : 30-Oct-2011
SAMPLE DATE : 01-Nov-2011 00:00:00	AVERAGE %EFF ERROR : 0.7436	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 13:33:04	EFF FILE : W128.CNF;182
% YIELD : 63.2 +/-8.141 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	9.6529E+00	1437-B	PO-210	9.6529E+00
NUCLIDE : PO-209						
NOMINAL : 5.3592E+00 dpm						
RESULTS : 3.3884E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5015.002	5.032	1.000	0.760	0.240	0.4899	100.000	5.14E-02	1.37E-01	3.24E-01	6.06E-02	1.36E-01
PO-209	4882.000	4894.612	21.490	207.000	206.280	0.720	0.8485	99.740	1.40E+01	3.08E+00	4.13E-01	1.05E-01	1.91E+00
PO-210	5304.380	5361.882	5.032	1.000	0.760	0.240	0.4899	100.000	5.20E-02	1.38E-01	3.28E-01	6.14E-02	1.38E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

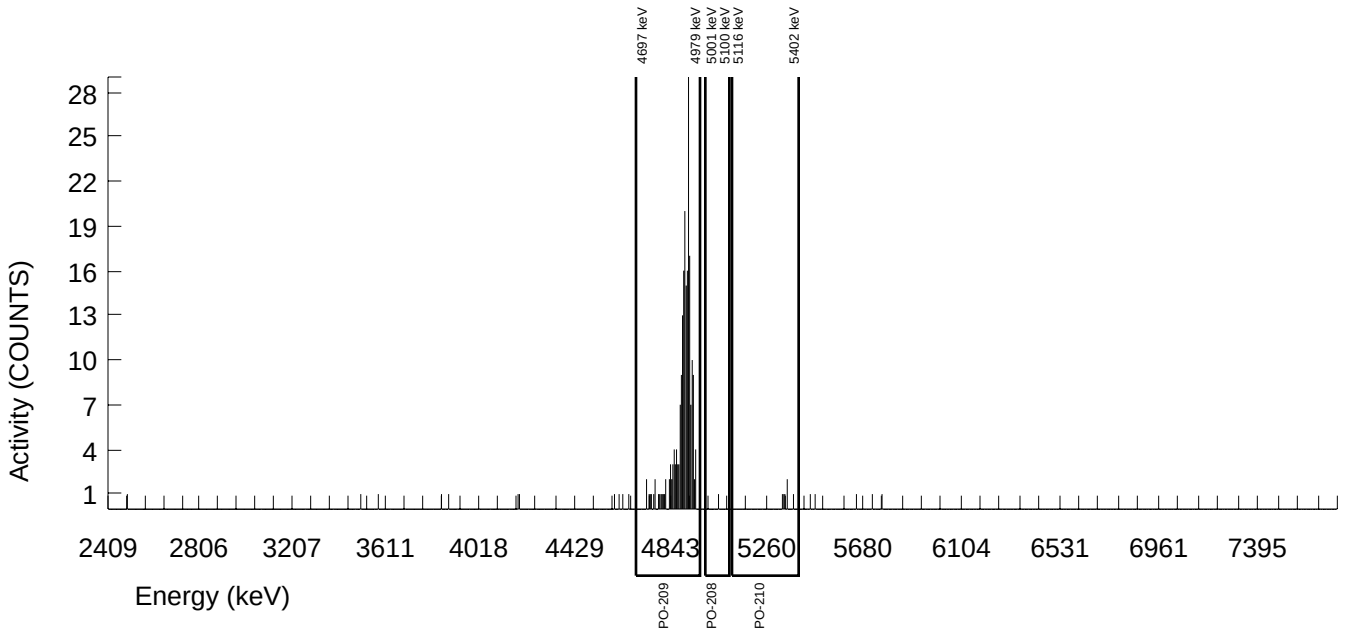
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 134	LIB FILE : PO
SAMPLE ID : S1202523259_PO	DETECTOR S/N : 76230	BKG FILE : B134.CNF;628
SAMPLE QTY : 0.126 G +/-2.565 %	AVERAGE %EFFICIENCY : 23.9814	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7017	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:13	EFF FILE : W134.CNF;187
% YIELD : 70.3 +/-8.002 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD		
			NOMINAL			NOMINAL
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G
ID : 1423-D	1437-B	PO-210	1.4504E+01	1437-B	PO-210	1.4504E+01
NUCLIDE : PO-209						
NOMINAL : 5.3610E+00 dpm						
RESULTS : 3.7690E+00 dpm						

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5061.509	4.947	1.000	1.000	0.000	0.0000	100.000	8.95E-02	1.76E-01	2.69E-01	0.00E+00	1.75E-01
PO-209	4882.000	4908.585	28.448	217.000	216.280	0.720	0.8485	99.740	1.92E+01	4.21E+00	5.41E-01	1.38E-01	2.56E+00
PO-210	5304.380	5356.122	4.947	6.000	5.040	0.960	0.9798	100.000	4.93E-01	4.86E-01	6.45E-01	1.76E-01	4.79E-01



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 135	LIB FILE : PO
SAMPLE ID : S1202523260_PO	DETECTOR S/N : 80005	BKG FILE : B135.CNF;635
SAMPLE QTY : 0.113 G +/-2.859 %	AVERAGE %EFFICIENCY : 26.3237	BKG DATE : 30-Oct-2011
SAMPLE DATE : 14-Oct-2011 00:00:00	AVERAGE %EFF ERROR : 0.7691	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:15	EFF FILE : W135.CNF;195
% YIELD : 67.8 +/-7.840 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

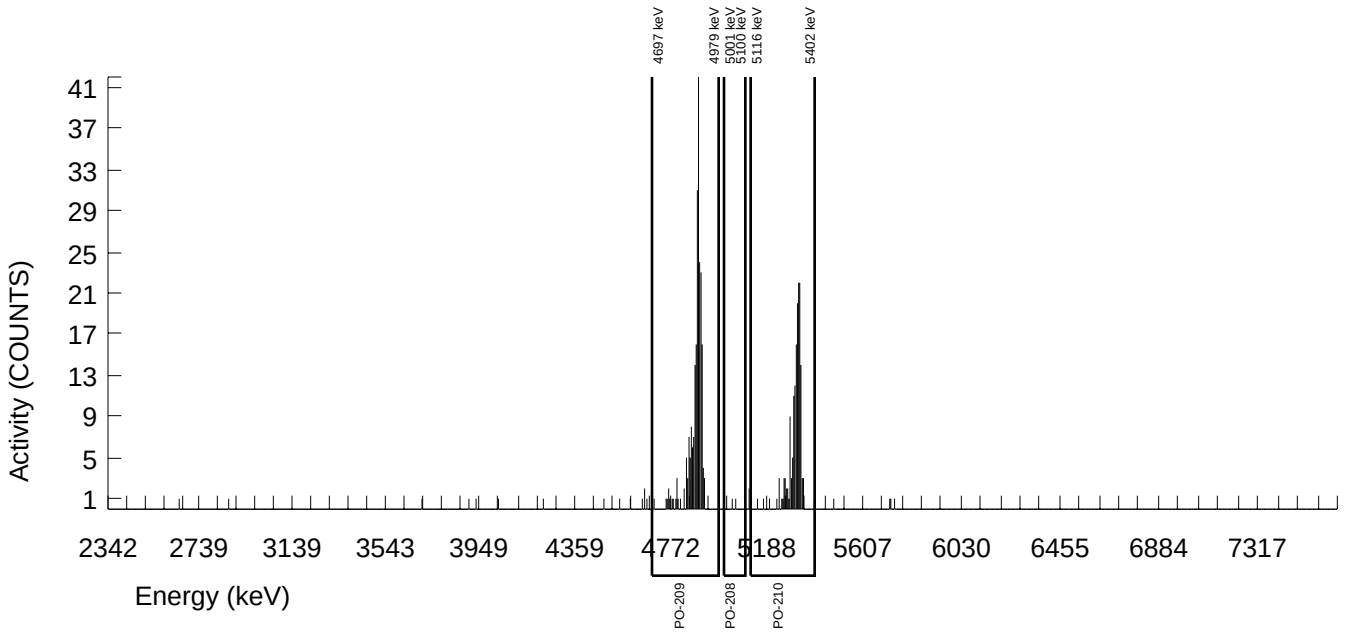
TRACER
ID : 1423-D
NUCLIDE : PO-209
NOMINAL : 5.3610E+00 dpm
RESULTS : 3.6362E+00 dpm

MS/MSD ID	NUCLIDE	NOMINAL pCi/G	% RECOVERY
1437-B	PO-210	1.6173E+01	103.706

LCS/LCSD ID	NUCLIDE	NOMINAL pCi/G
1437-B	PO-210	1.6173E+01

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5054.830	19.761	2.000	1.040	0.960	0.9798	100.000	9.81E-02	2.76E-01	6.21E-01	1.69E-01	2.76E-01
PO-209	4882.000	4888.611	19.526	230.000	229.040	0.960	0.9798	99.740	2.14E+01	4.63E+00	6.15E-01	1.67E-01	2.77E+00
PO-210	5304.380	5317.160	30.989	163.000	162.760	0.240	0.4899	100.000	1.68E+01	3.89E+00	4.94E-01	9.25E-02	2.58E+00



Alpha Spectroscopy Software Version 3.0
effective date: 1-Jul-2011

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

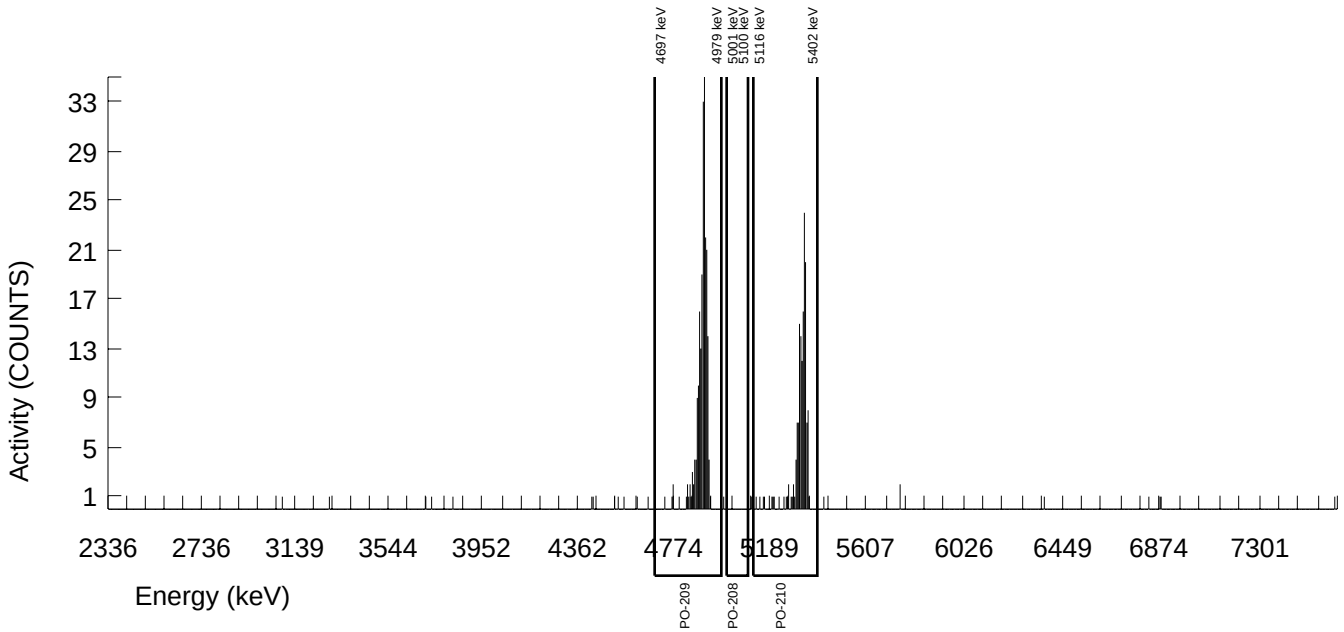
Instrument SOP: GL-RAD-I-009
Analytical SOP: GL-RAD-A-016

BATCH NUMBER : 1156276	CHAMBER : 136	LIB FILE : PO
SAMPLE ID : S1202523261_PO	DETECTOR S/N : 80006	BKG FILE : B136.CNF;632
SAMPLE QTY : 0.173 G +/-1.871 %	AVERAGE %EFFICIENCY : 26.2521	BKG DATE : 30-Oct-2011
SAMPLE DATE : 01-Nov-2011 00:00:00	AVERAGE %EFF ERROR : 0.7671	BKG LIVE TIME(SEC) : 60000.00
ANALYST : HAKB	COUNT DATE : 03-Nov-2011 08:11:17	EFF FILE : W136.CNF;194
% YIELD : 65.9 +/-7.913 %	ELAPSED LIVE TIME(SEC) : 14400.00	CAL DATE : 19-Oct-2011

TRACER	MS/MSD			LCS/LCSD			
			NOMINAL			NOMINAL	%
	ID	NUCLIDE	pCi/G	ID	NUCLIDE	pCi/G	RECOVERY
ID : 1423-D	1437-B	PO-210	9.6529E+00	1437-B	PO-210	9.6529E+00	100.605
NUCLIDE : PO-209							
NOMINAL : 5.3592E+00 dpm							
RESULTS : 3.5329E+00 dpm							

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG StDev	%ABUN	ACTIVITY pCi/G	TPU 1.96-SIGMA	MDA pCi/G	Lc pCi/G	UNC pCi/G
PO-208	5080.000	5050.478	0.000	0.000	0.000	0.000	0.0000	100.000	0.00E+00	1.24E-01	1.88E-01	0.00E+00	1.23E-01
PO-209	4882.000	4902.671	23.689	222.000	222.000	0.000	0.0000	99.740	1.40E+01	2.99E+00	1.89E-01	0.00E+00	1.84E+00
PO-210	5304.380	5325.374	29.875	154.000	153.040	0.960	0.9798	100.000	9.71E+00	2.26E+00	4.18E-01	1.14E-01	1.54E+00



Continuing Calibration Data

Review of Alpha Spectrometer QA results (Daily checks) 28-OCT-2011 12:28:49.59

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
28-OCT-2011	13	PSENERGY-5000	Above
28-OCT-2011	23	PSENERGY-5000	Above
28-OCT-2011	31	PSFWHM-5000	Below
28-OCT-2011	31	PSCENTRD-5000	Below
28-OCT-2011	32	PSFWHM-5000	Below
28-OCT-2011	32	PSENERGY-5000	Above
28-OCT-2011	32	PSCENTRD-5000	Below
28-OCT-2011	32	PSCTSS-5000	Below
28-OCT-2011	34	PSFWHM-5000	Below
28-OCT-2011	34	PSENERGY-5000	Below
28-OCT-2011	34	PSCENTRD-5000	Below
28-OCT-2011	34	PSCTSS-5000	Below
28-OCT-2011	41	PSENERGY-5000	Above
28-OCT-2011	48	PSFWHM-5000	Below
28-OCT-2011	48	PSCENTRD-5000	Below
28-OCT-2011	48	PSCTSS-5000	Below
28-OCT-2011	69	PSENERGY-5000	Above
28-OCT-2011	70	PSFWHM-5000	Below
28-OCT-2011	70	PSENERGY-5000	Above
28-OCT-2011	70	PSCENTRD-5000	Above
28-OCT-2011	70	PSCTSS-5000	Below
28-OCT-2011	102	PSENERGY-5000	Above
28-OCT-2011	107	PSFWHM-5000	Above
28-OCT-2011	107	PSCTSS-5000	Below
28-OCT-2011	111	PSFWHM-5000	Below
28-OCT-2011	111	PSENERGY-5000	Above
28-OCT-2011	111	PSCTSS-5000	Below
28-OCT-2011	112	PSFWHM-5000	Below
28-OCT-2011	112	PSCENTRD-5000	Below
28-OCT-2011	112	PSCTSS-5000	Below
28-OCT-2011	165	PSFWHM-5000	Below
28-OCT-2011	165	PSCTSS-5000	Below
28-OCT-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

28-OCT-2011	183	may not have run since 28-OCT-2011
28-OCT-2011	184	may not have run since 28-OCT-2011

} out of service

APPROVAL DATE: 10-28-2011 APPROVAL TIME: 1245

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

Report completed at 28-OCT-2011 12:34:52.38

Review of Alpha Spectrometer QA results (Daily checks) 31-OCT-2011 08:33:51.44

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
31-OCT-2011	13	PSENERGY-5000	Above
31-OCT-2011	23	PSFWHM-5000	Above
31-OCT-2011	23	PSENERGY-5000	Above
31-OCT-2011	31	PSFWHM-5000	Below
31-OCT-2011	31	PSCENTRD-5000	Below
31-OCT-2011	32	PSFWHM-5000	Below
31-OCT-2011	32	PSENERGY-5000	Above
31-OCT-2011	32	PSCENTRD-5000	Below
31-OCT-2011	32	PSCTSS-5000	Below
31-OCT-2011	34	PSFWHM-5000	Below
31-OCT-2011	34	PSENERGY-5000	Below
31-OCT-2011	34	PSCENTRD-5000	Below
31-OCT-2011	34	PSCTSS-5000	Below
31-OCT-2011	41	PSENERGY-5000	Above
31-OCT-2011	48	PSFWHM-5000	Below
31-OCT-2011	48	PSCENTRD-5000	Below
31-OCT-2011	48	PSCTSS-5000	Below
31-OCT-2011	69	PSENERGY-5000	Above
31-OCT-2011	70	PSFWHM-5000	Below
31-OCT-2011	70	PSENERGY-5000	Above
31-OCT-2011	70	PSCENTRD-5000	Above
31-OCT-2011	70	PSCTSS-5000	Below
31-OCT-2011	102	PSENERGY-5000	Above
31-OCT-2011	107	PSFWHM-5000	Above
31-OCT-2011	107	PSCTSS-5000	Below
31-OCT-2011	111	PSFWHM-5000	Below
31-OCT-2011	111	PSENERGY-5000	Above
31-OCT-2011	111	PSCTSS-5000	Below
31-OCT-2011	112	PSFWHM-5000	Below
31-OCT-2011	112	PSCENTRD-5000	Below
31-OCT-2011	112	PSCTSS-5000	Below
31-OCT-2011	165	PSFWHM-5000	Above
31-OCT-2011	165	PSENERGY-5000	Above
31-OCT-2011	165	PSCTSS-5000	Below

MD
10/31

31-OCT-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

31-OCT-2011	183	may not have run since 31-OCT-2011
31-OCT-2011	184	may not have run since 31-OCT-2011

APPROVAL DATE: 10/31/11 APPROVAL TIME: 9:55

APPROVED BY: MD PROCEDURE # GL-RAD-I-009

Report completed at 31-OCT-2011 08:36:26.20

Review of Alpha Spectrometer QA results (Daily checks) 1-NOV-2011 13:59:30.49

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag	
1-NOV-2011	13	PSENERGY-5000	Above	
1-NOV-2011	23	PSENERGY-5000	Above	
1-NOV-2011	27	PSENERGY-5000	Above	See NOTE 1
1-NOV-2011	31	PSFWHM-5000	Below	
1-NOV-2011	31	PSCENTRD-5000	Below	
1-NOV-2011	32	PSFWHM-5000	Below	
1-NOV-2011	32	PSENERGY-5000	Above	
1-NOV-2011	32	PSCENTRD-5000	Below	
1-NOV-2011	32	PSCTSS-5000	Below	
1-NOV-2011	34	PSFWHM-5000	Below	
1-NOV-2011	34	PSENERGY-5000	Below	
1-NOV-2011	34	PSCENTRD-5000	Below	
1-NOV-2011	34	PSCTSS-5000	Below	
1-NOV-2011	41	PSENERGY-5000	Above	
1-NOV-2011	48	PSFWHM-5000	Below	
1-NOV-2011	48	PSCENTRD-5000	Below	
1-NOV-2011	48	PSCTSS-5000	Below	
1-NOV-2011	69	PSENERGY-5000	Above	
1-NOV-2011	70	PSFWHM-5000	Below	
1-NOV-2011	70	PSENERGY-5000	Above	
1-NOV-2011	70	PSCENTRD-5000	Above	
1-NOV-2011	70	PSCTSS-5000	Below	
1-NOV-2011	102	PSENERGY-5000	Above	
1-NOV-2011	107	PSFWHM-5000	Above	
1-NOV-2011	107	PSCTSS-5000	Below	
1-NOV-2011	111	PSFWHM-5000	Below	
1-NOV-2011	111	PSENERGY-5000	Above	
1-NOV-2011	111	PSCTSS-5000	Below	
1-NOV-2011	112	PSFWHM-5000	Below	
1-NOV-2011	112	PSCENTRD-5000	Below	
1-NOV-2011	112	PSCTSS-5000	Below	
1-NOV-2011	165	PSFWHM-5000	Above	
1-NOV-2011	165	PSENERGY-5000	Above	

1-NOV-2011 191 PSFWHM-5000 Above

The following detectors that may not have properly transfered to the QA file

1-NOV-2011 183 may not have run since 1-NOV-2011
1-NOV-2011 184 may not have run since 1-NOV-2011 } out of service

APPROVAL DATE: 11-1-2011 APPROVAL TIME: 1415

APPROVED BY: RZ PROCEDURE # GL-RAD-I-009

Report completed at 1-NOV-2011 14:02:02.13

Note 1: Detector Daily passed on previous day. Sample results counted since last passing daily have been verified.
GZD 11/1/11

Review of Alpha Spectrometer QA results (Daily checks) 3-NOV-2011 13:22:49.71

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
3-NOV-2011	13	PSENERGY-5000	Above
3-NOV-2011	23	PSENERGY-5000	Above
3-NOV-2011	27	PSENERGY-5000	Above
3-NOV-2011	31	PSFWHM-5000	Below
3-NOV-2011	31	PSCENTRD-5000	Below
3-NOV-2011	32	PSFWHM-5000	Below
3-NOV-2011	32	PSENERGY-5000	Above
3-NOV-2011	32	PSCENTRD-5000	Below
3-NOV-2011	32	PSCTSS-5000	Below
3-NOV-2011	34	PSFWHM-5000	Below
3-NOV-2011	34	PSENERGY-5000	Below
3-NOV-2011	34	PSCENTRD-5000	Below
3-NOV-2011	34	PSCTSS-5000	Below
3-NOV-2011	41	PSENERGY-5000	Above
3-NOV-2011	48	PSFWHM-5000	Below
3-NOV-2011	48	PSCENTRD-5000	Below
3-NOV-2011	48	PSCTSS-5000	Below
3-NOV-2011	69	PSENERGY-5000	Above
3-NOV-2011	70	PSFWHM-5000	Below
3-NOV-2011	70	PSENERGY-5000	Above
3-NOV-2011	70	PSCENTRD-5000	Above
3-NOV-2011	70	PSCTSS-5000	Below
3-NOV-2011	102	PSENERGY-5000	Above
3-NOV-2011	107	PSFWHM-5000	Above
3-NOV-2011	107	PSCTSS-5000	Below
3-NOV-2011	111	PSFWHM-5000	Below
3-NOV-2011	111	PSENERGY-5000	Above
3-NOV-2011	111	PSCTSS-5000	Below
3-NOV-2011	112	PSFWHM-5000	Below
3-NOV-2011	112	PSCENTRD-5000	Below
3-NOV-2011	112	PSCTSS-5000	Below
3-NOV-2011	165	PSFWHM-5000	Above
3-NOV-2011	165	PSENERGY-5000	Above

3-NOV-2011	165	PSCTSS-5000	Below
3-NOV-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

3-NOV-2011	183	may not have run since 3-NOV-2011
3-NOV-2011	184	may not have run since 3-NOV-2011

} out of service

APPROVAL DATE: 11-3-2011 APPROVAL TIME: 1345

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

Report completed at 3-NOV-2011 13:25:48.38

Review of Alpha Spectrometer QA results (Daily checks) 4-NOV-2011 18:32:07.88

Bank 1 through bank 25 (detectors 1 through 208)

DETECTORS NOT LISTED HAVE PASSED ALL QUALITY ASSURANCE PARAMETERS

	Detector	Parameter	Flag
4-NOV-2011	31	PSFWHM-5000	Below
4-NOV-2011	31	PSCENTRD-5000	Below
4-NOV-2011	32	PSFWHM-5000	Below
4-NOV-2011	32	PSENERGY-5000	Above
4-NOV-2011	32	PSCENTRD-5000	Below
4-NOV-2011	32	PSCTSS-5000	Below
4-NOV-2011	34	PSFWHM-5000	Below
4-NOV-2011	34	PSENERGY-5000	Below
4-NOV-2011	34	PSCENTRD-5000	Below
4-NOV-2011	34	PSCTSS-5000	Below
4-NOV-2011	41	PSENERGY-5000	Above
4-NOV-2011	48	PSFWHM-5000	Below
4-NOV-2011	48	PSCENTRD-5000	Below
4-NOV-2011	48	PSCTSS-5000	Below
4-NOV-2011	69	PSENERGY-5000	Above
4-NOV-2011	70	PSFWHM-5000	Below
4-NOV-2011	70	PSENERGY-5000	Above
4-NOV-2011	70	PSCENTRD-5000	Above
4-NOV-2011	70	PSCTSS-5000	Below
4-NOV-2011	102	PSENERGY-5000	Above
4-NOV-2011	107	PSFWHM-5000	Above
4-NOV-2011	107	PSCTSS-5000	Below
4-NOV-2011	111	PSFWHM-5000	Below
4-NOV-2011	111	PSENERGY-5000	Above
4-NOV-2011	111	PSCTSS-5000	Below
4-NOV-2011	112	PSFWHM-5000	Below
4-NOV-2011	112	PSCENTRD-5000	Below
4-NOV-2011	112	PSCTSS-5000	Below
4-NOV-2011	165	PSFWHM-5000	Above
4-NOV-2011	165	PSENERGY-5000	Above
4-NOV-2011	165	PSCTSS-5000	Below
4-NOV-2011	191	PSFWHM-5000	Above

The following detectors that may not have properly transfered to the QA file

4-NOV-2011	183	may not have run since 4-NOV-2011
4-NOV-2011	184	may not have run since 4-NOV-2011

} out of service

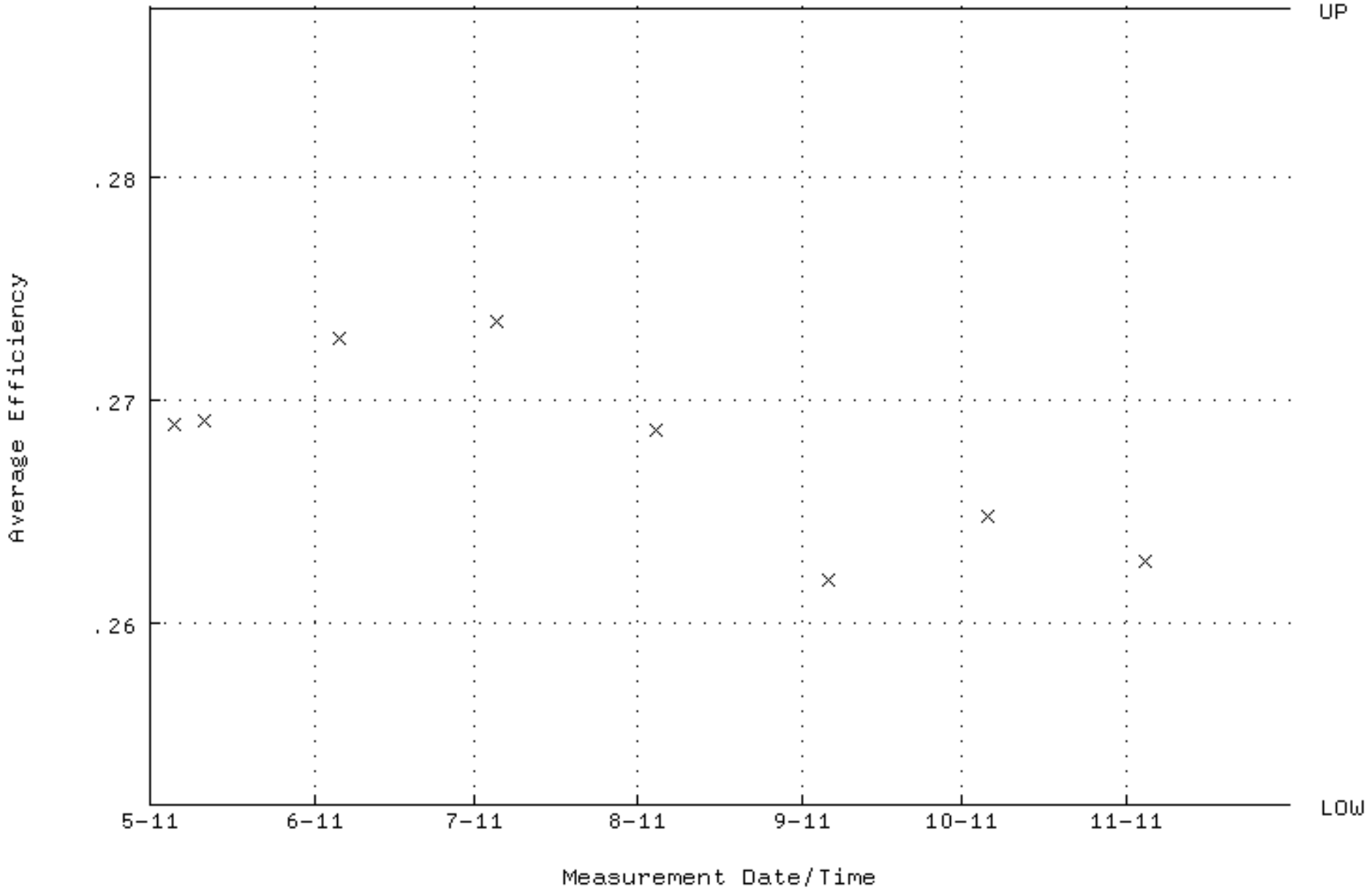
APPROVAL DATE: 11-4-2011 APPROVAL TIME: 1845

APPROVED BY: RC PROCEDURE # GL-RAD-I-009

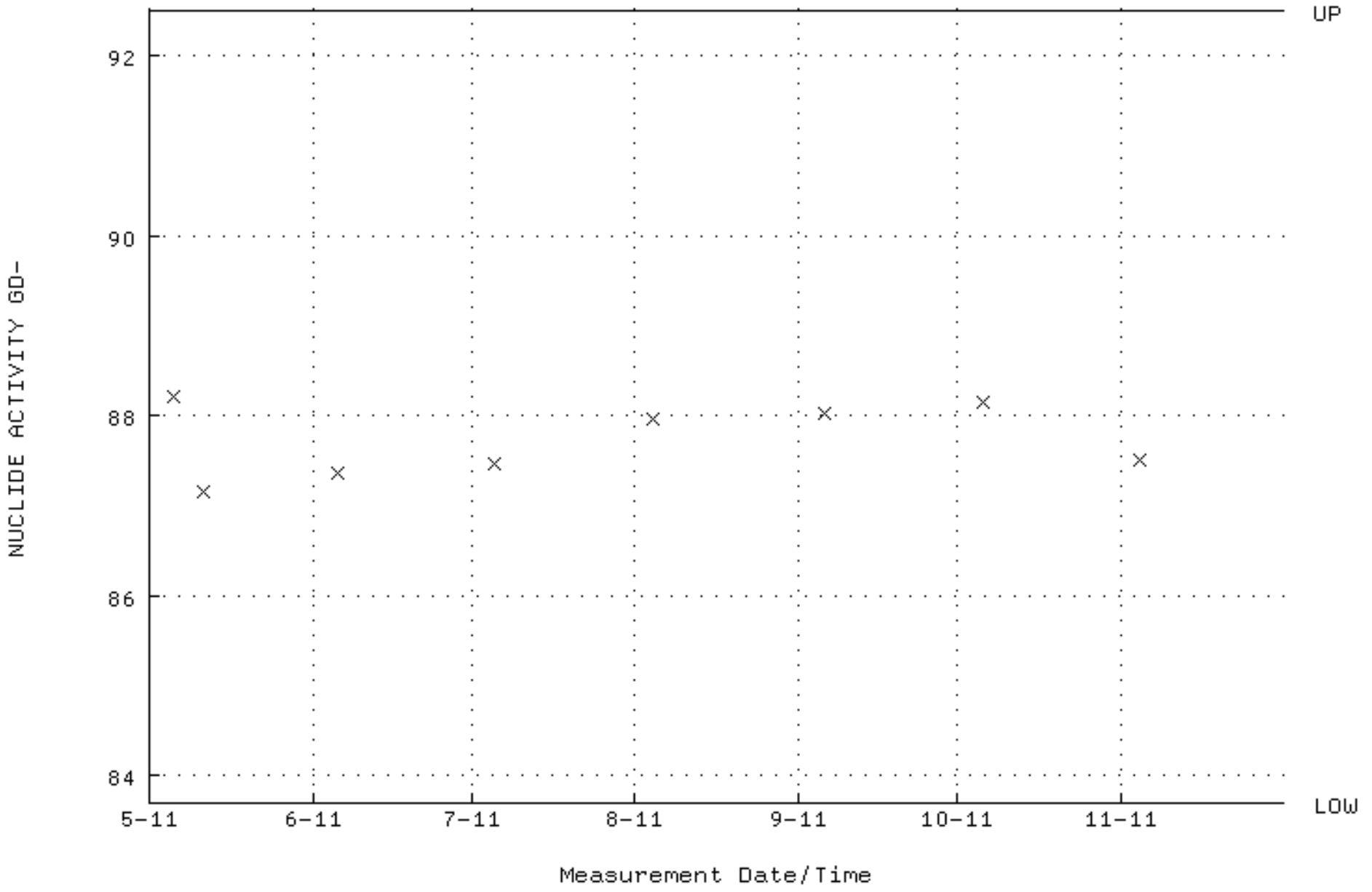
Report completed at 4-NOV-2011 18:34:56.12

Background and Efficiency Data

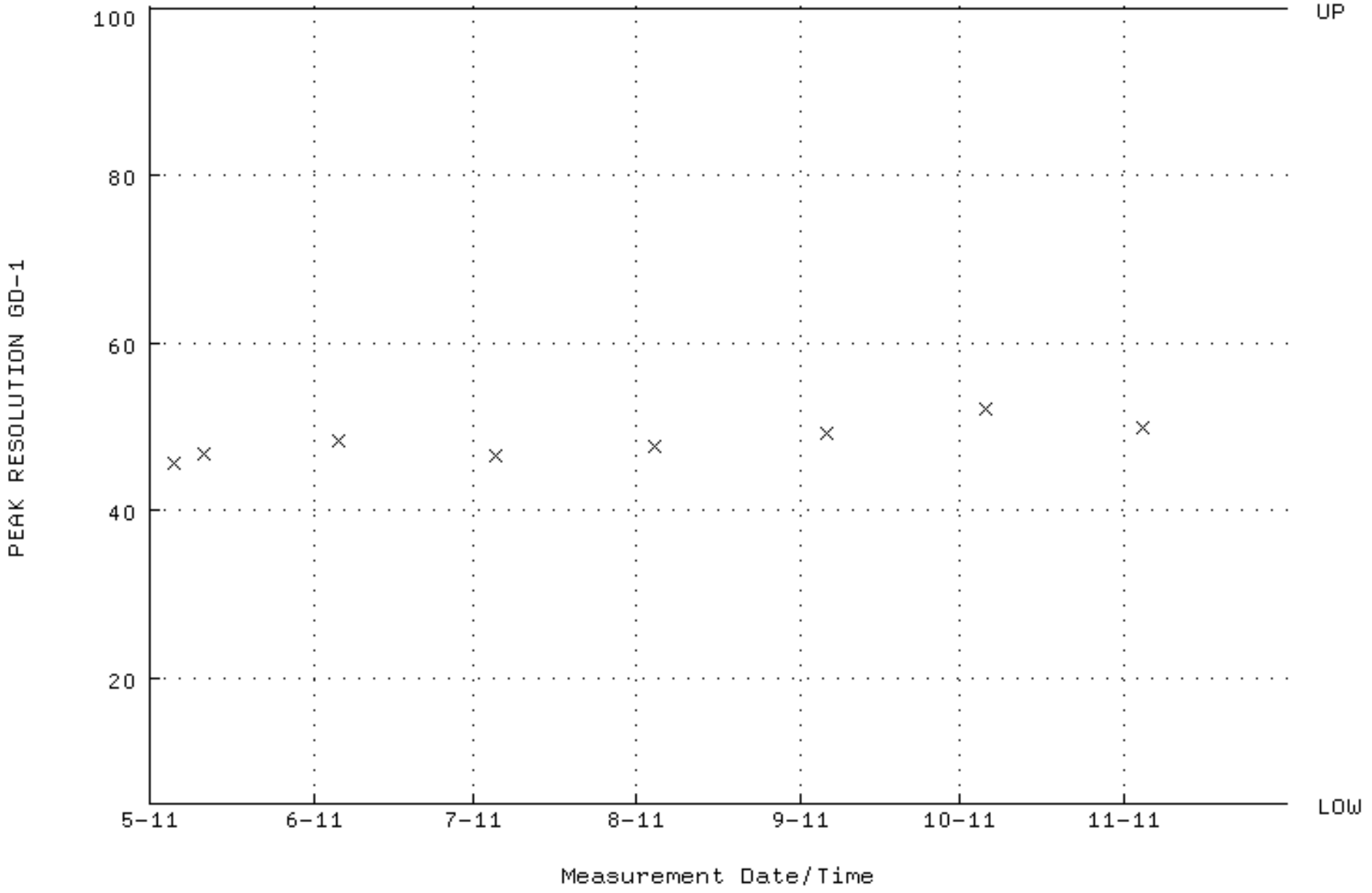
QA filename : DKA100:[ENV_ALPHA.QA.W]W021.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.251880 through 0.287510



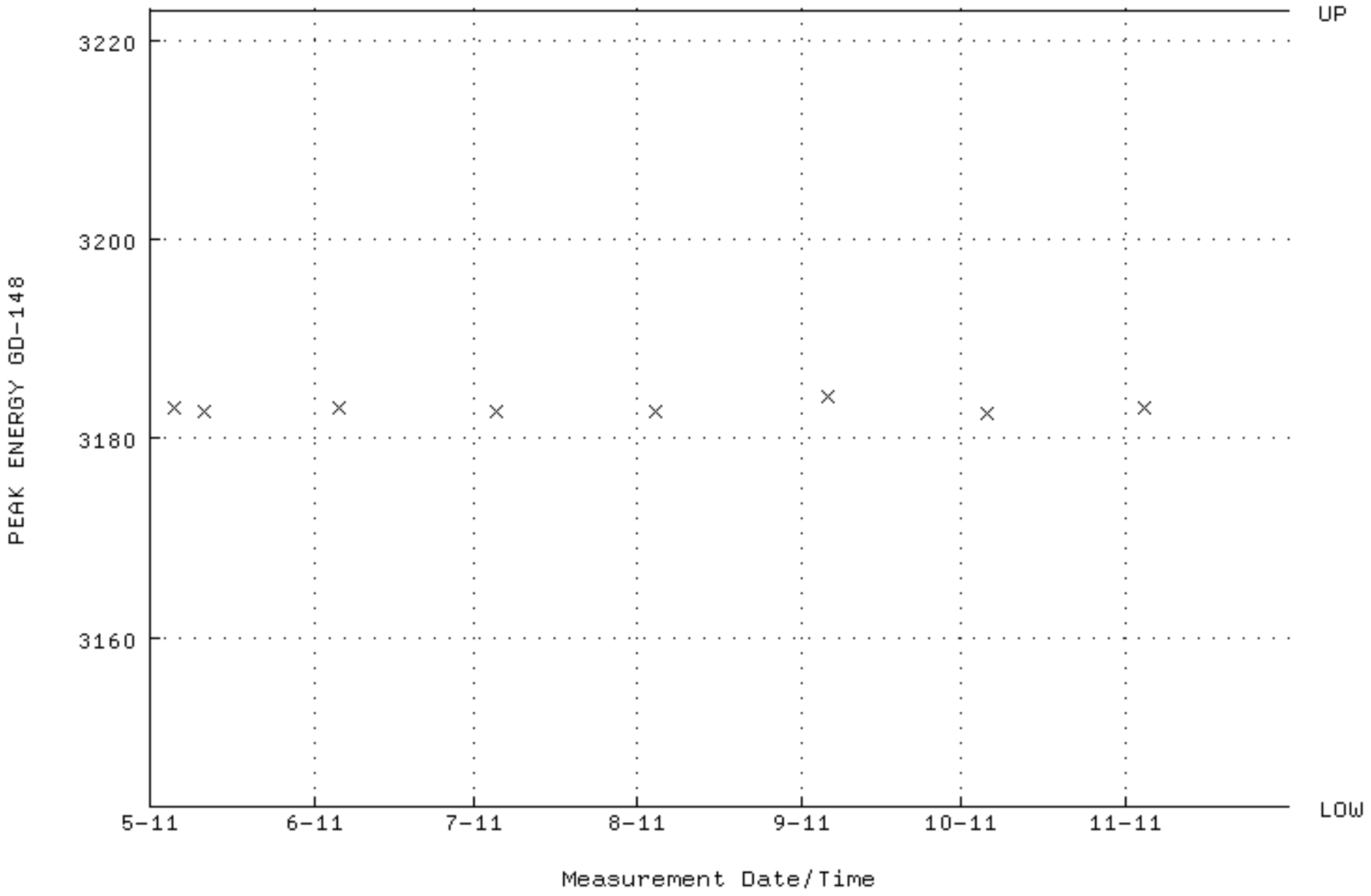
QA filename : DKA100:[ENV_ALPHA.QA.W]W021.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 83.6924 through 92.5022



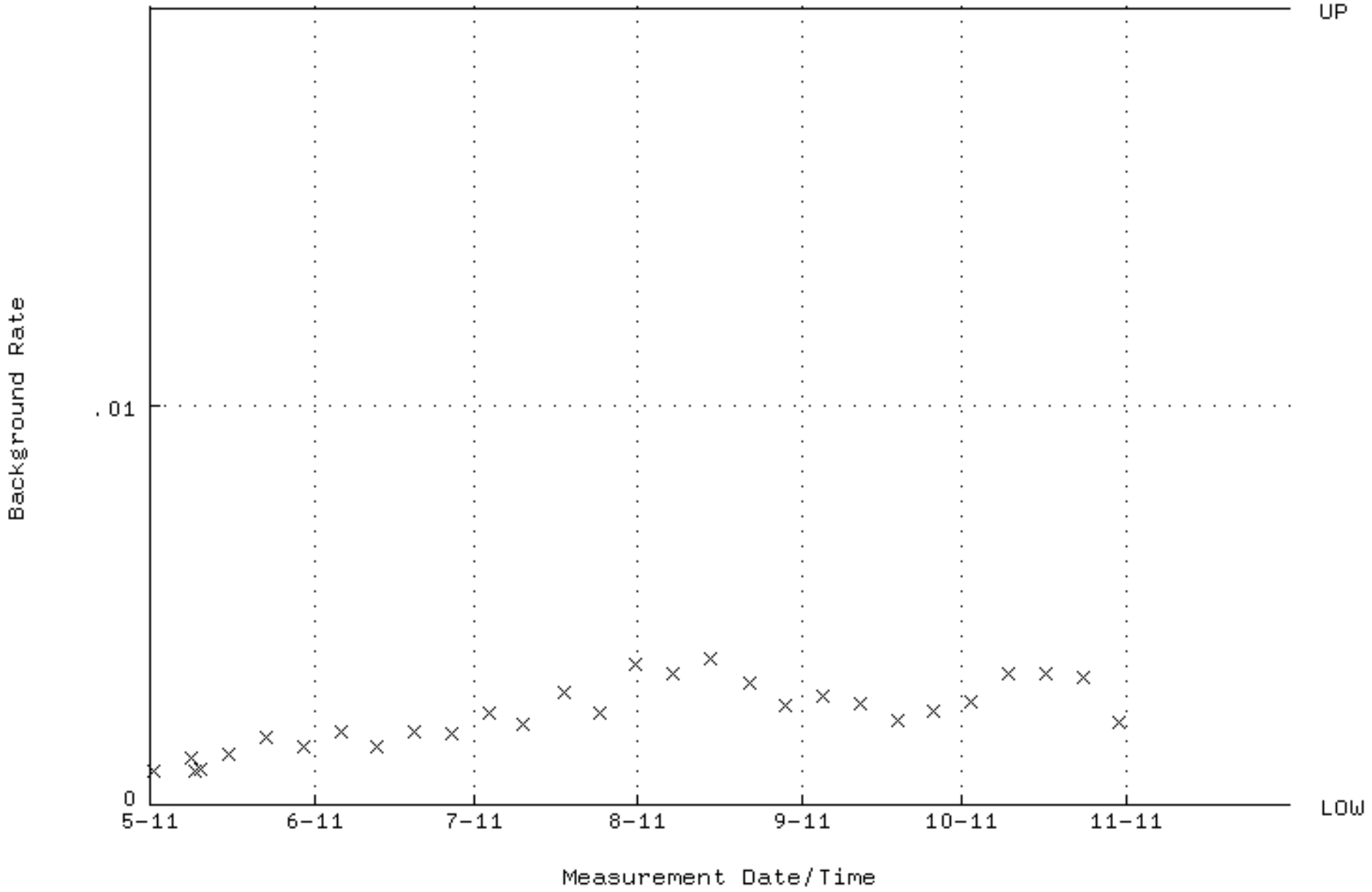
QA filename : DKA100:[ENV_ALPHA.QA.W]W021.QAF;6
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



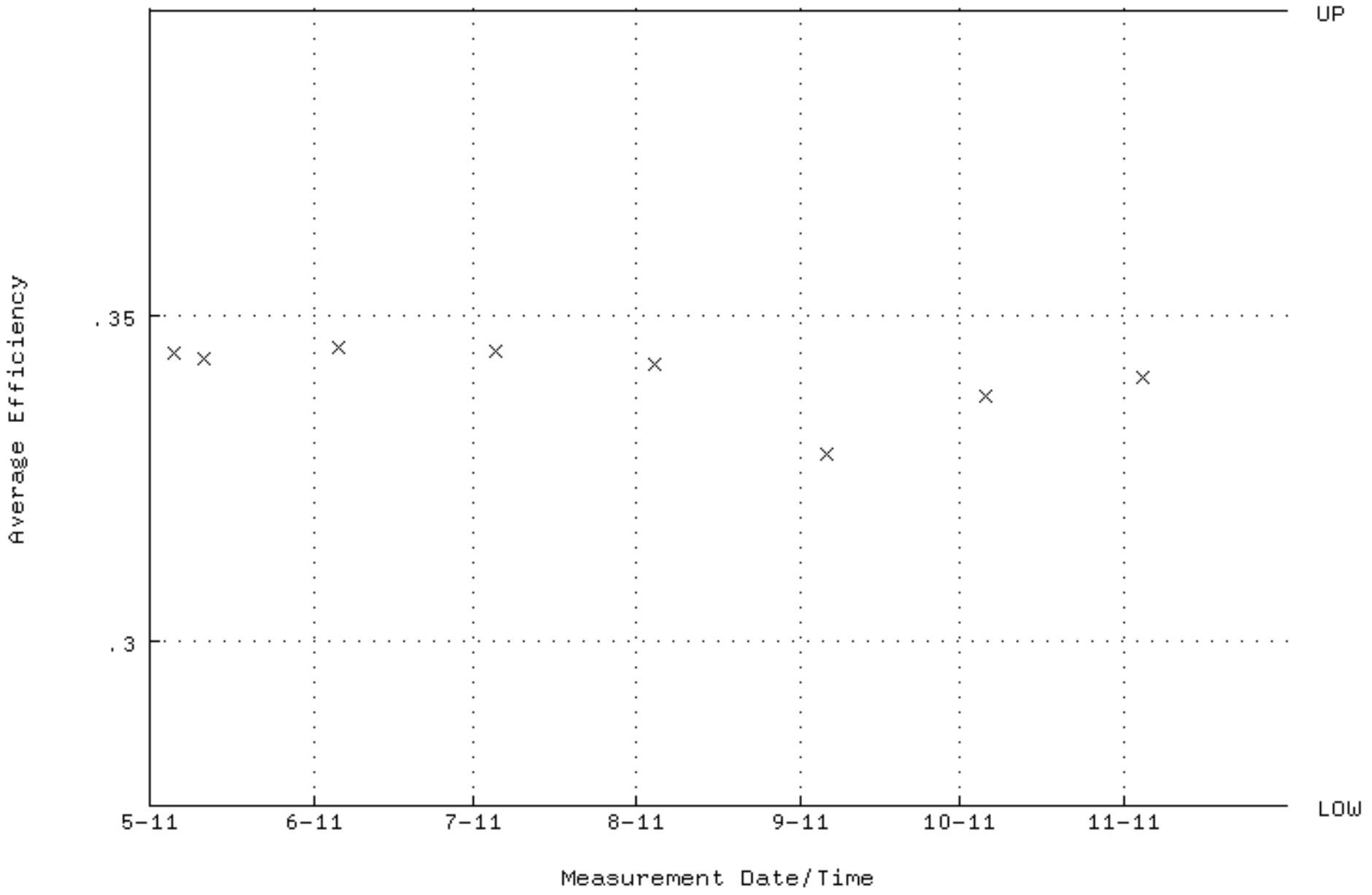
QA filename : DKA100:[ENV_ALPHA.QA.W]W021.QAF;6
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



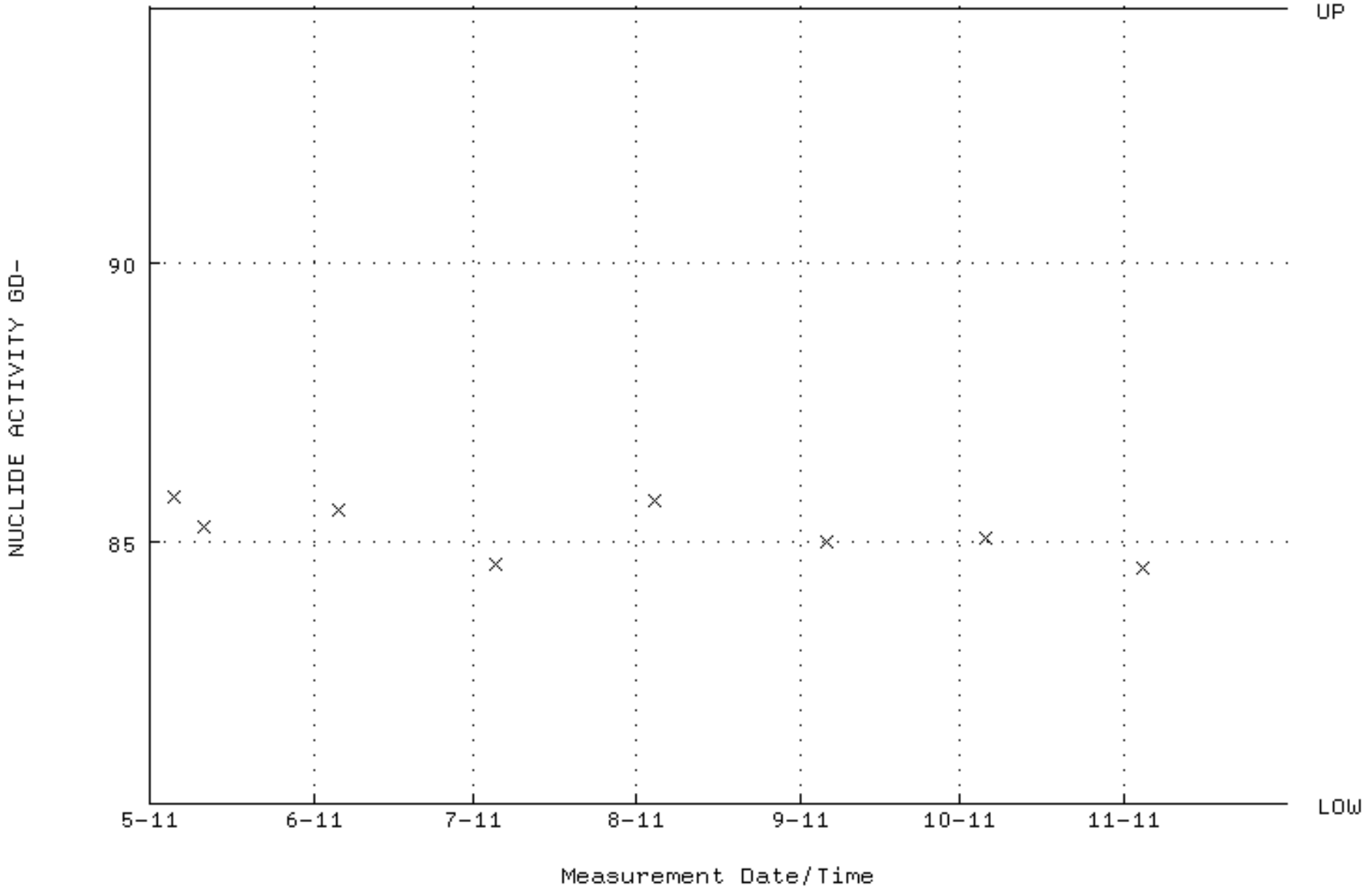
QA filename : DKA100:[ENV_ALPHA.QA.B]B021.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



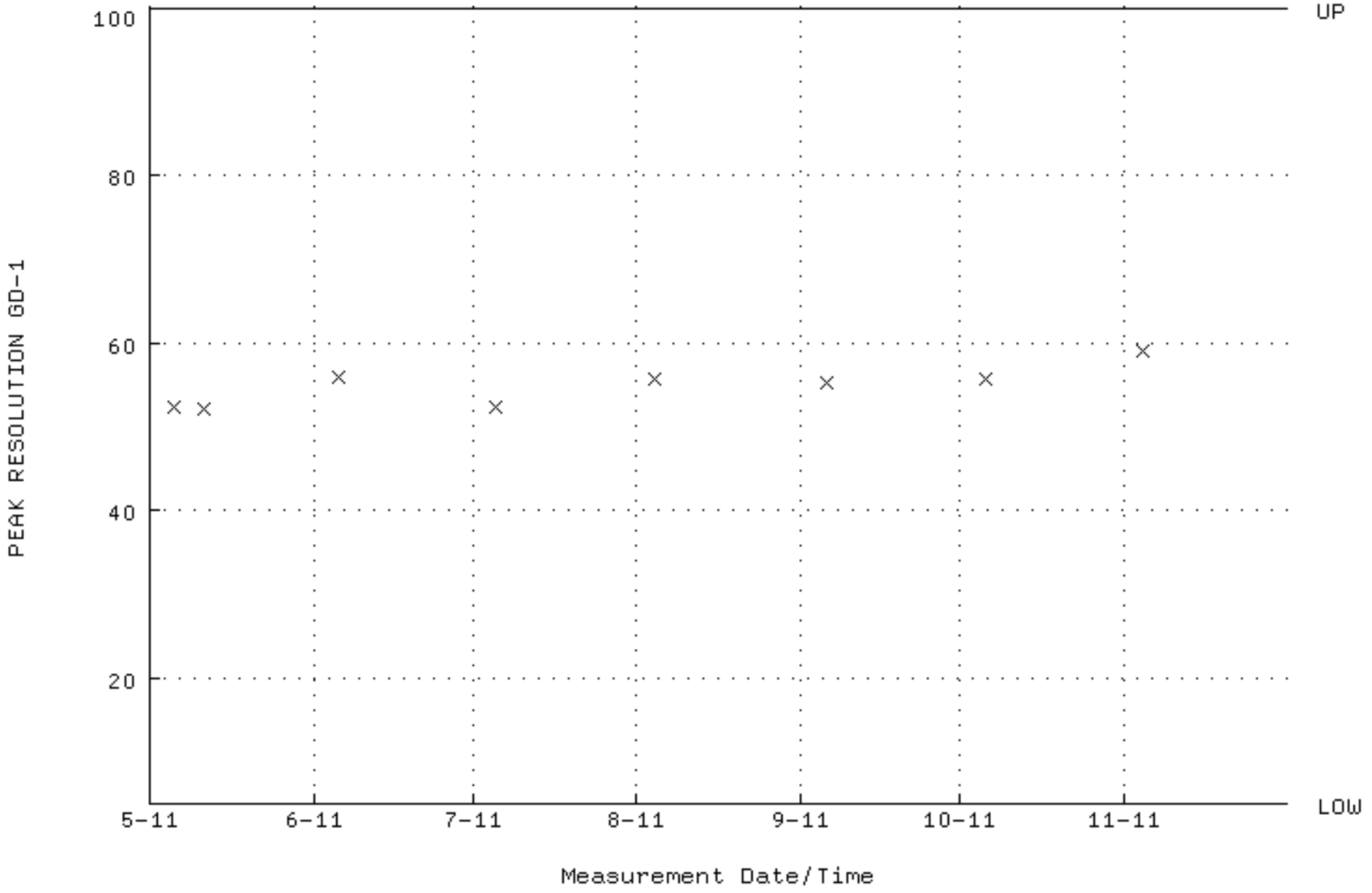
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.274700 through 0.396700



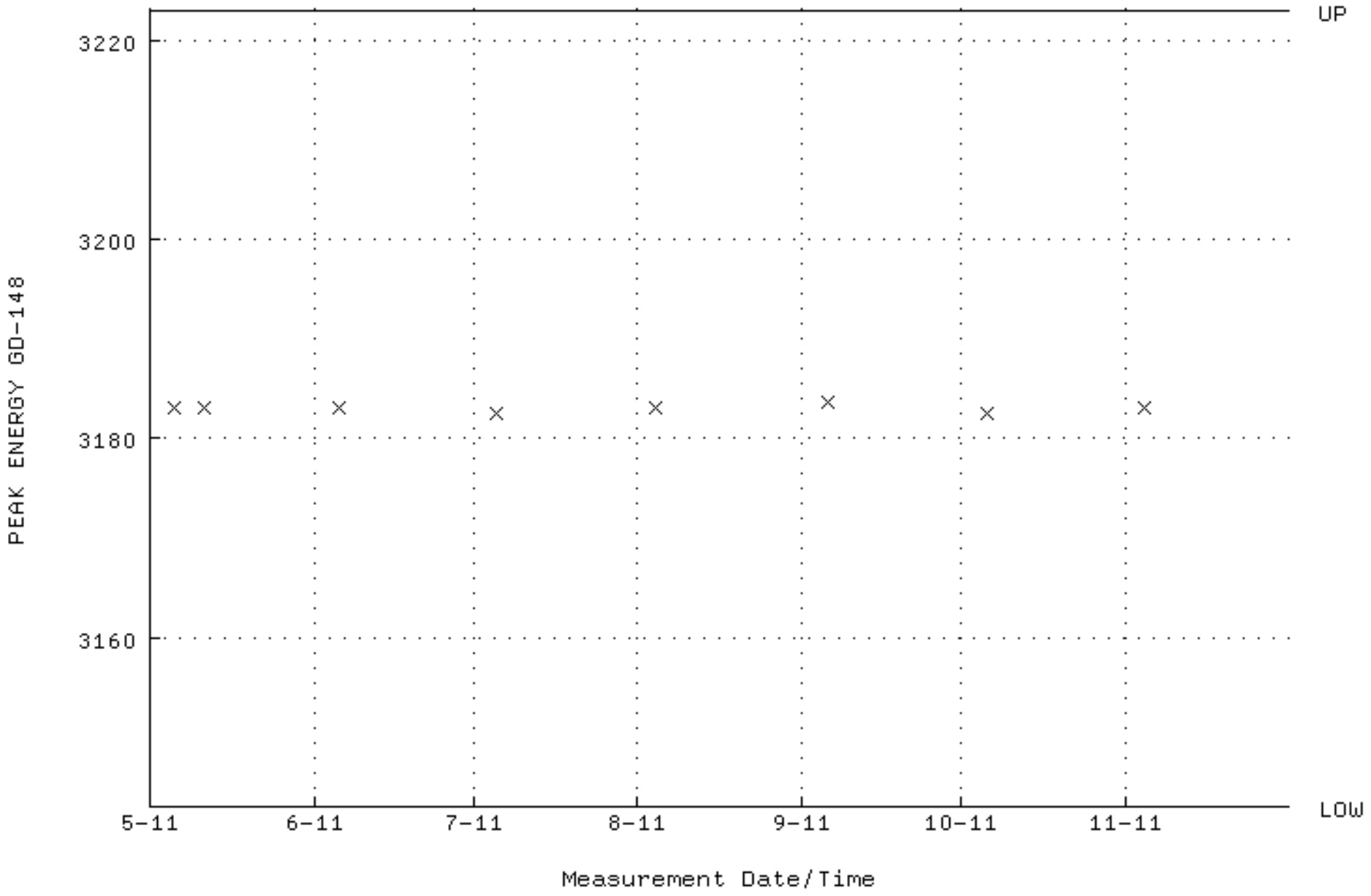
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 80.2832 through 94.5738



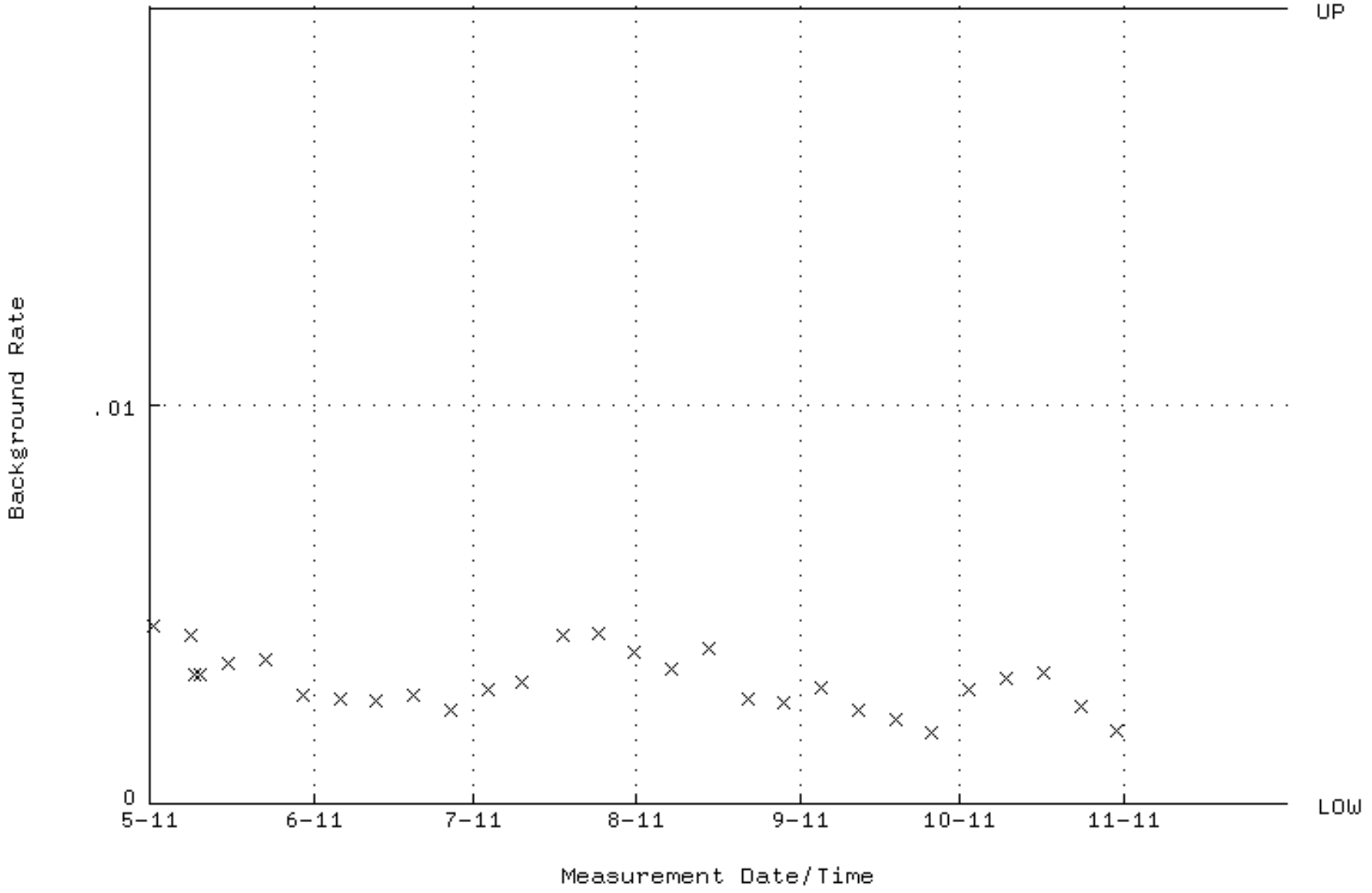
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



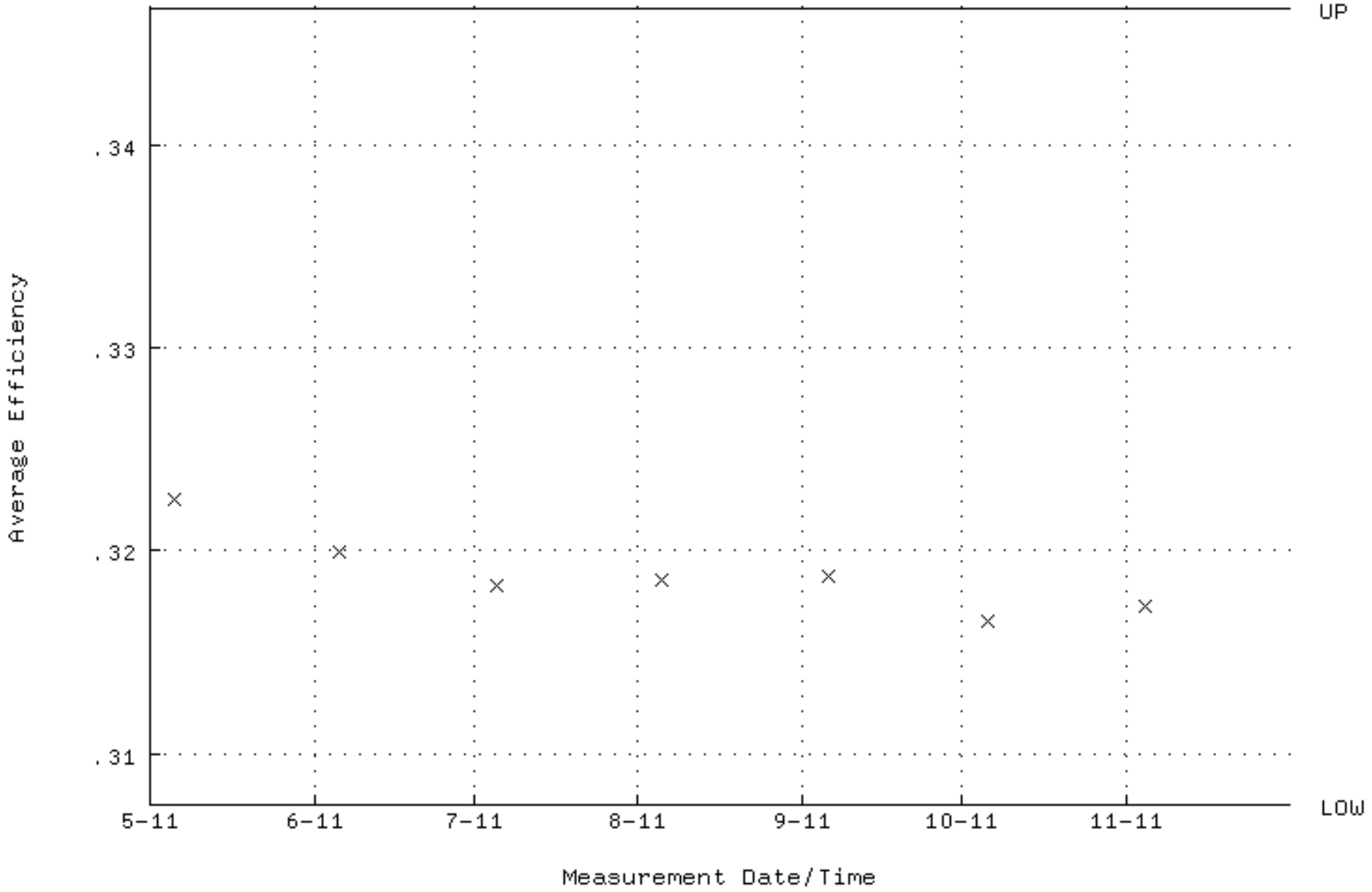
QA filename : DKA100:[ENV_ALPHA.QA.W]W024.QAF;2
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



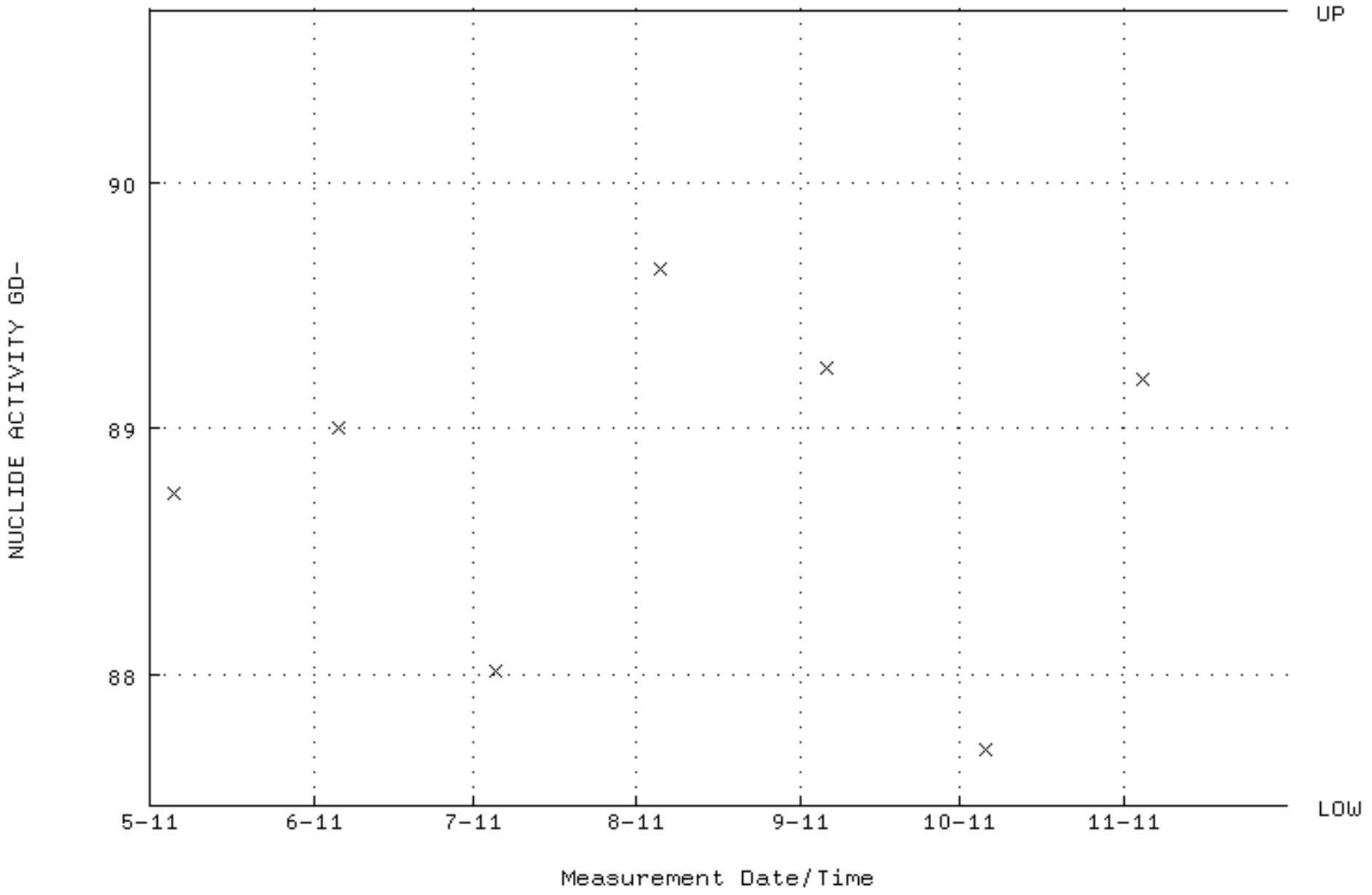
QA filename : DKA100:[ENV_ALPHA.QA.B]B024.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



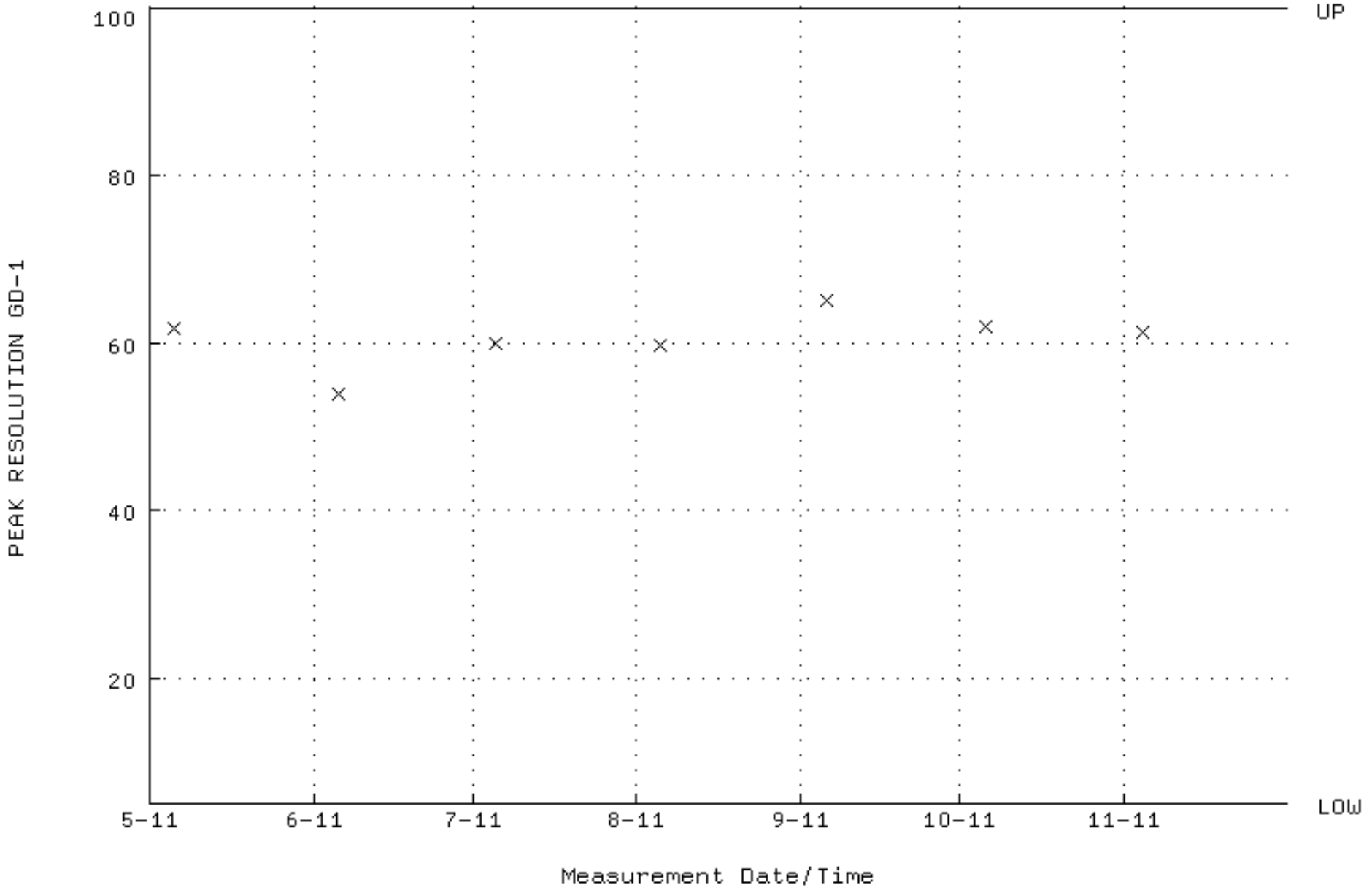
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.307463 through 0.346751



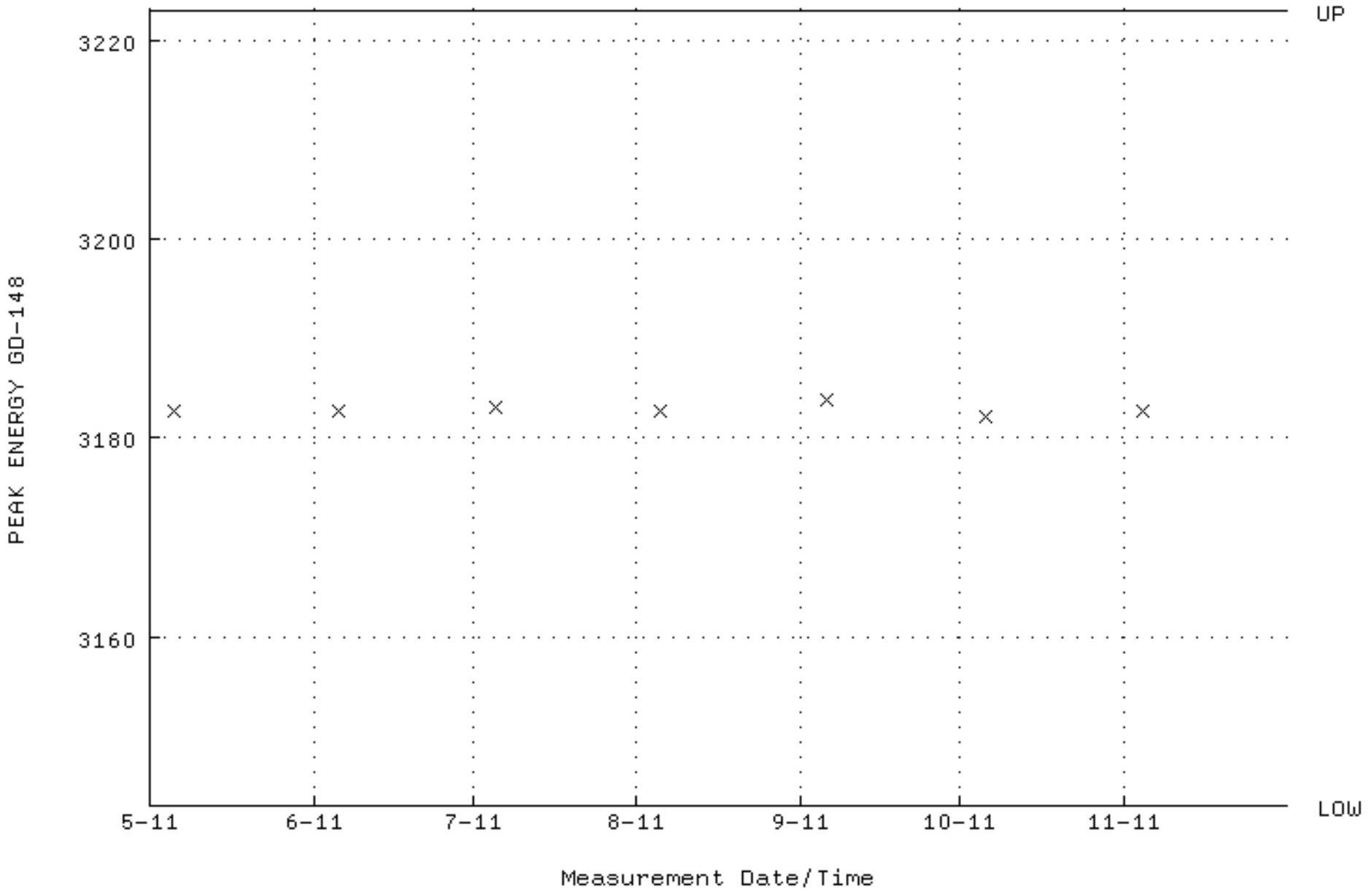
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 87.4673 through 90.6973



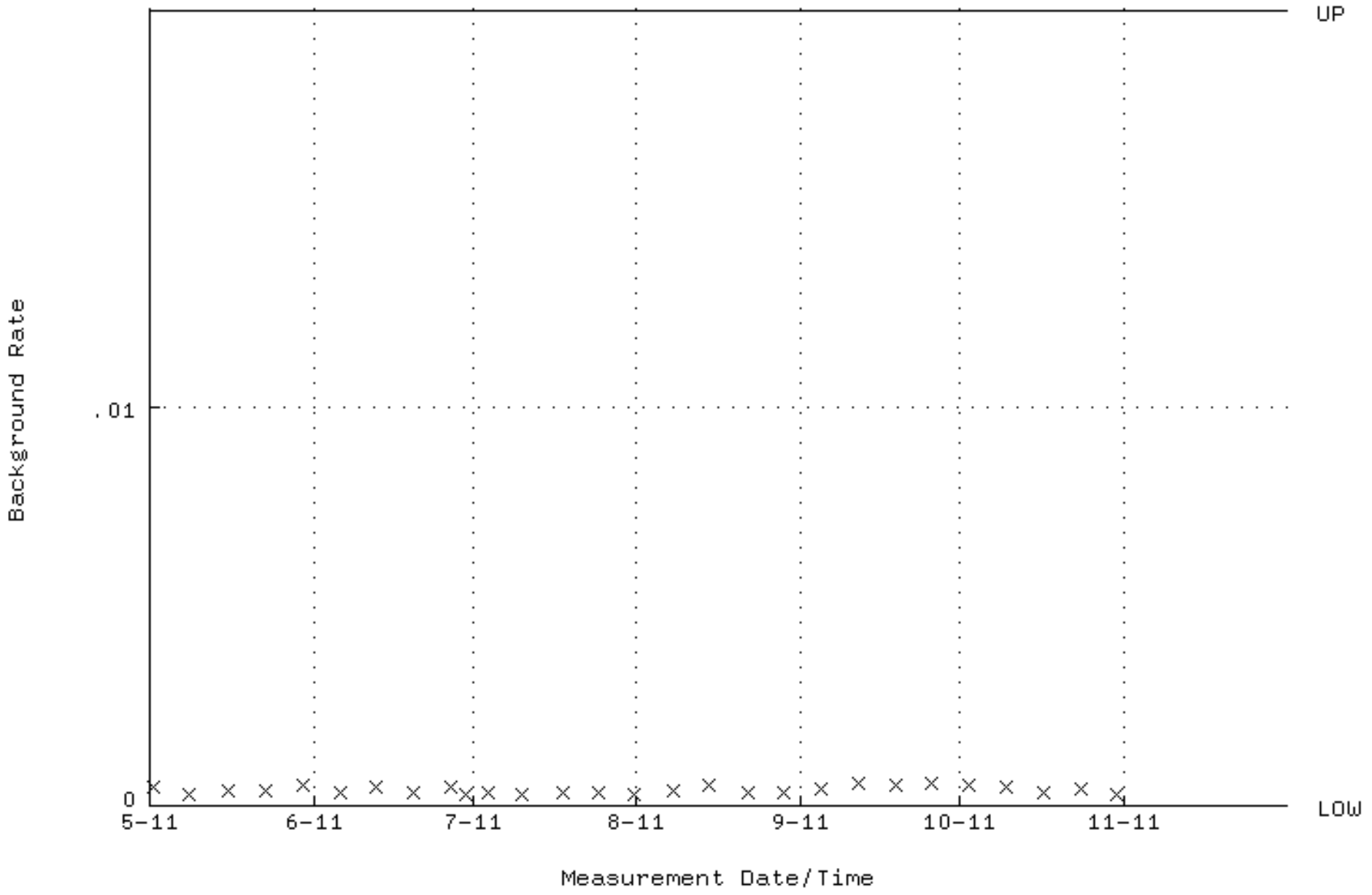
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



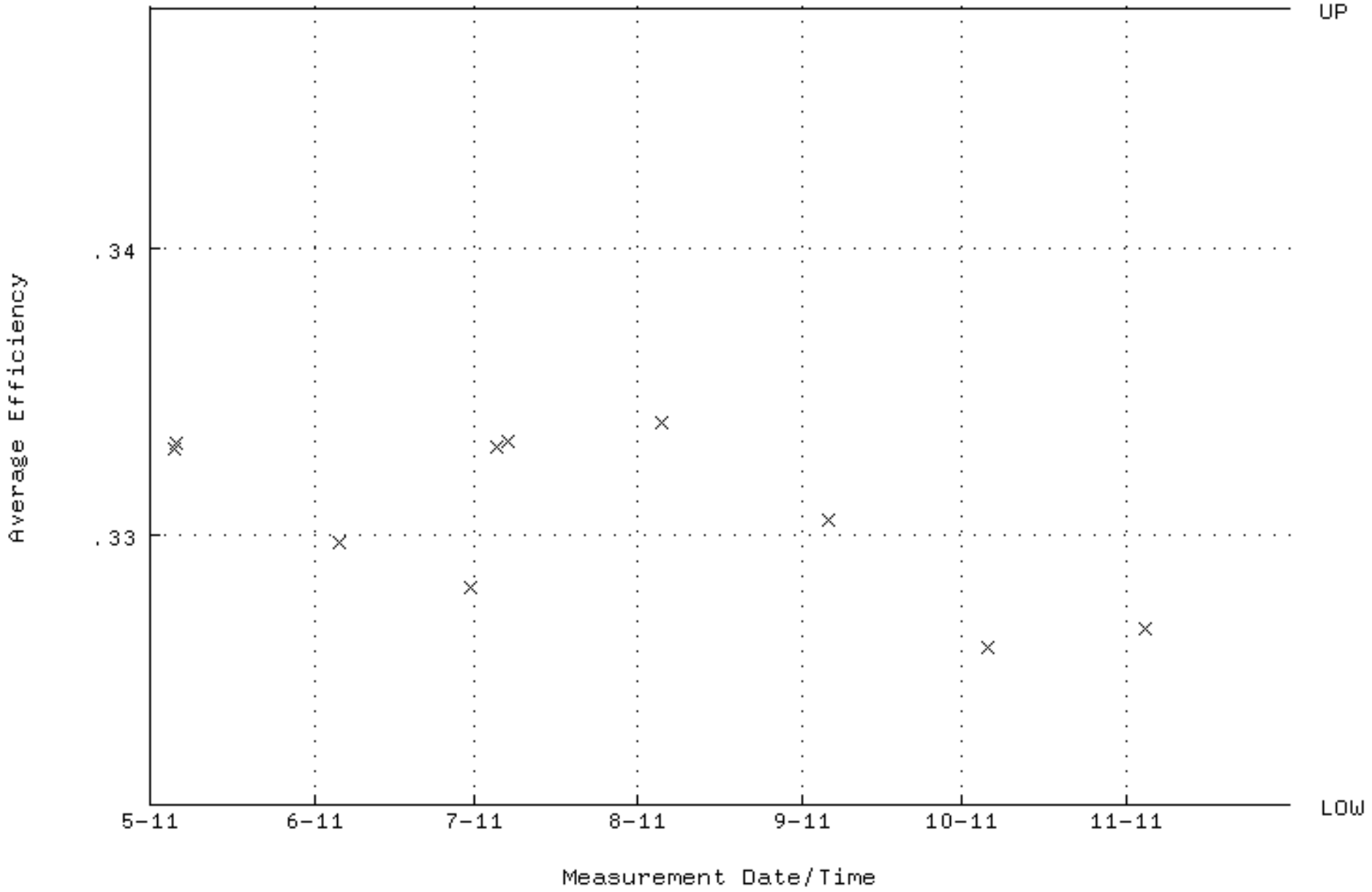
QA filename : DKA100:[ENV_ALPHA.QA.W]W026.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



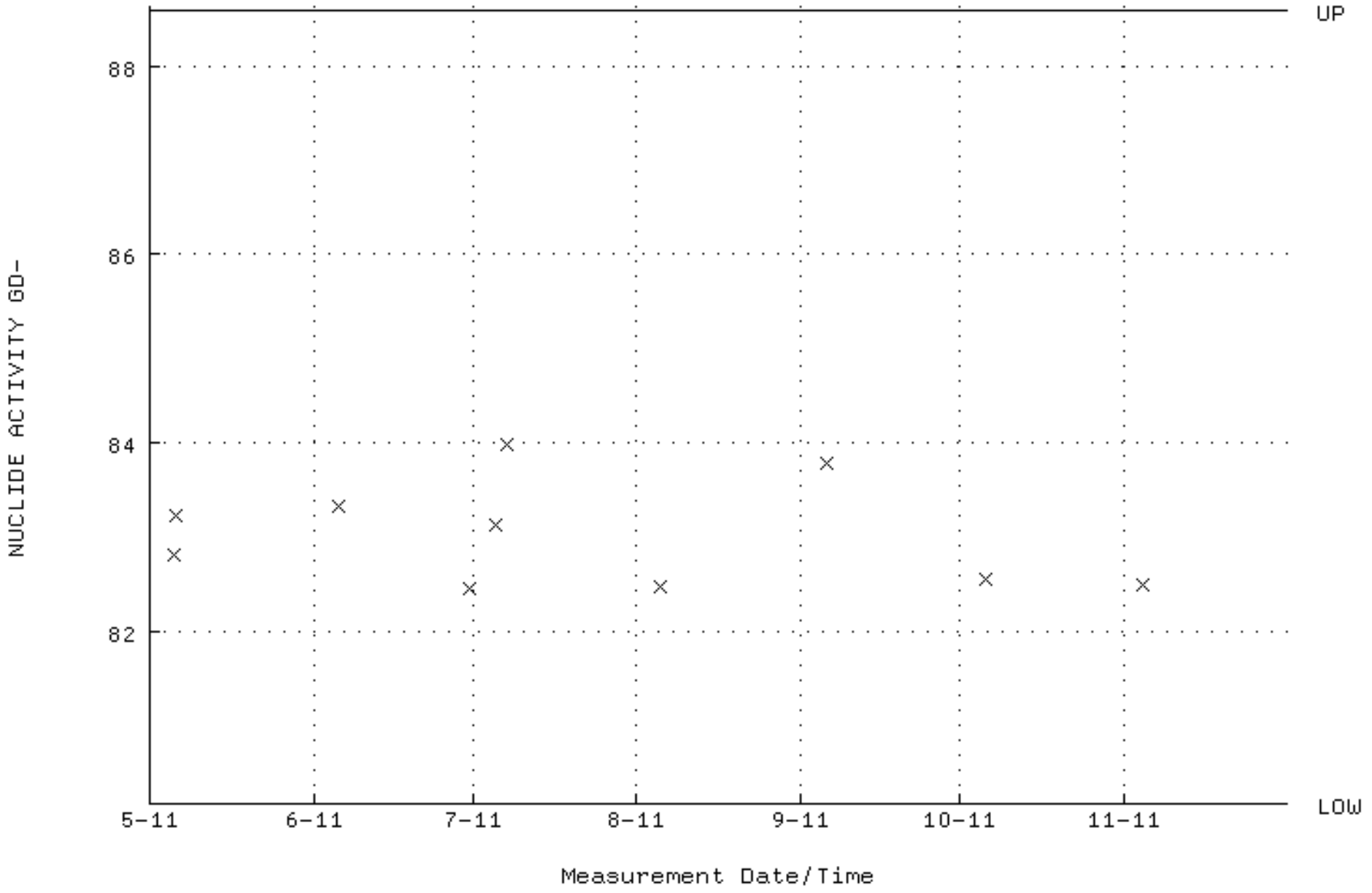
QA filename : DKA100:[ENV_ALPHA.QA.B]B026.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



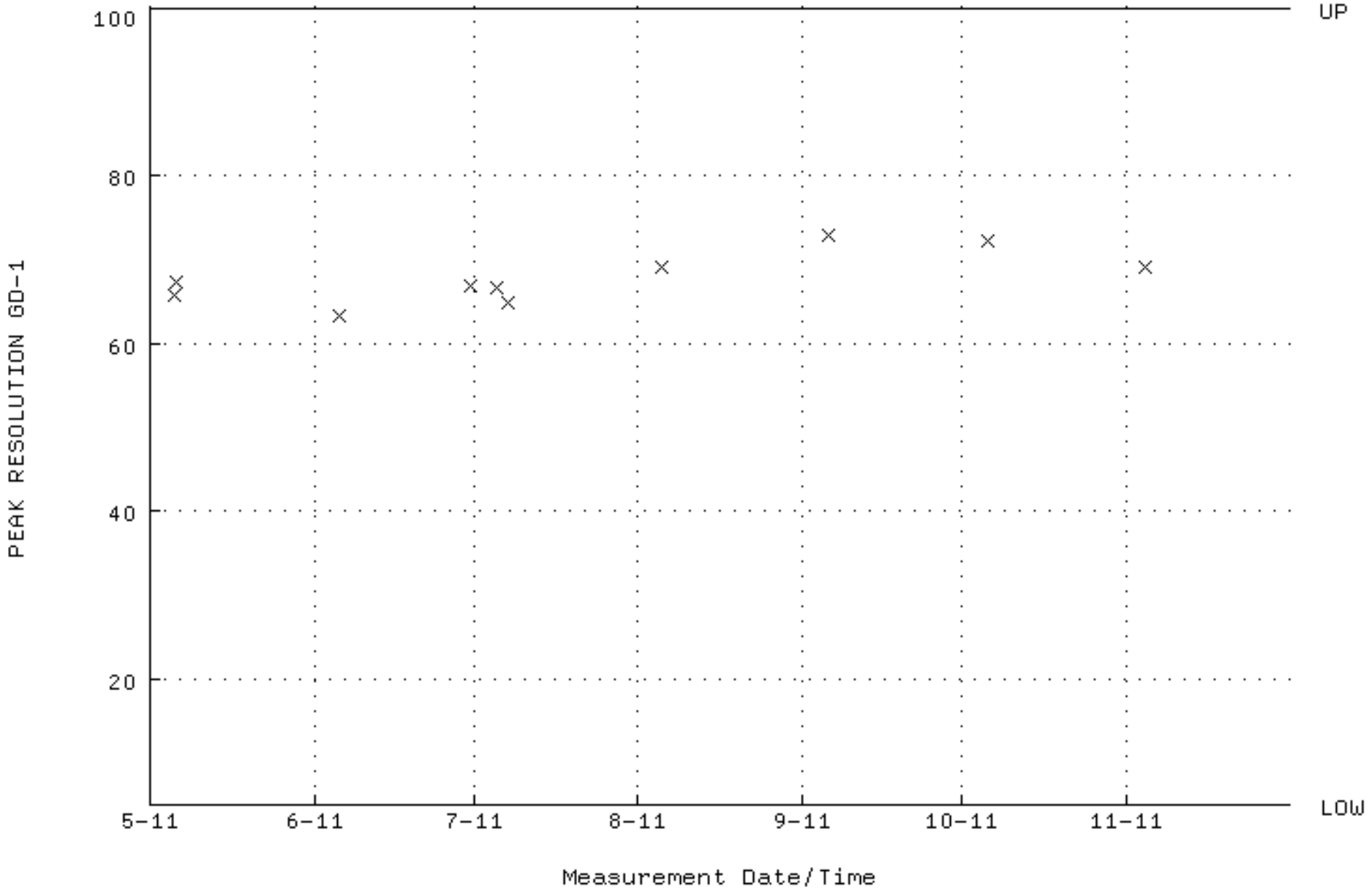
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.320589 through 0.348389



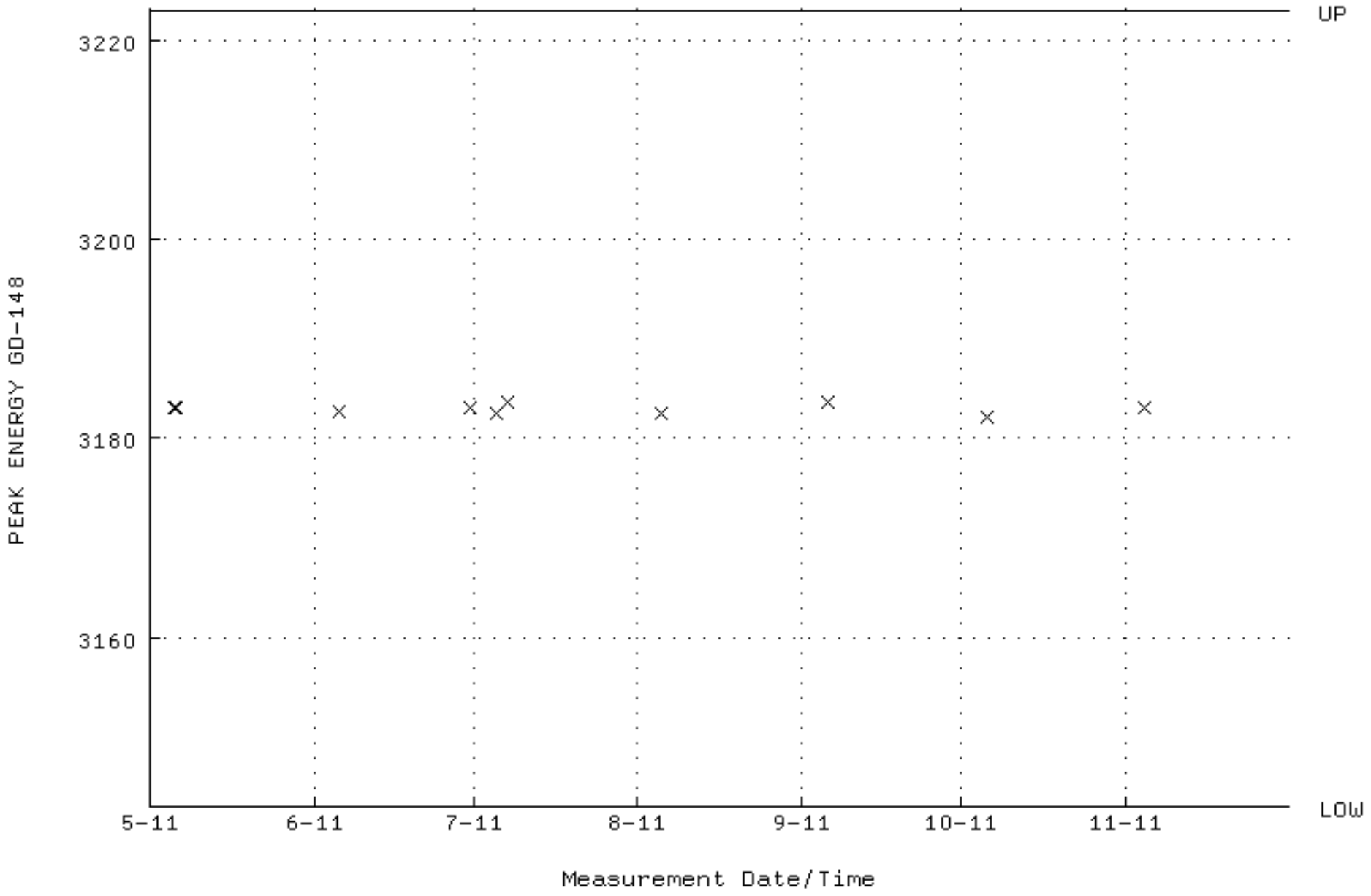
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 80.1705 through 88.6095



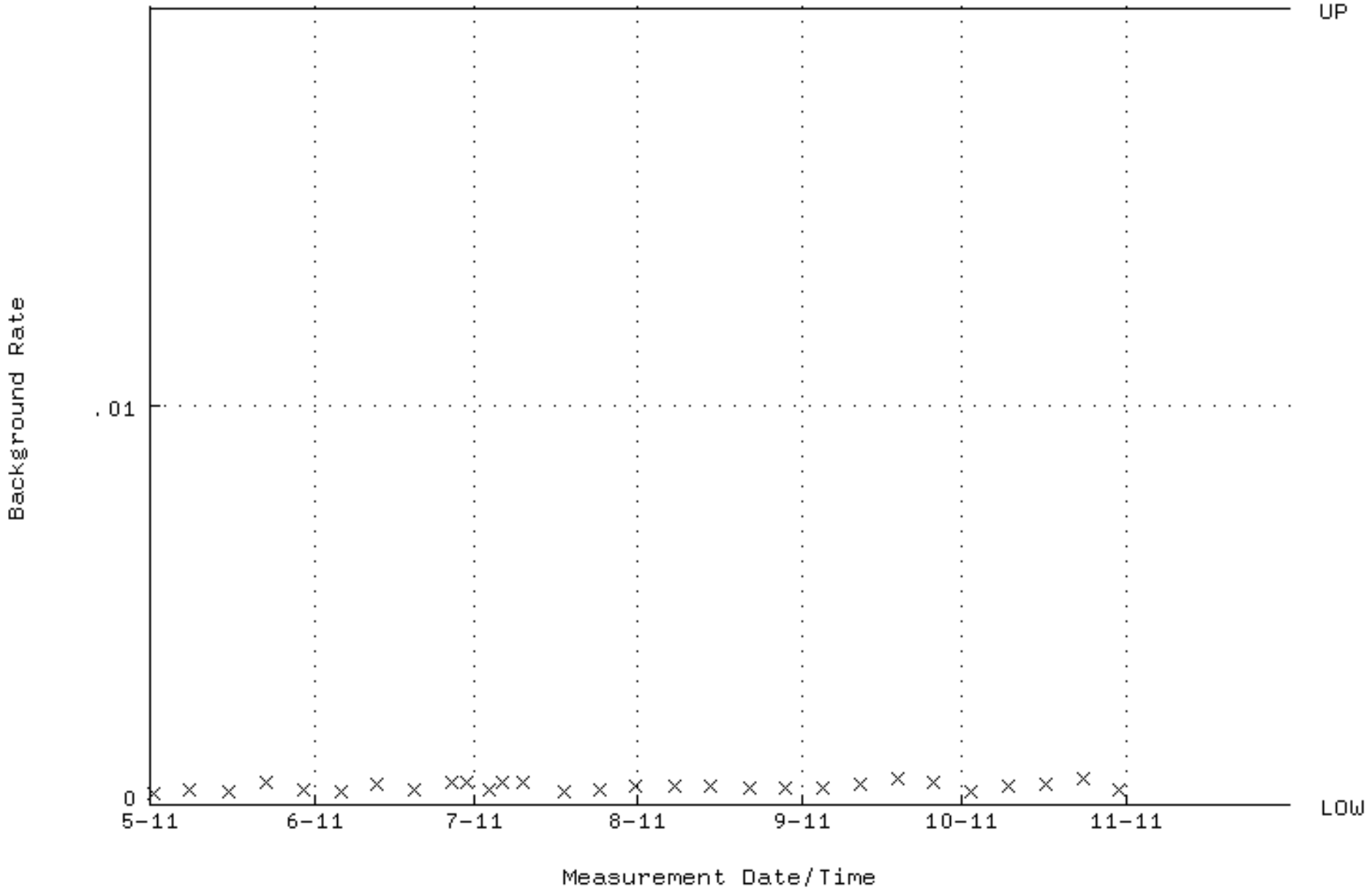
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



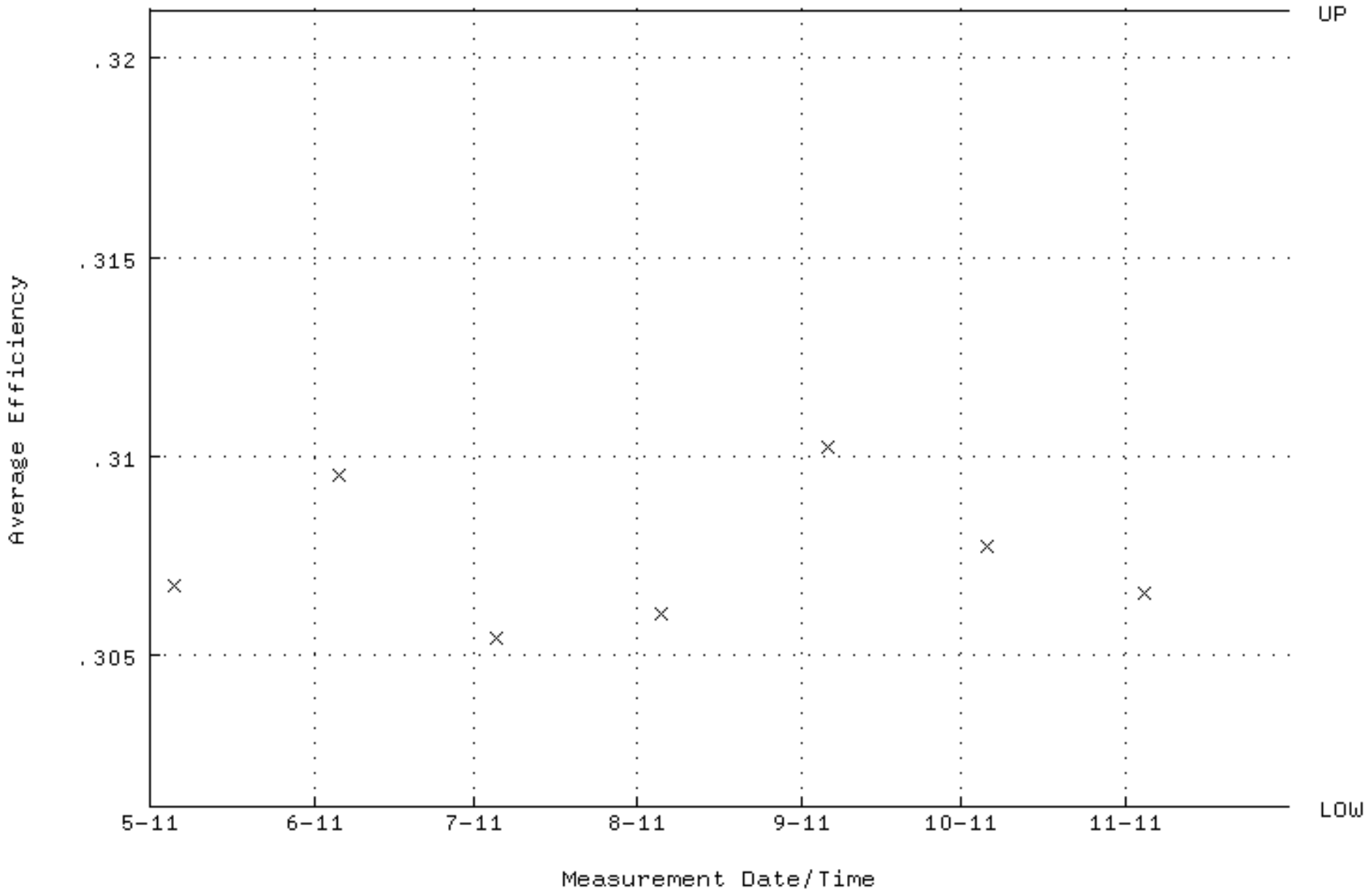
QA filename : DKA100:[ENV_ALPHA.QA.W]W027.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



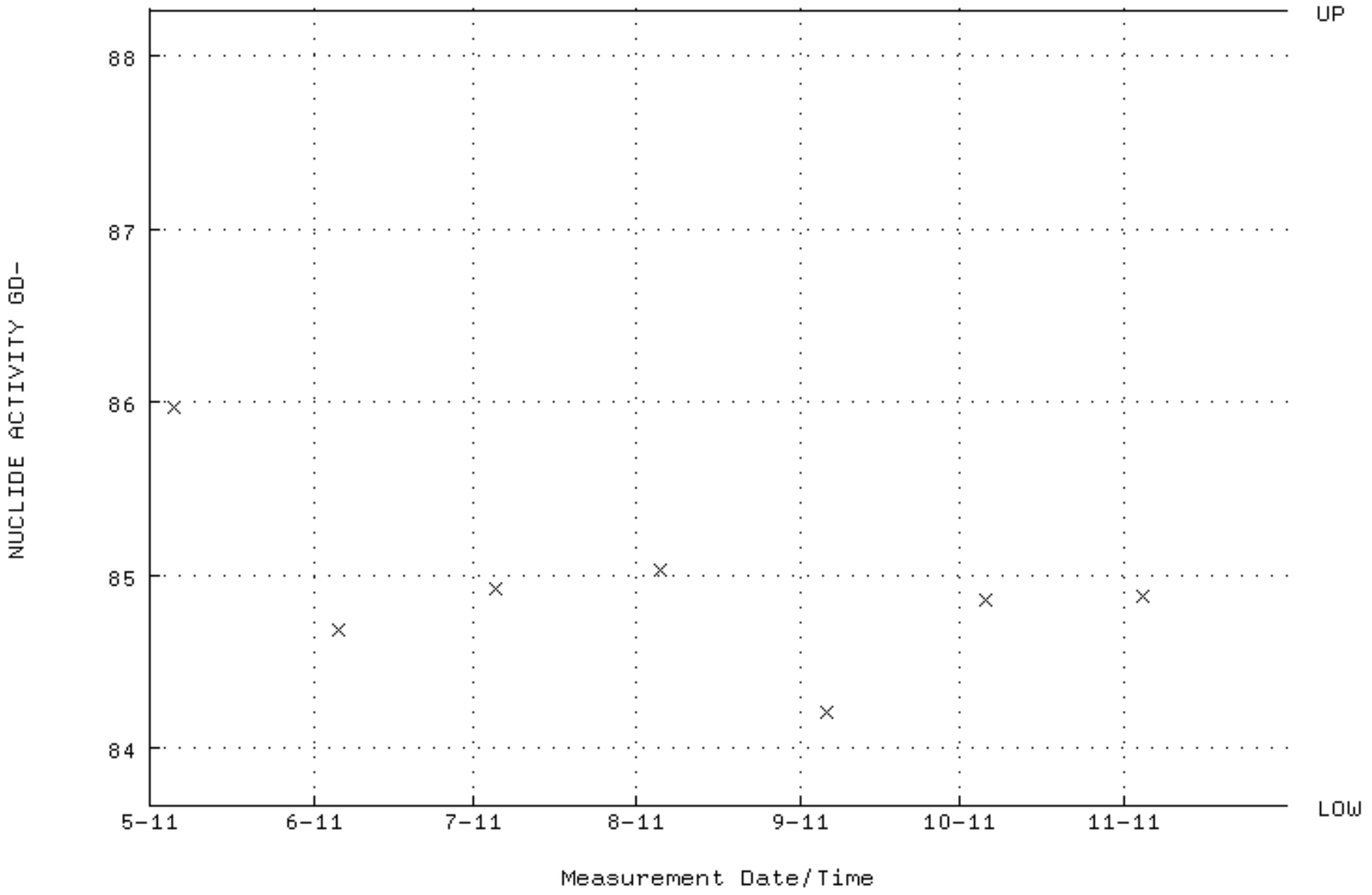
QA filename : DKA100:[ENV_ALPHA.QA.B]B027.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



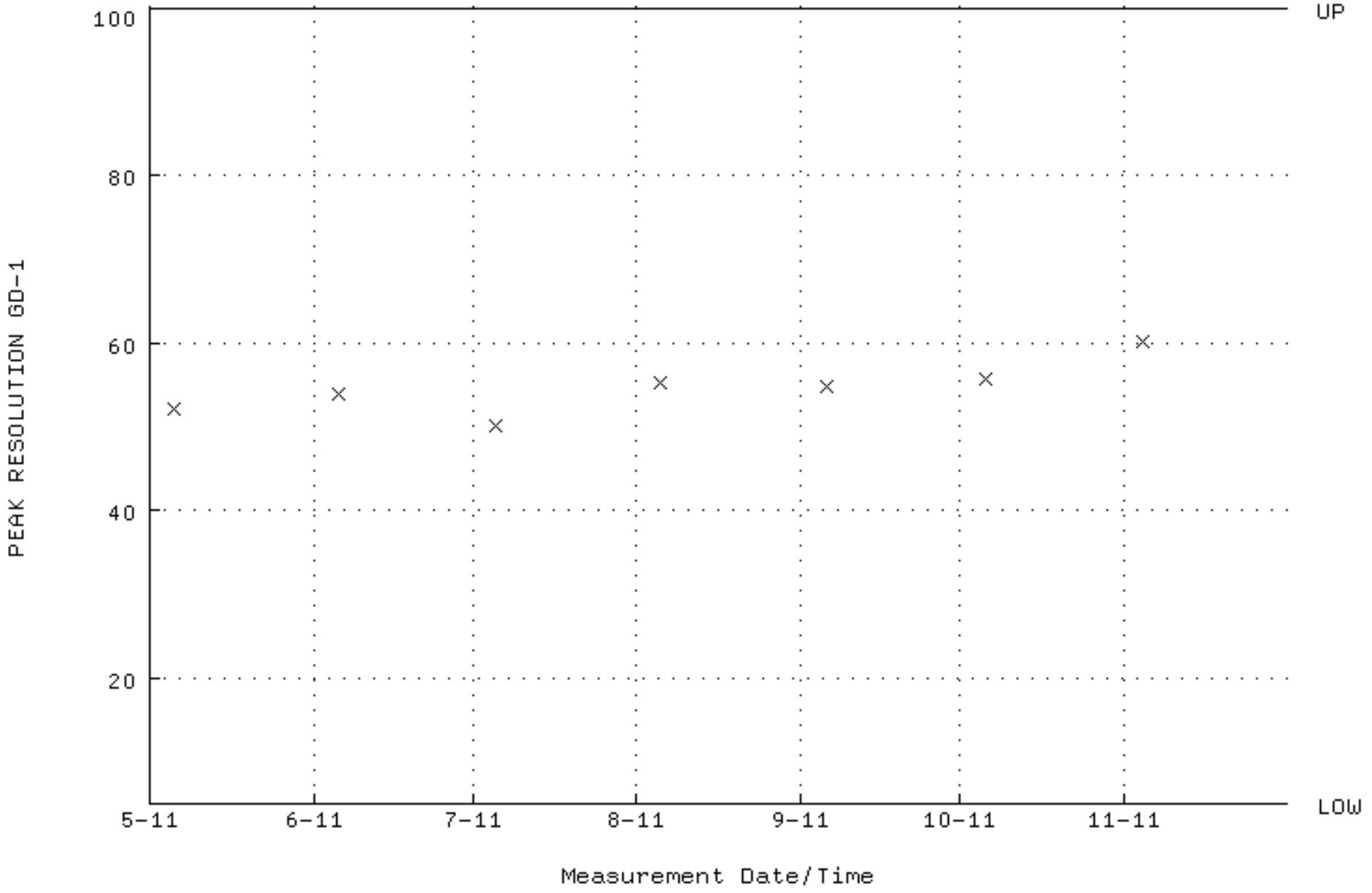
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.301196 through 0.321196



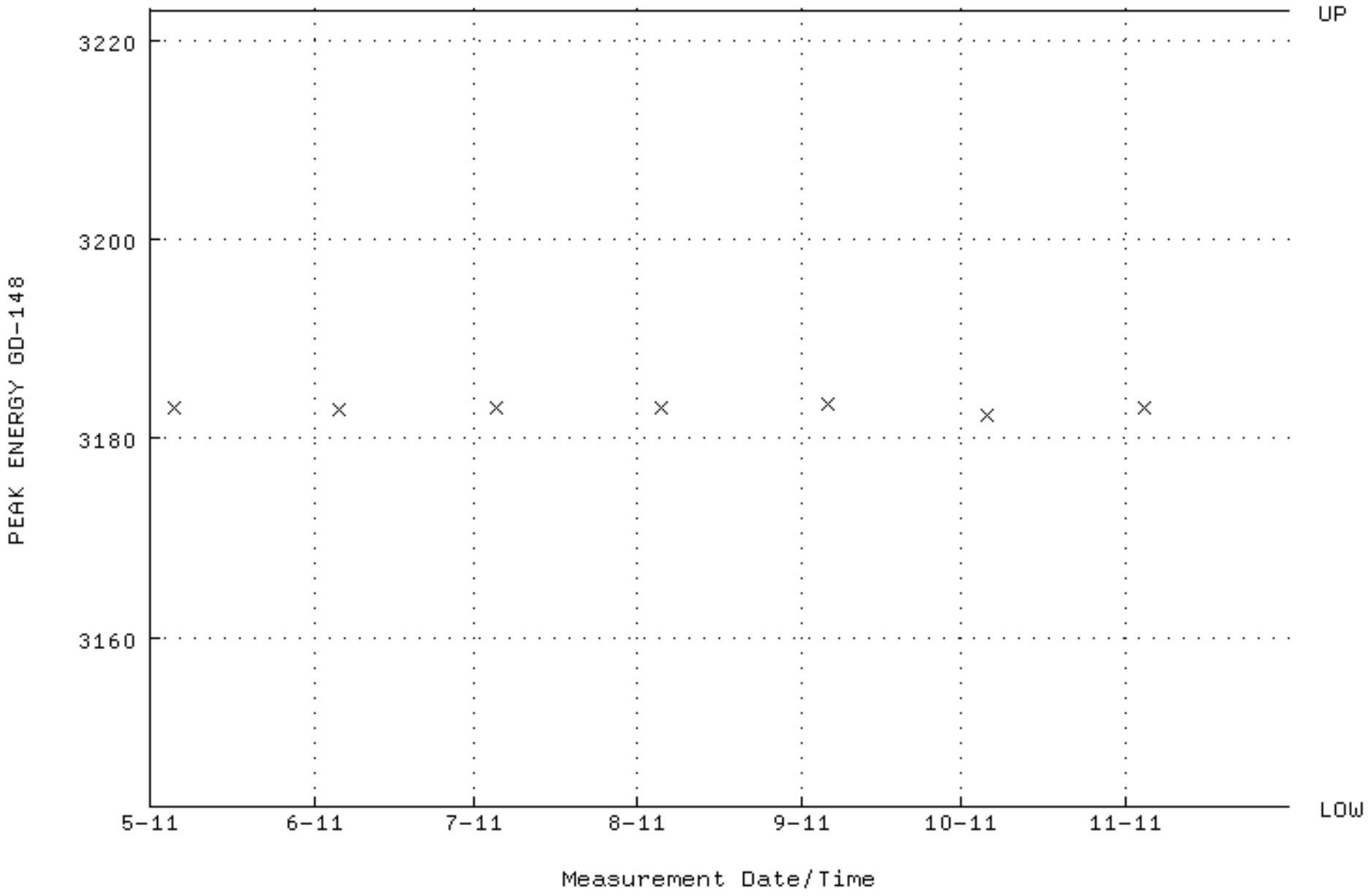
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 83.6674 through 88.2604



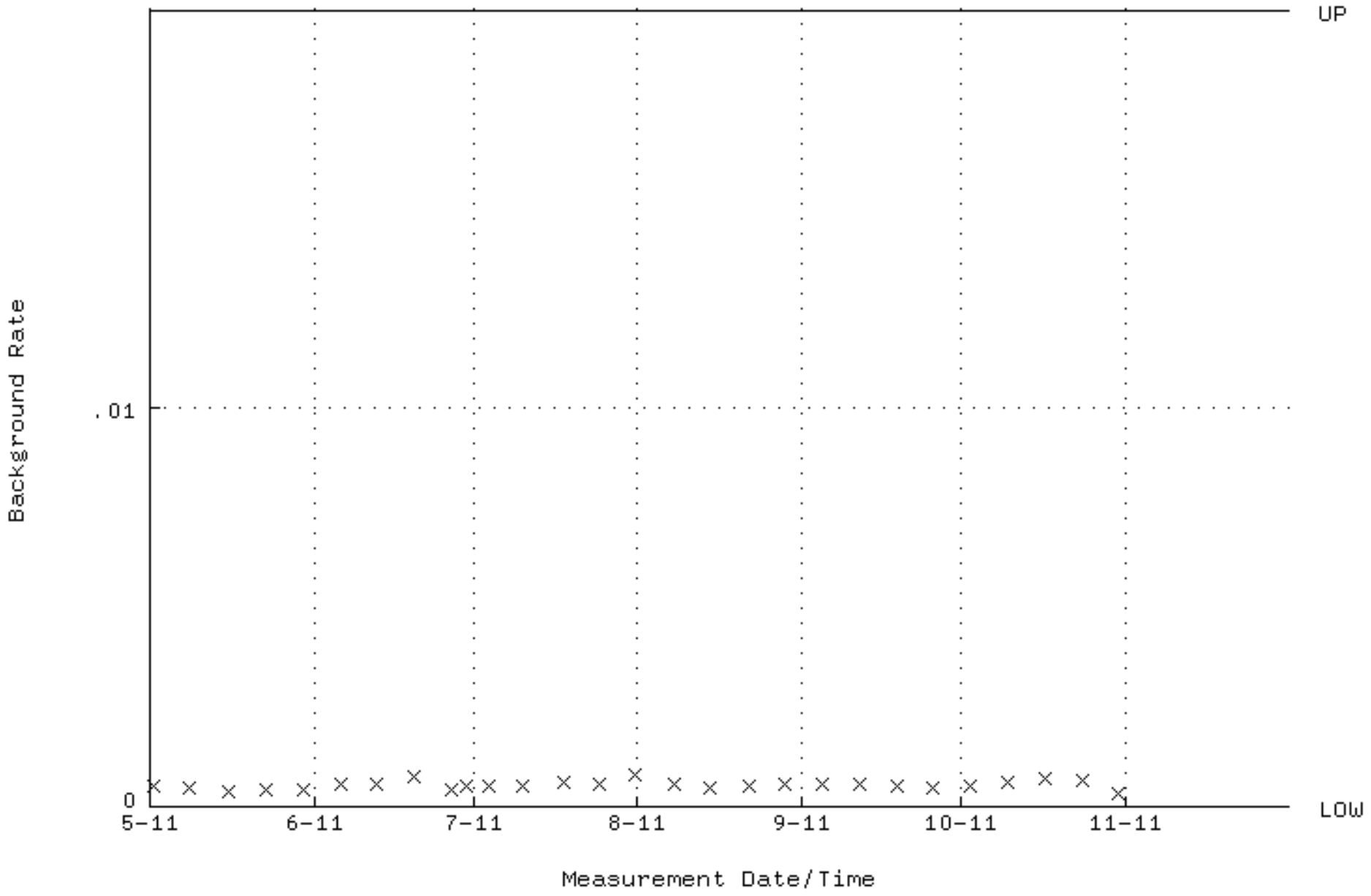
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



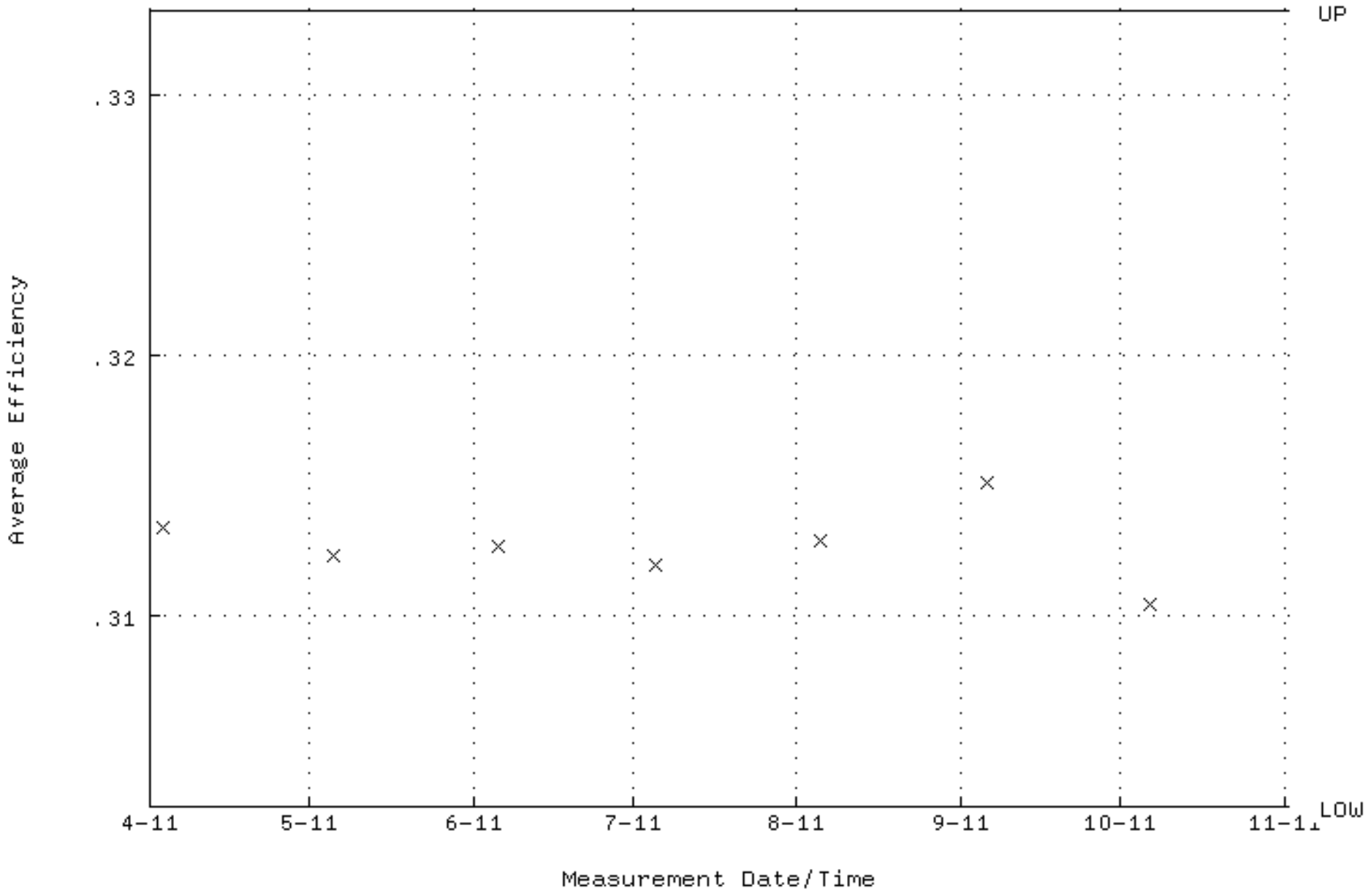
QA filename : DKA100:[ENV_ALPHA.QA.W]W028.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



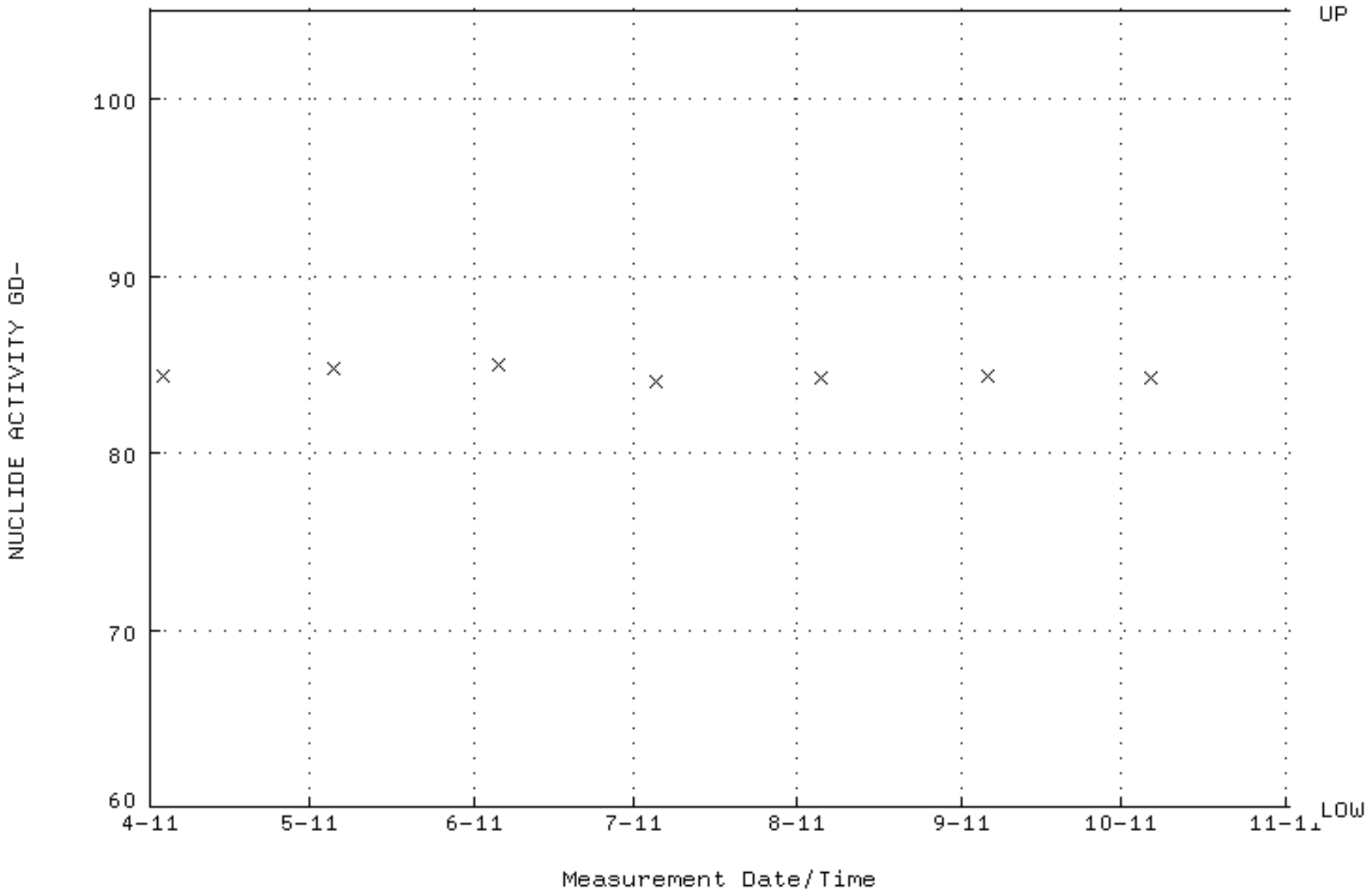
QA filename : DKA100:[ENV_ALPHA.QA.B]B028.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



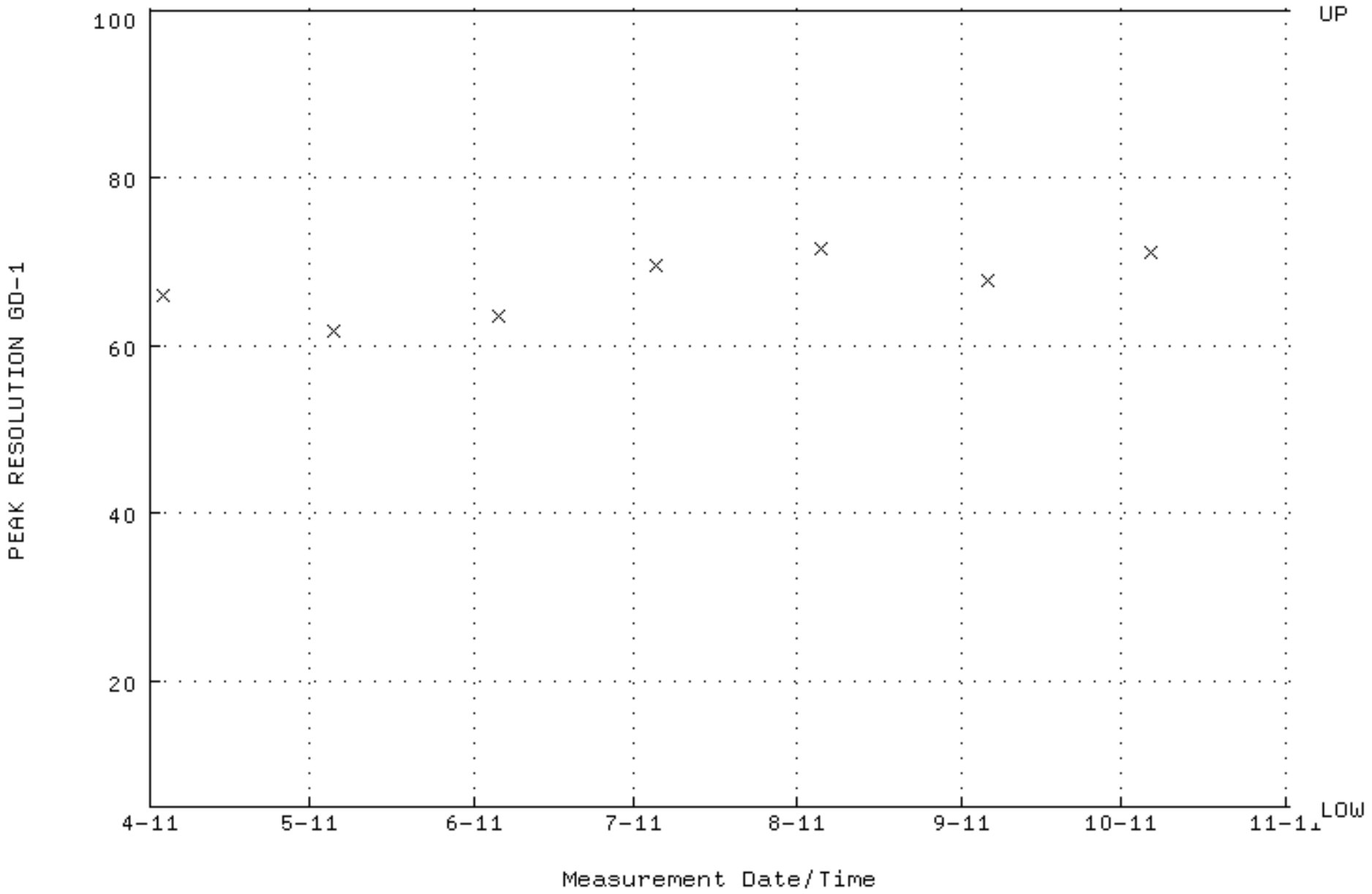
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-APR-2011 12:36:21 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.302627 through 0.333227



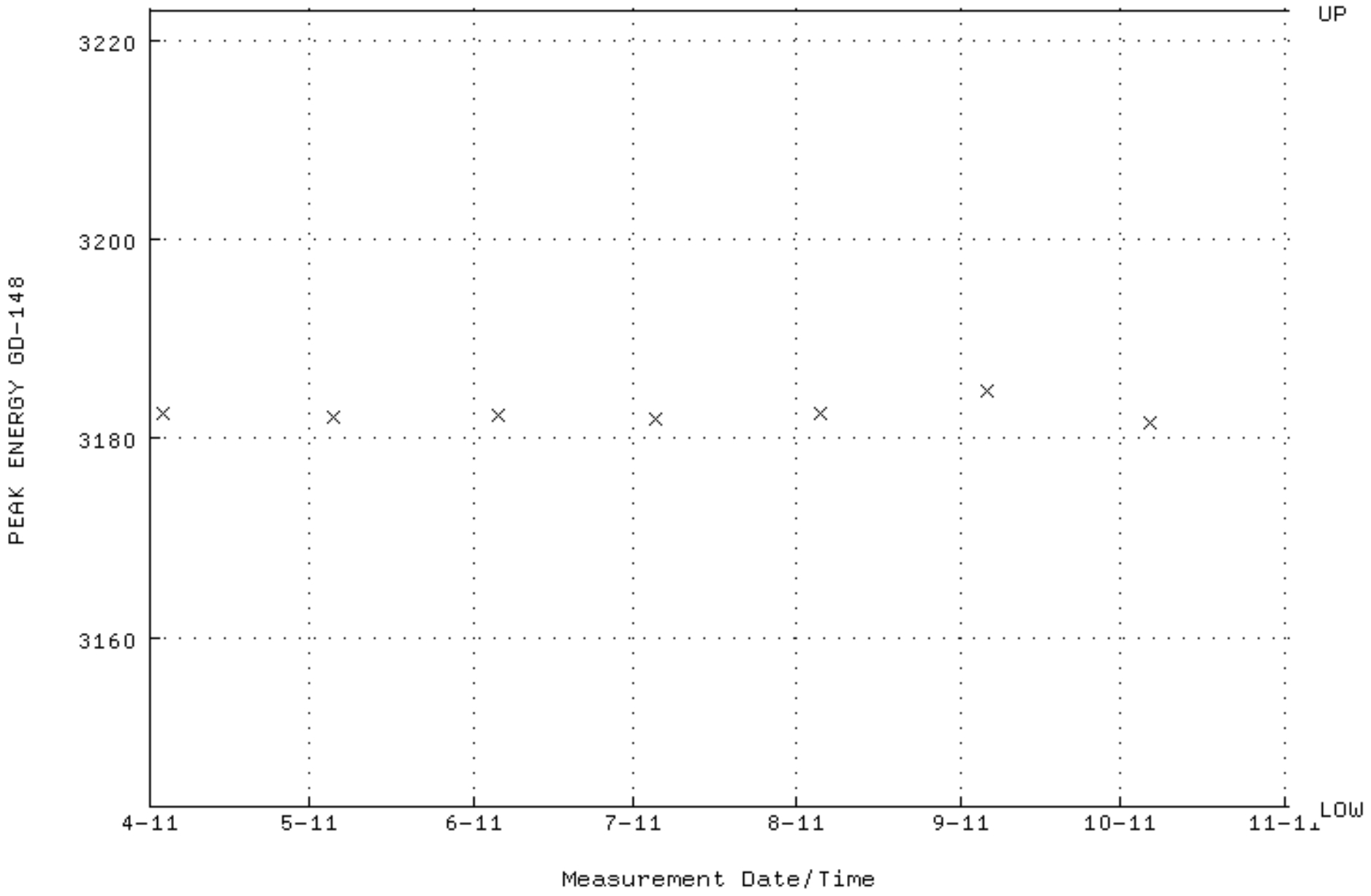
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-APR-2011 12:36:21 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



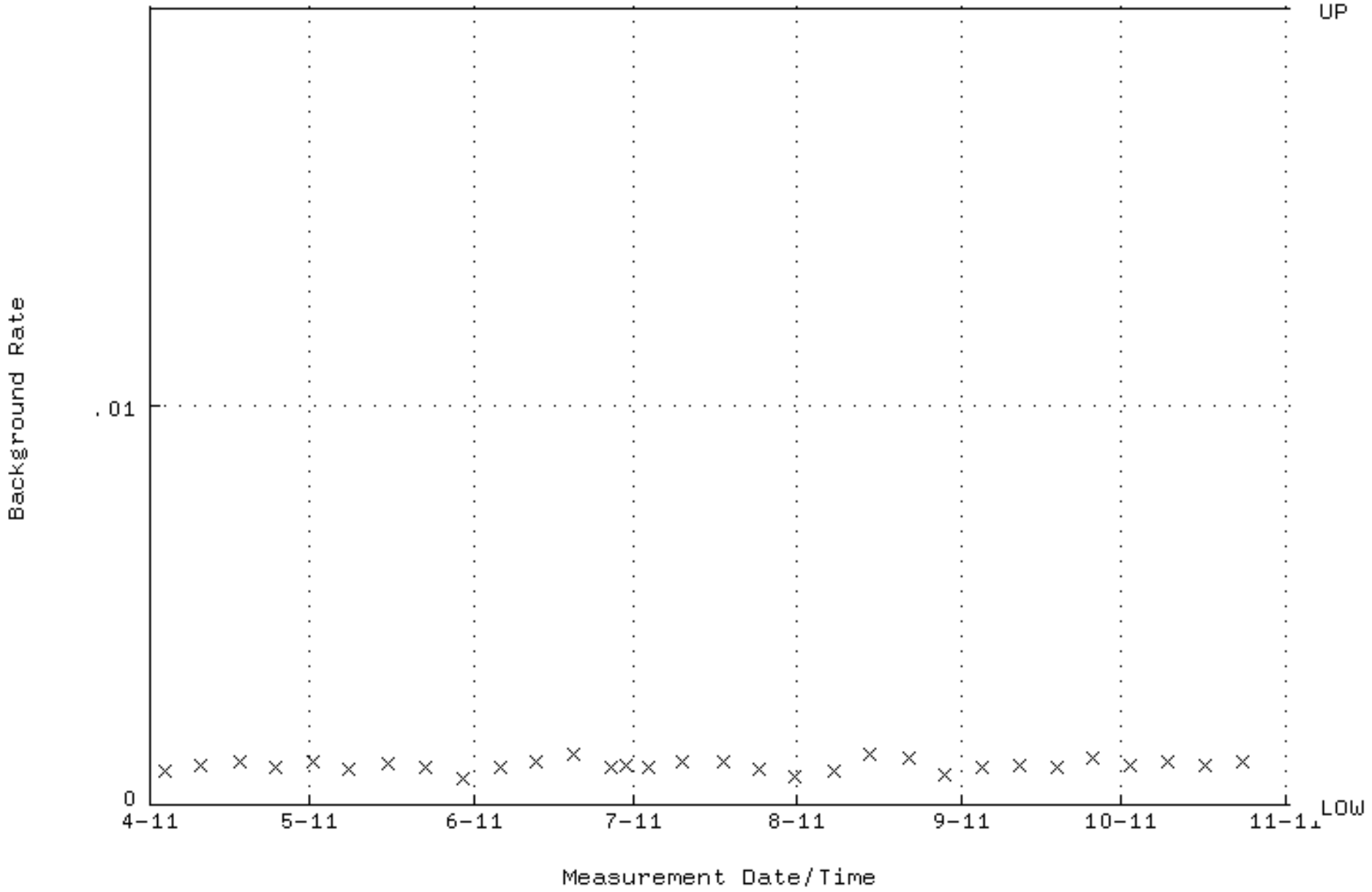
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 3-APR-2011 12:36:21 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



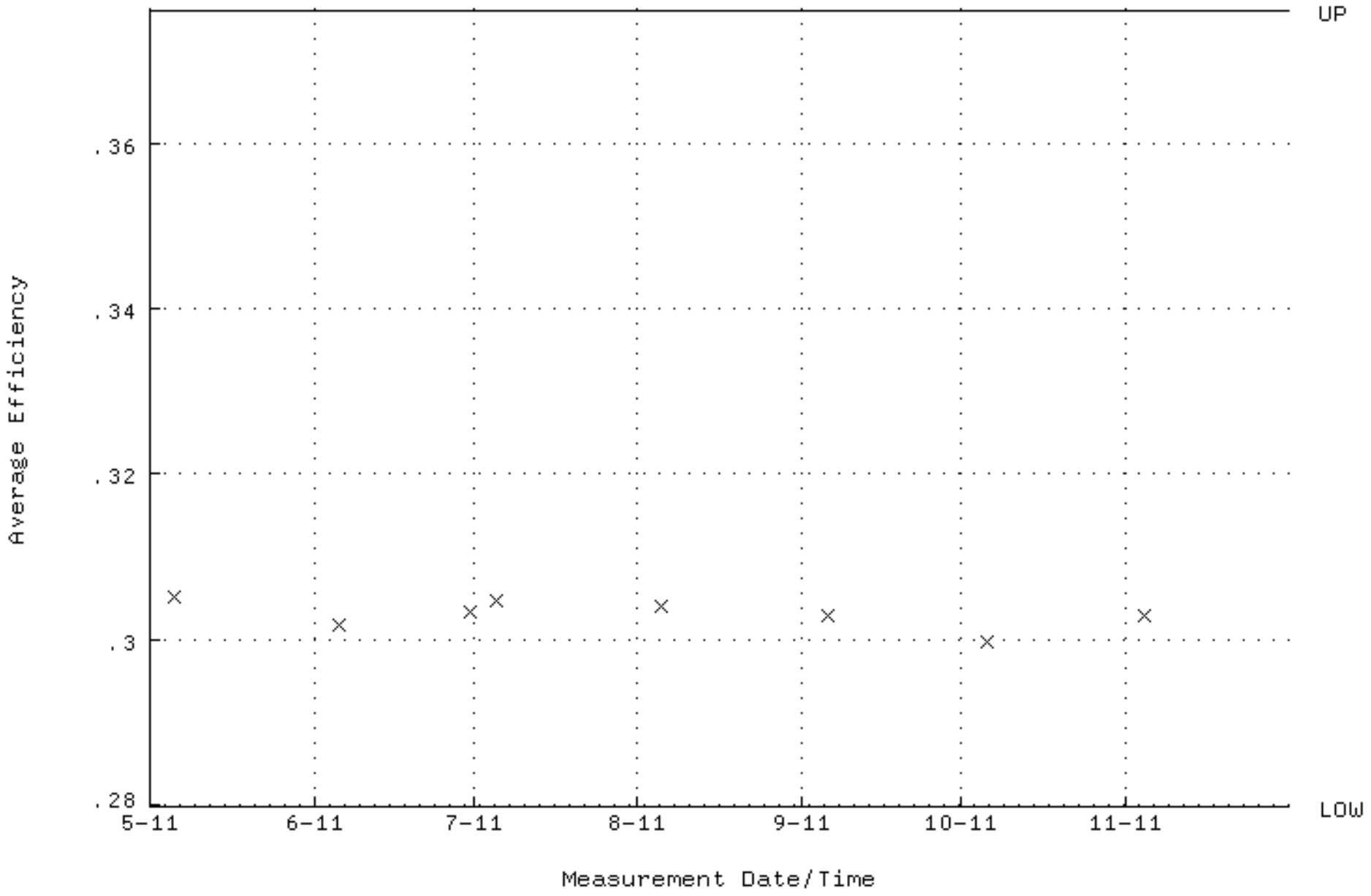
QA filename : DKA100:[ENV_ALPHA.QA.W]W029.QAF;6
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 3-APR-2011 12:36:21 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



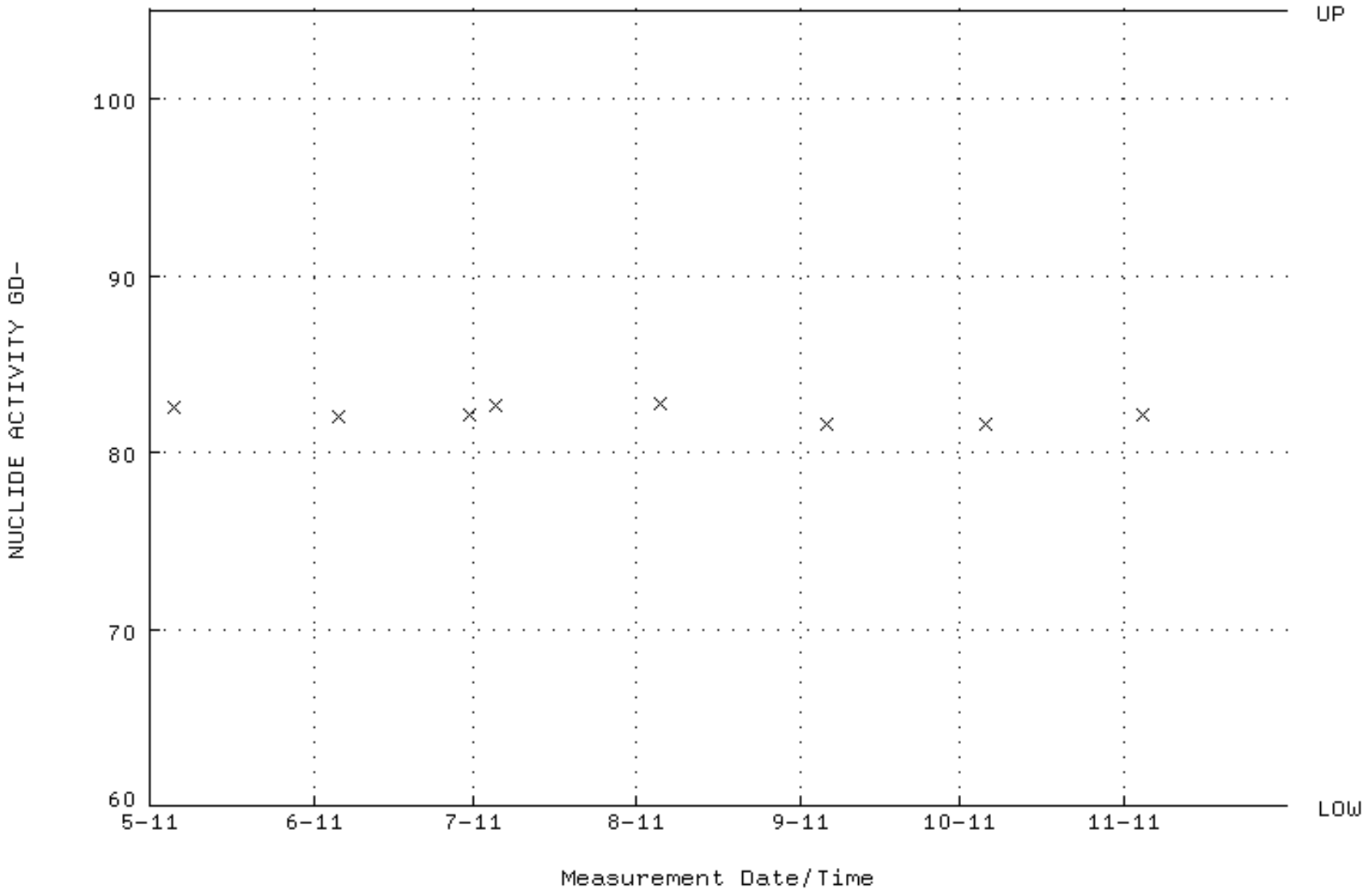
QA filename : DKA100:[ENV_ALPHA.QA.B]B029.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 18:47:38 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



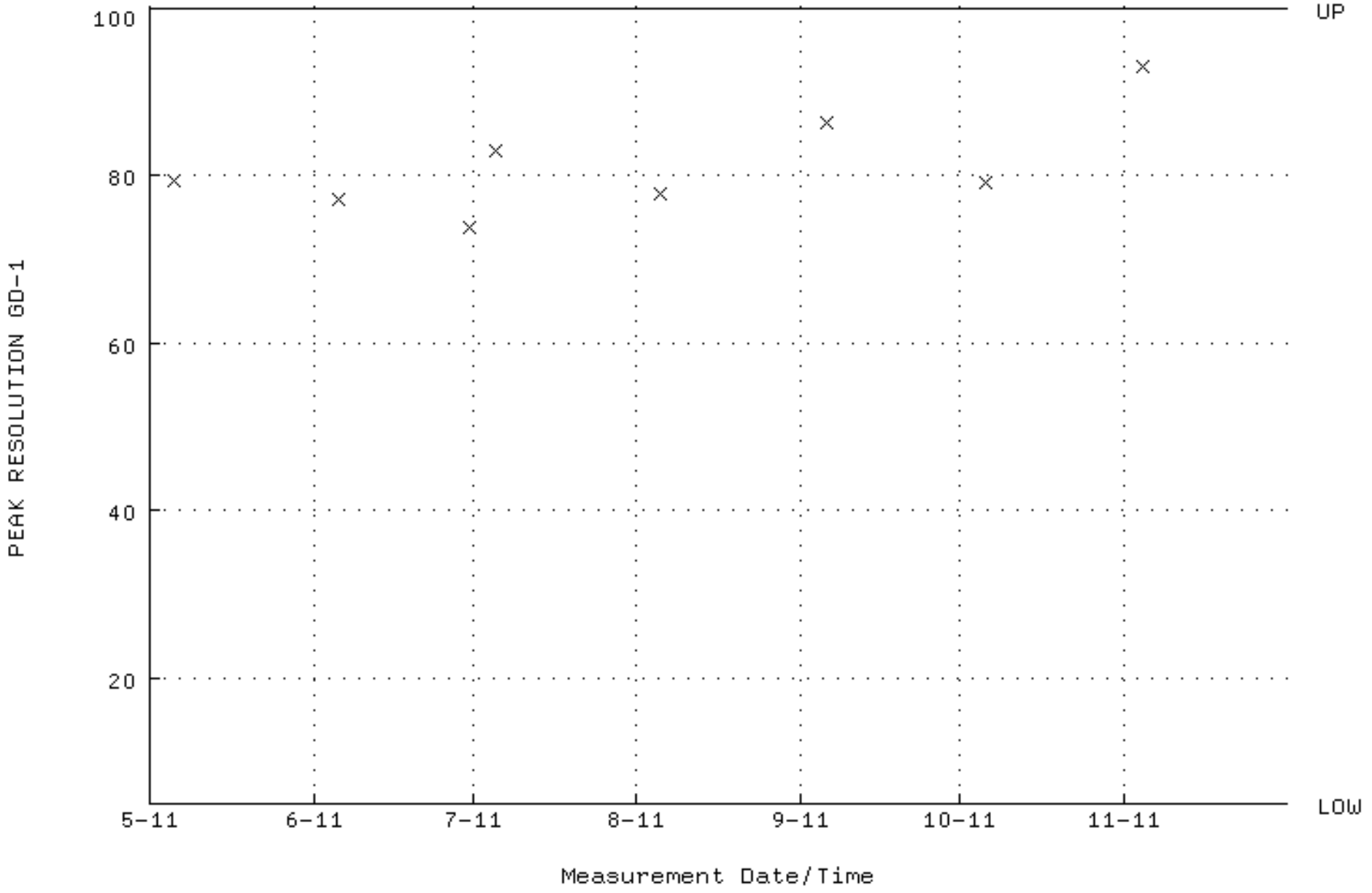
QA filename : DKA100:[ENV_ALPHA.QA.W]W030.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.279800 through 0.376000



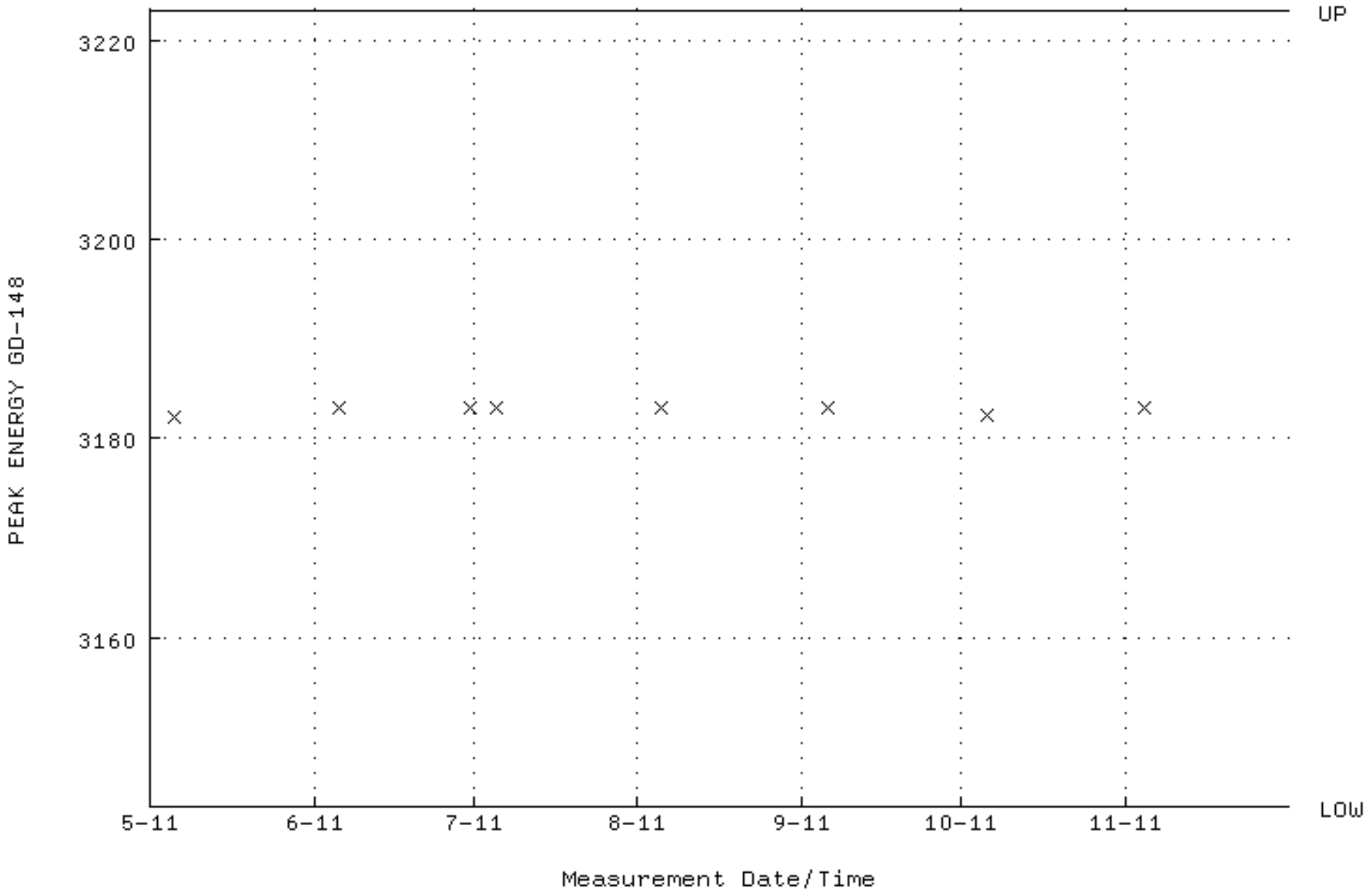
QA filename : DKA100:[ENV_ALPHA.QA.W]W030.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



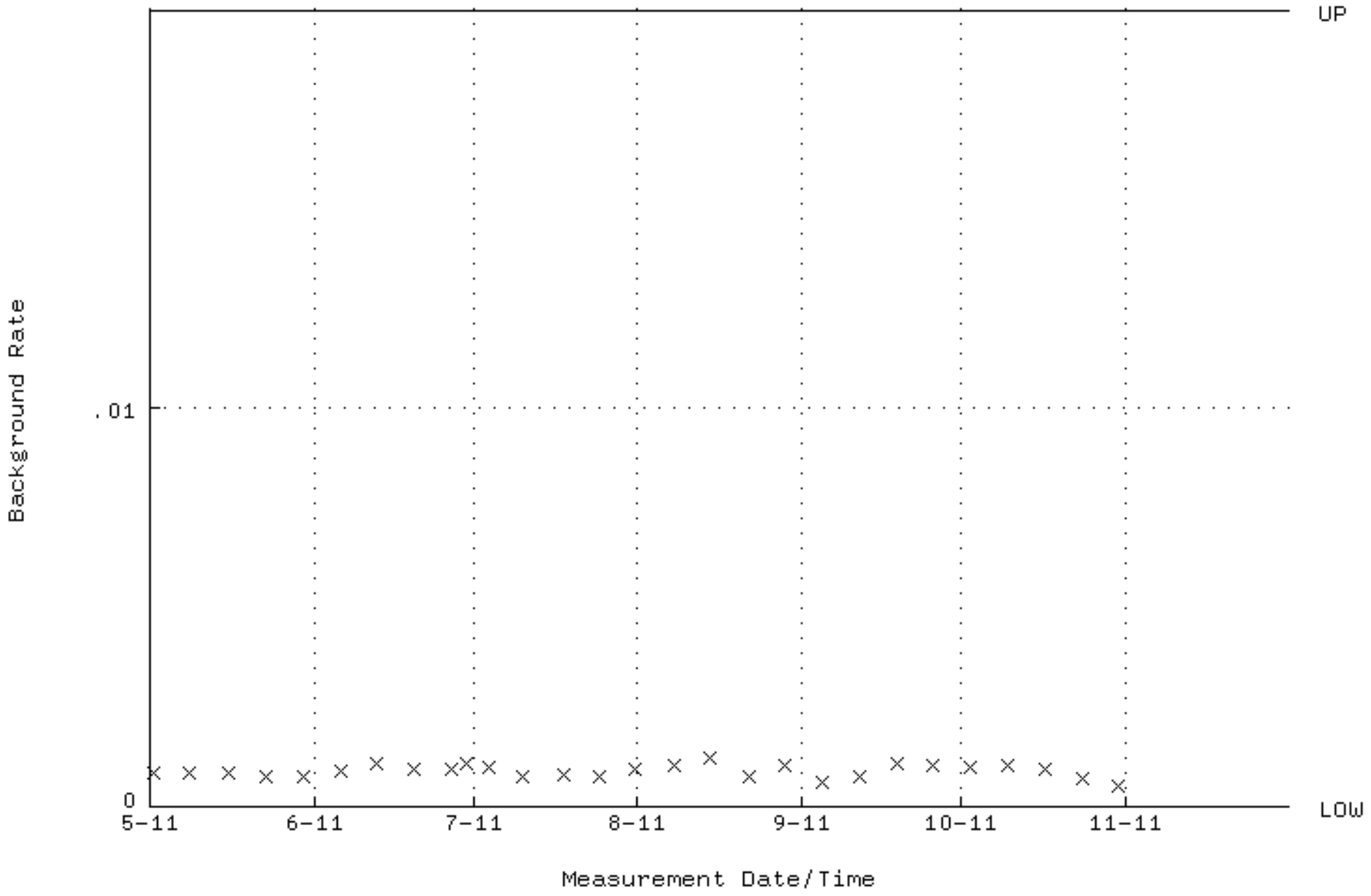
QA filename : DKA100:[ENV_ALPHA.QA.W]W030.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



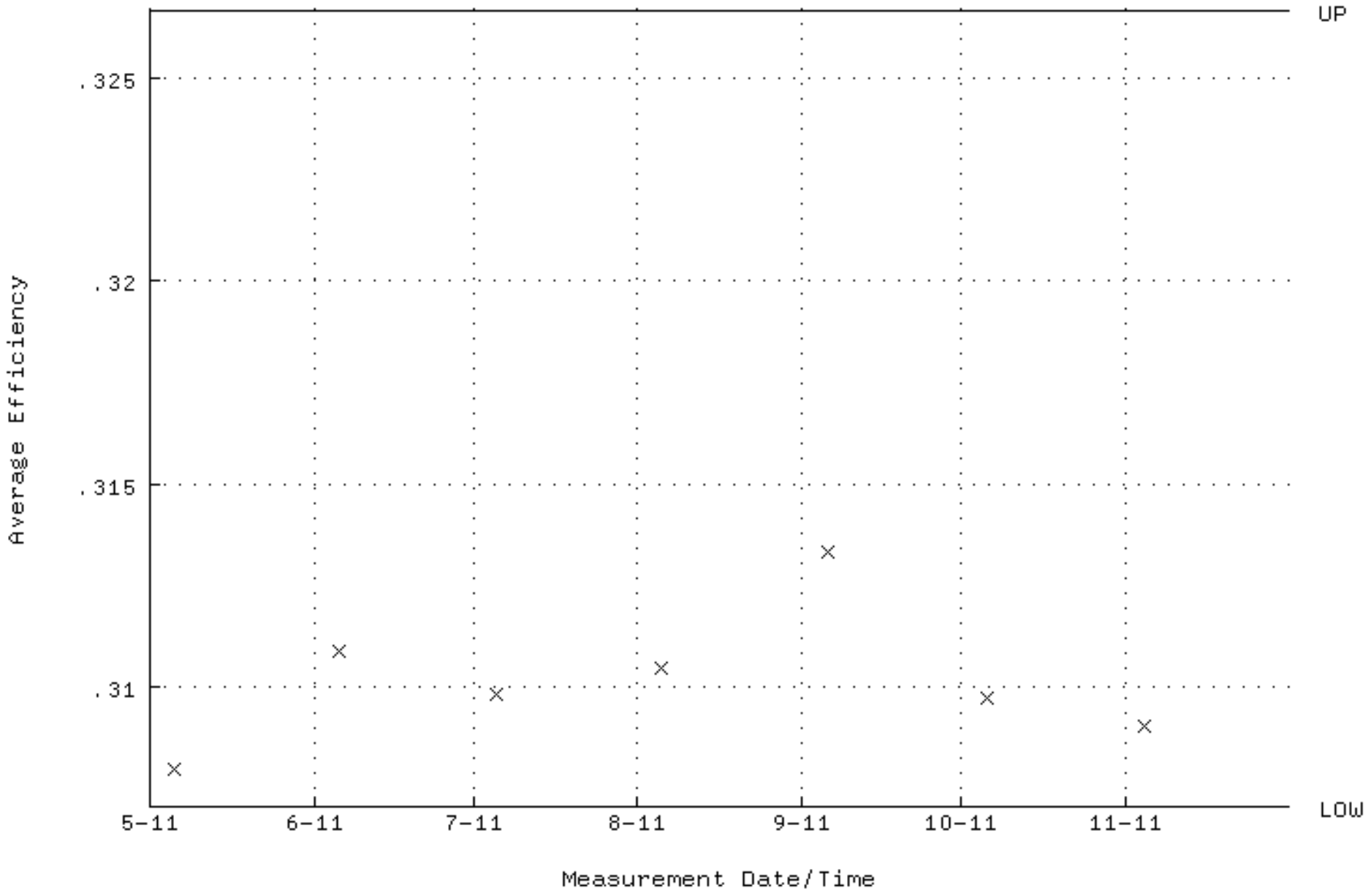
QA filename : DKA100:[ENV_ALPHA.QA.W]W030.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:58 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



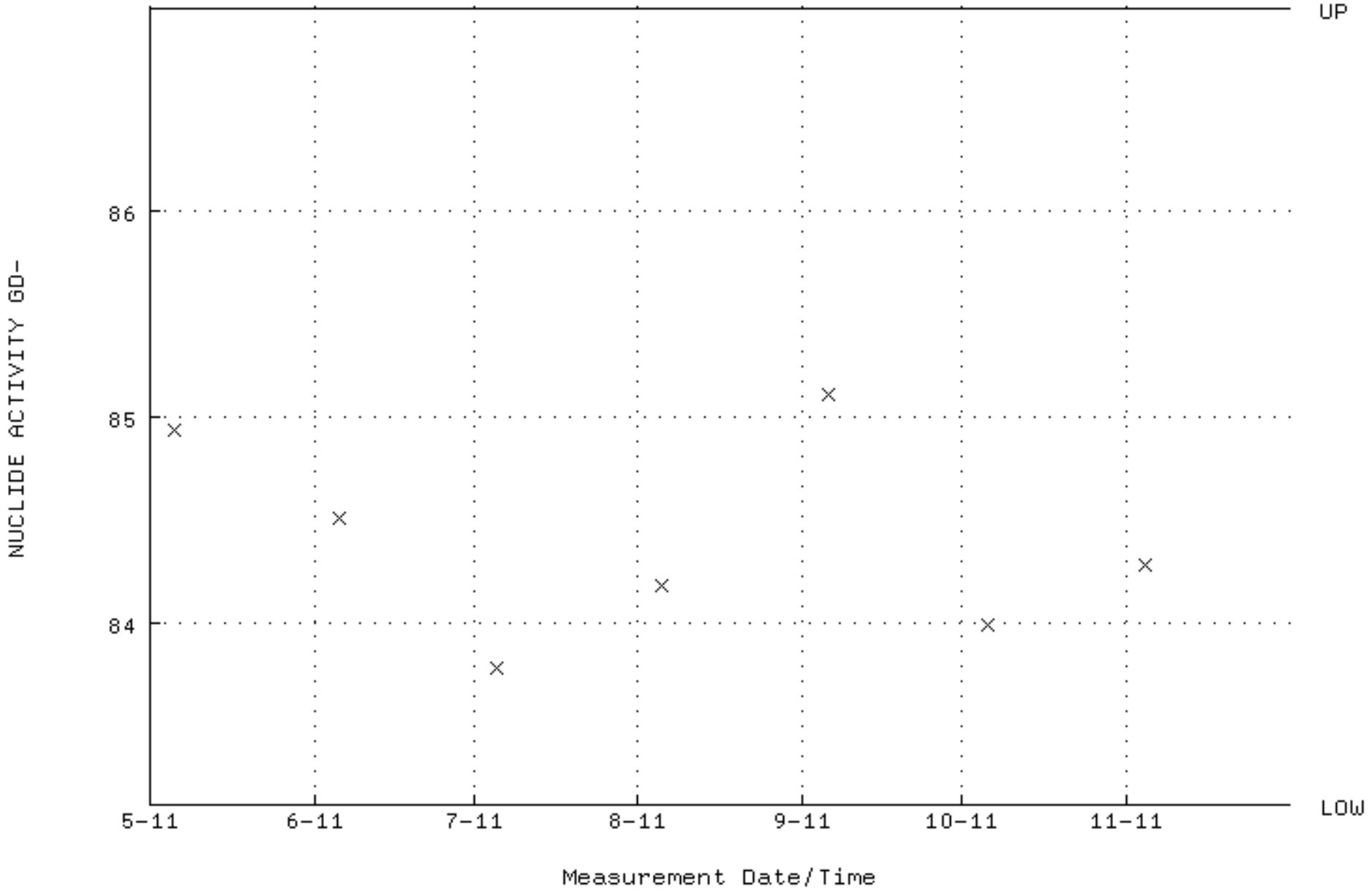
QA filename : DKA100:[ENV_ALPHA.QA.B]B030.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:48 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



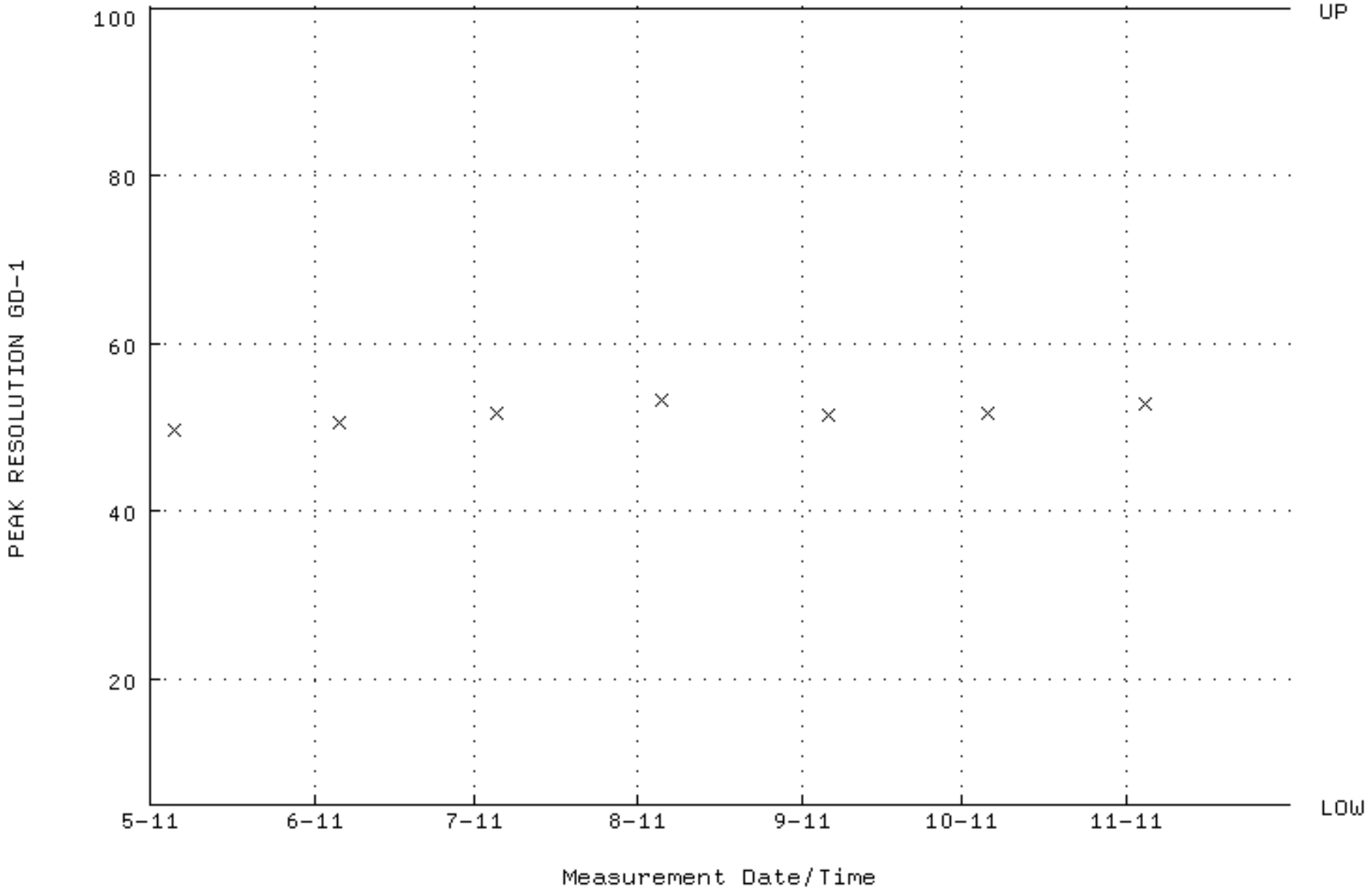
QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.307057 through 0.326645



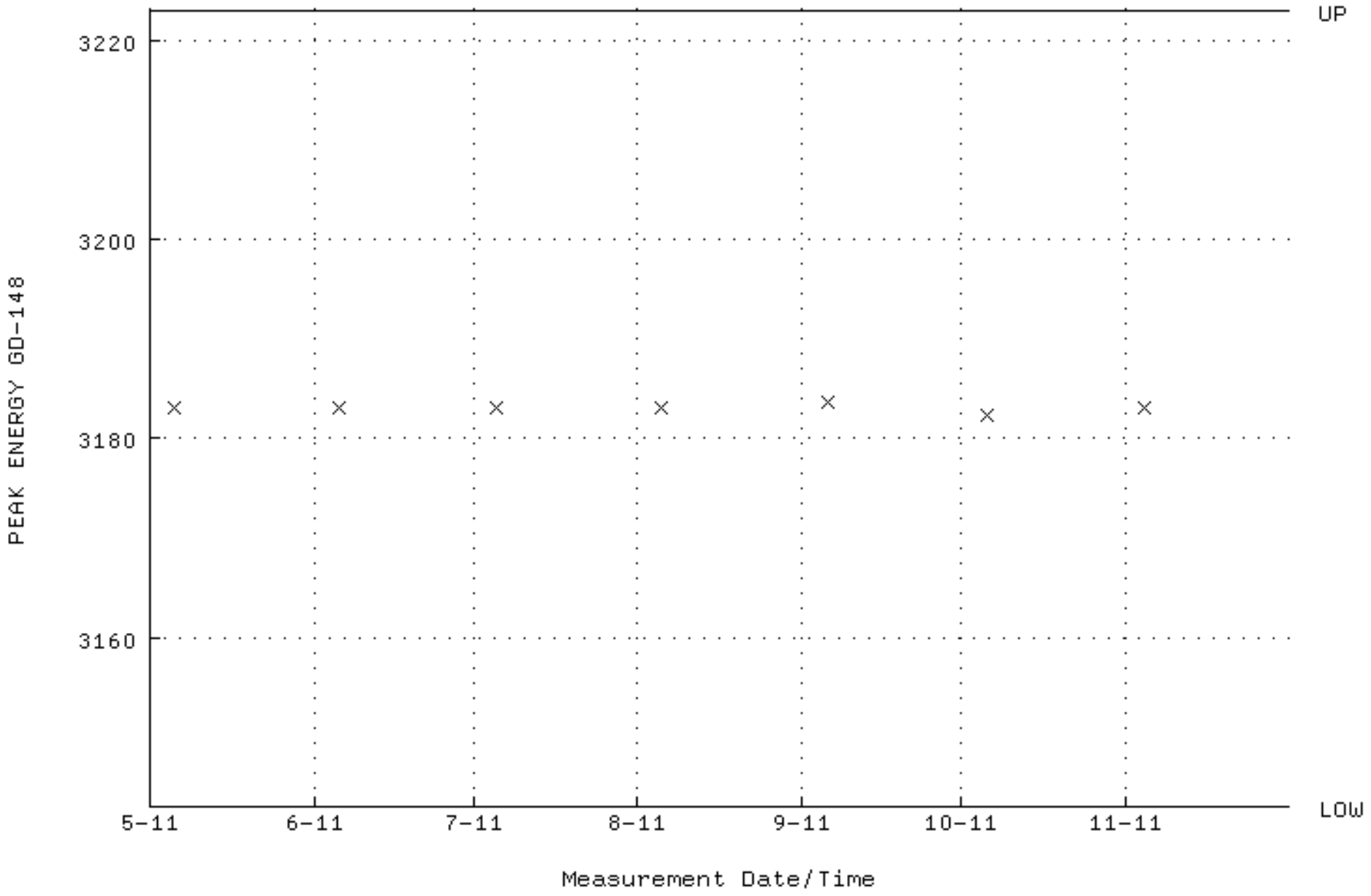
QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 83.1182 through 86.9846



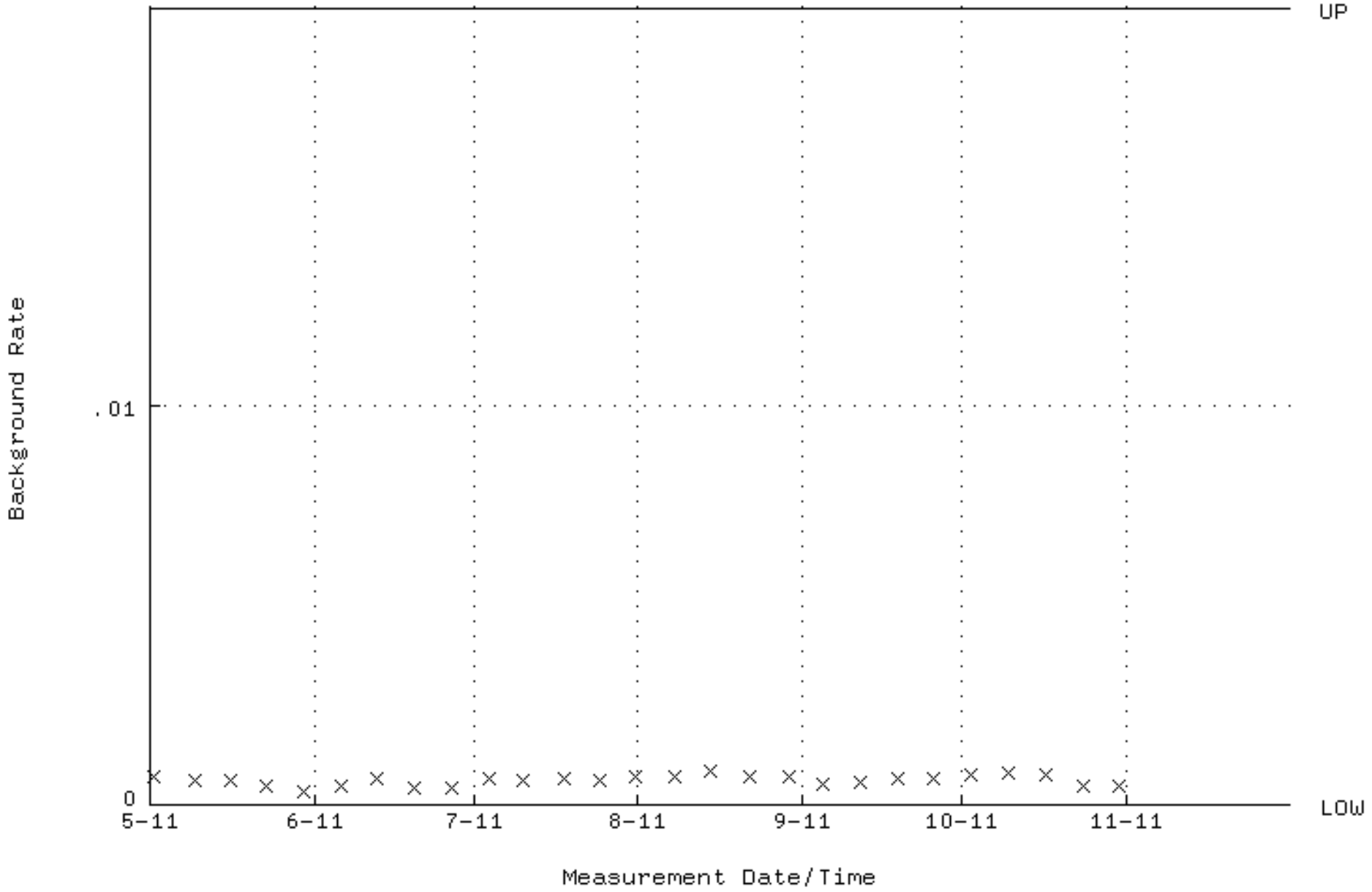
QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



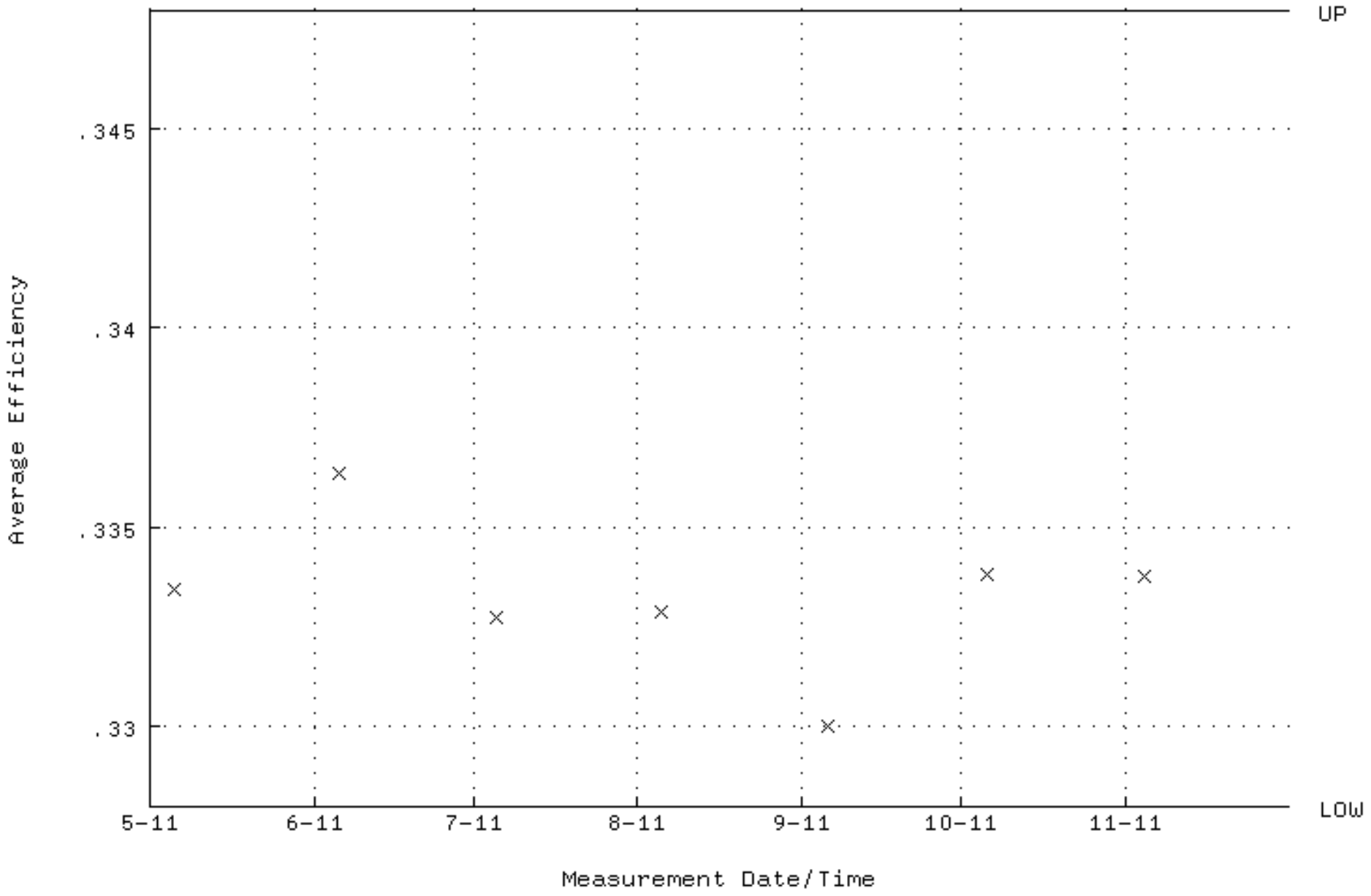
QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



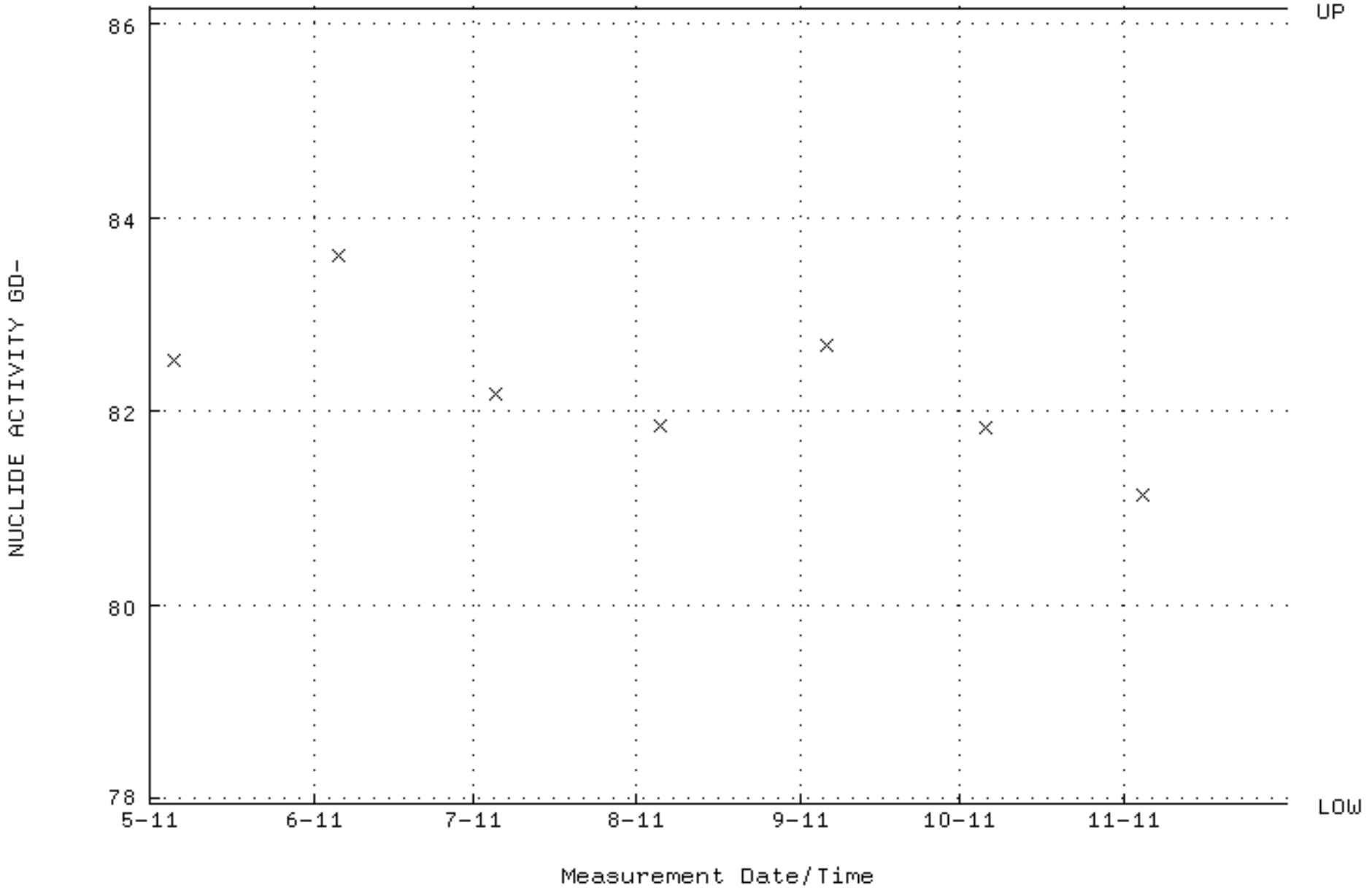
QA filename : DKA100:[ENV_ALPHA.QA.B]B033.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:49 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



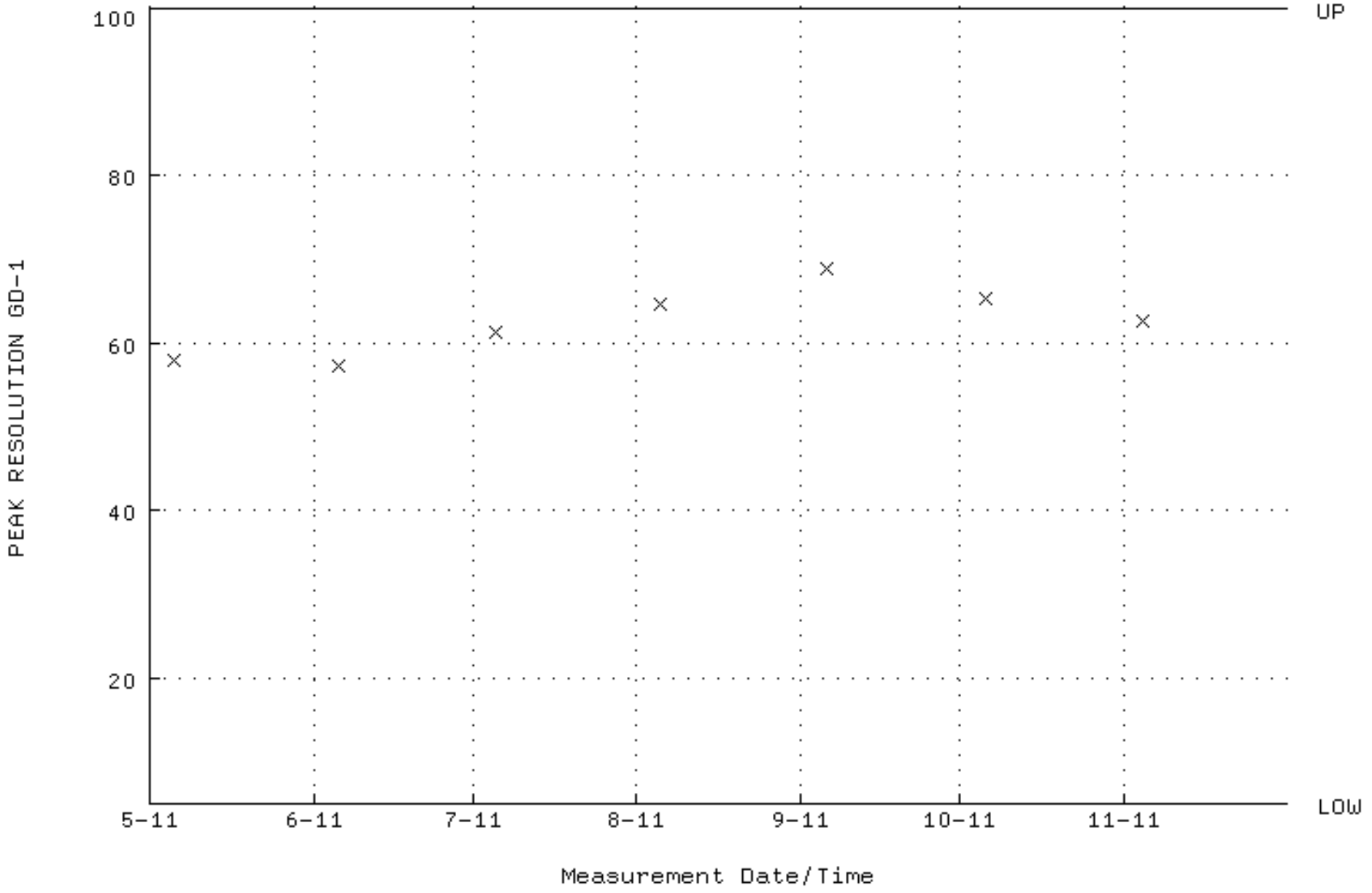
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.327966 through 0.347966



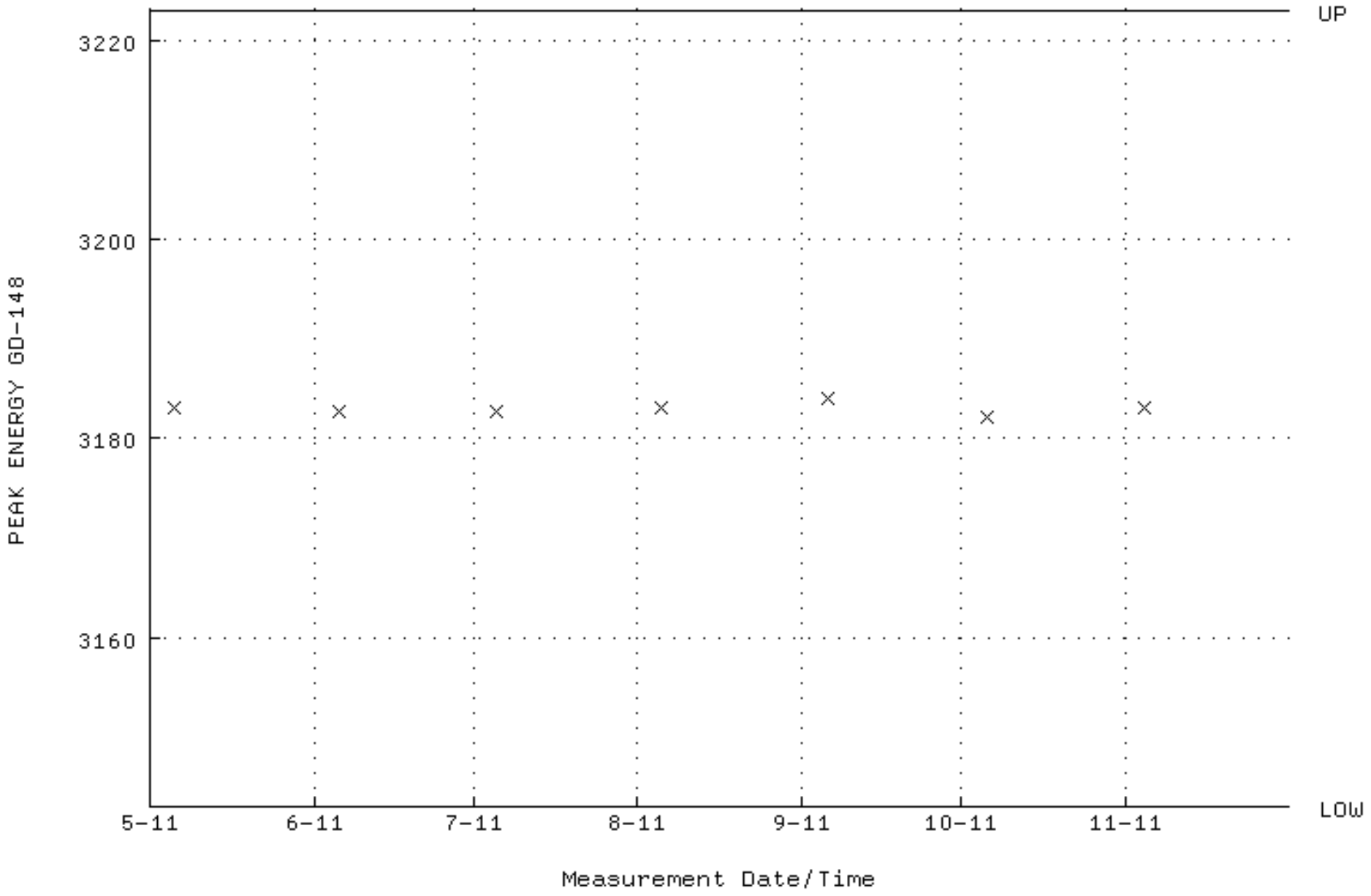
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 77.9481 through 86.1531



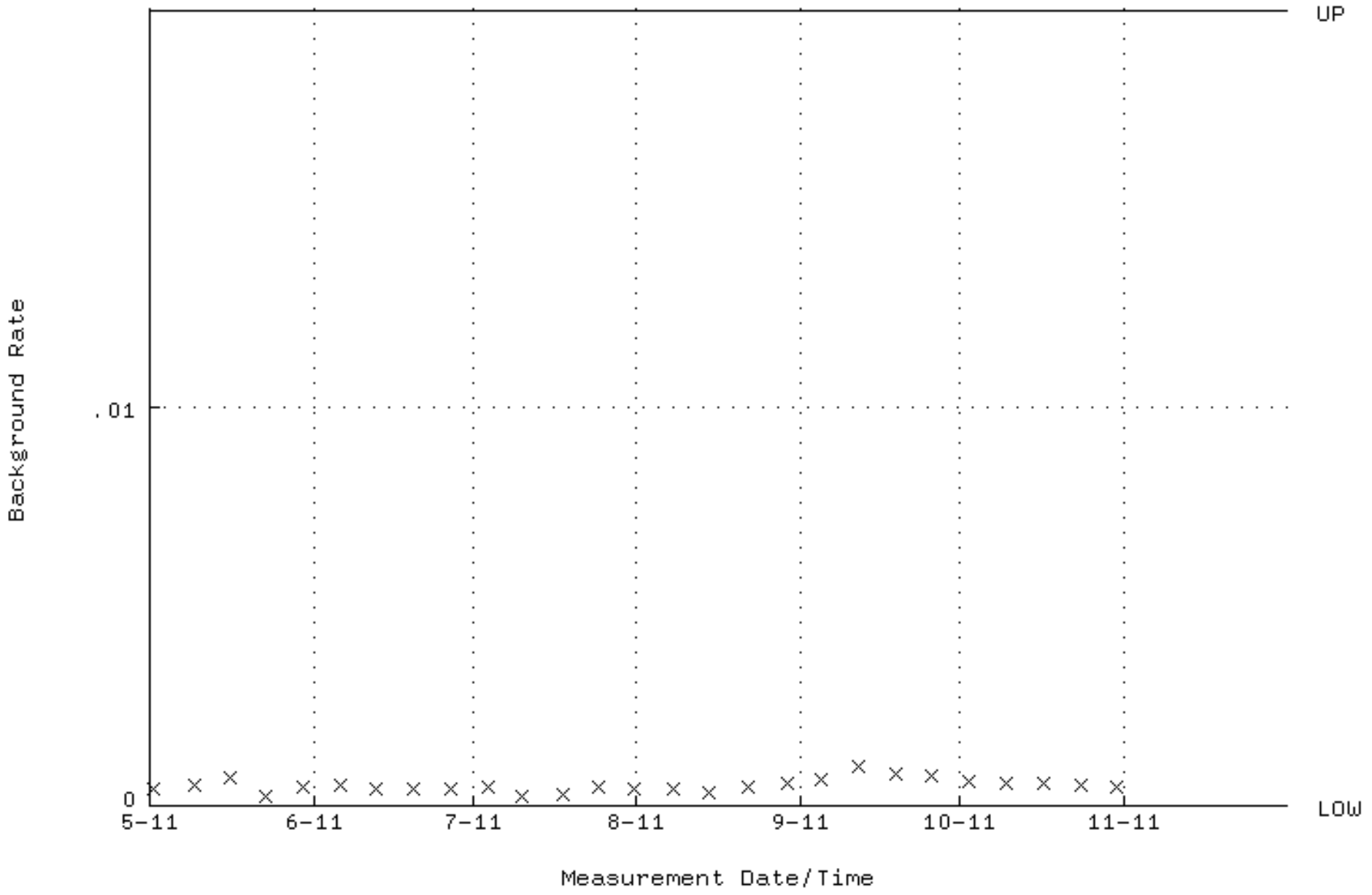
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



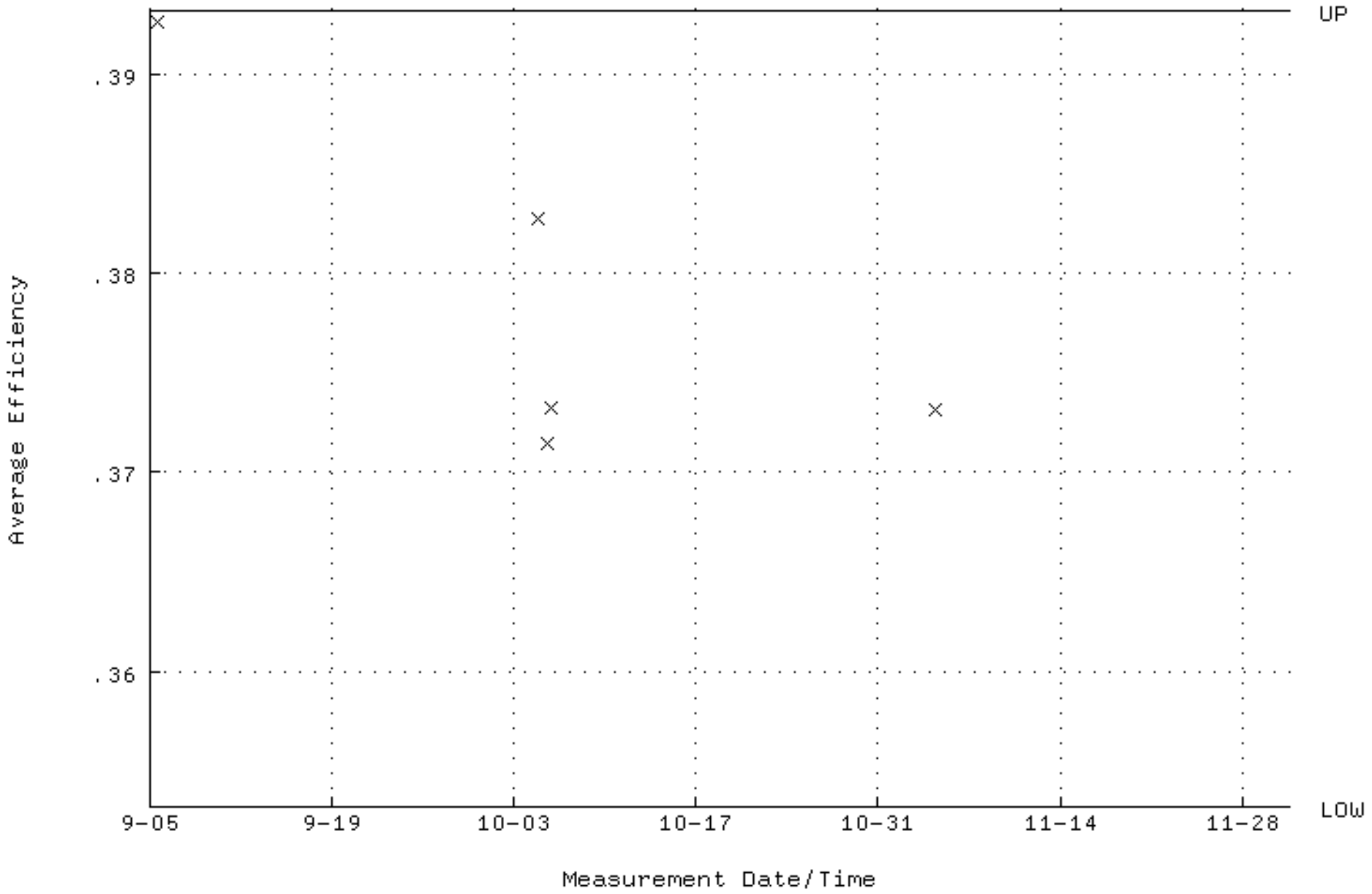
QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:34:59 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



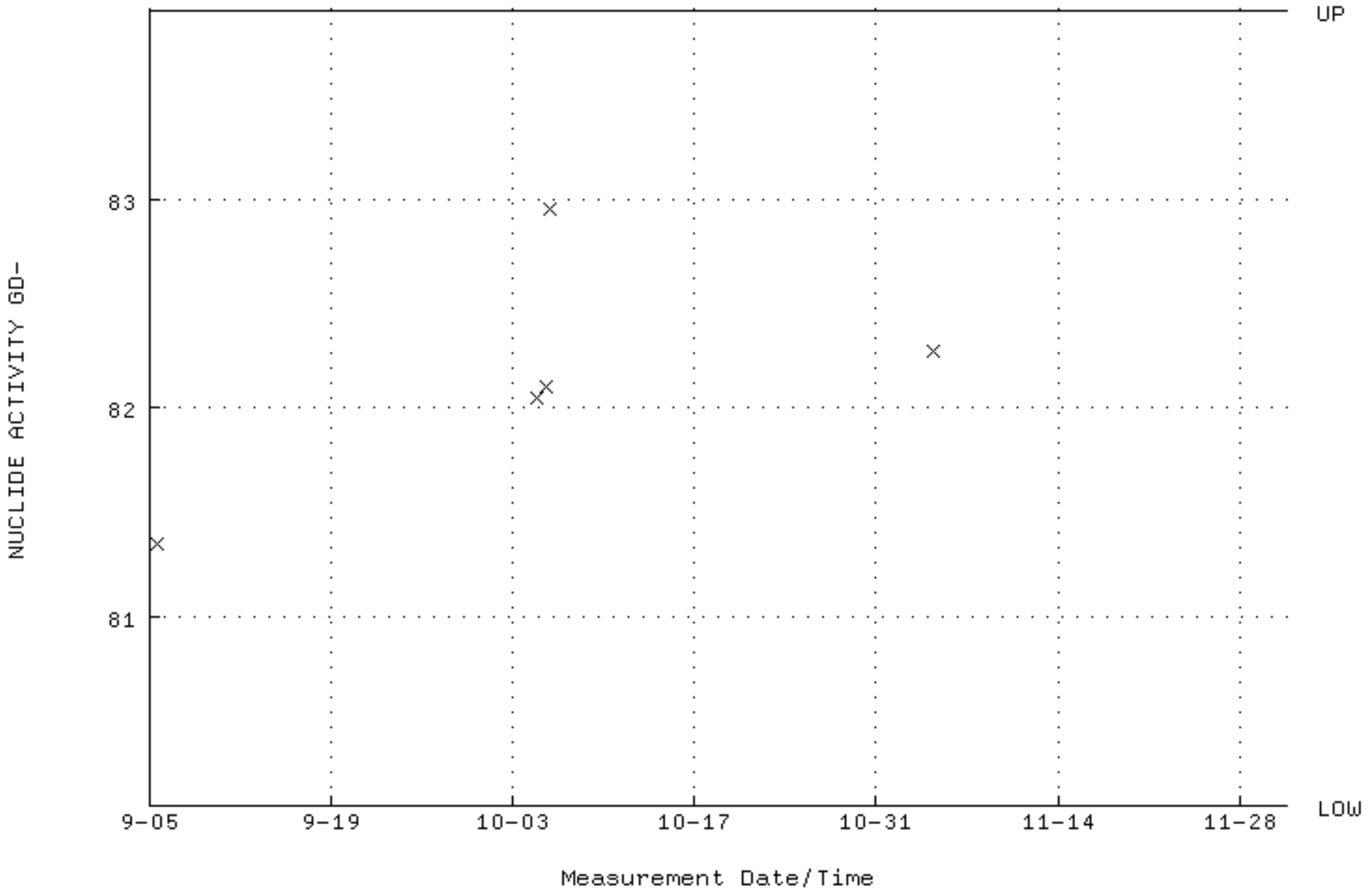
QA filename : DKA100:[ENV_ALPHA.QA.B]B036.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:49 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



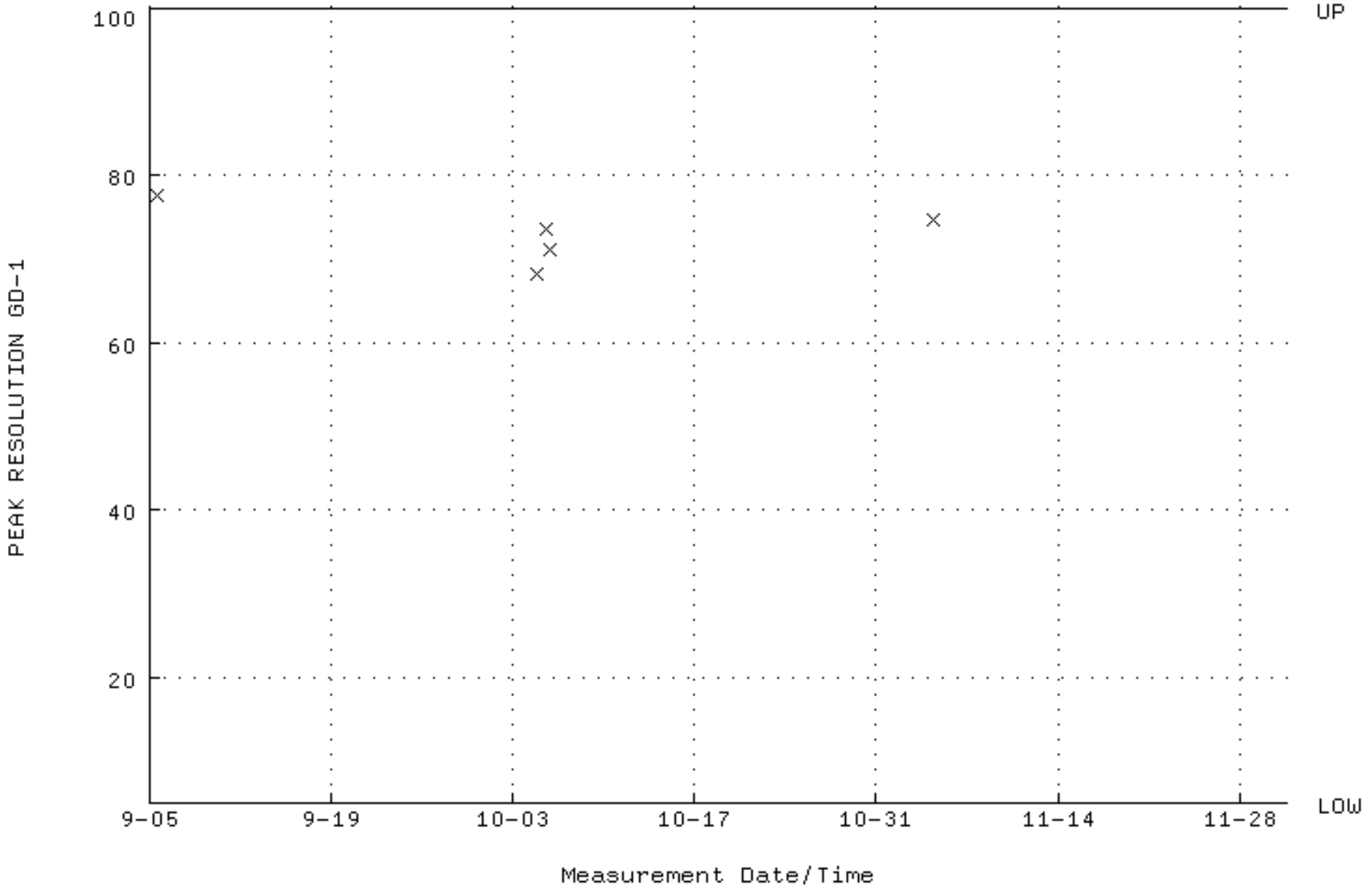
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-SEP-2011 13:23:25 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.353200 through 0.393200



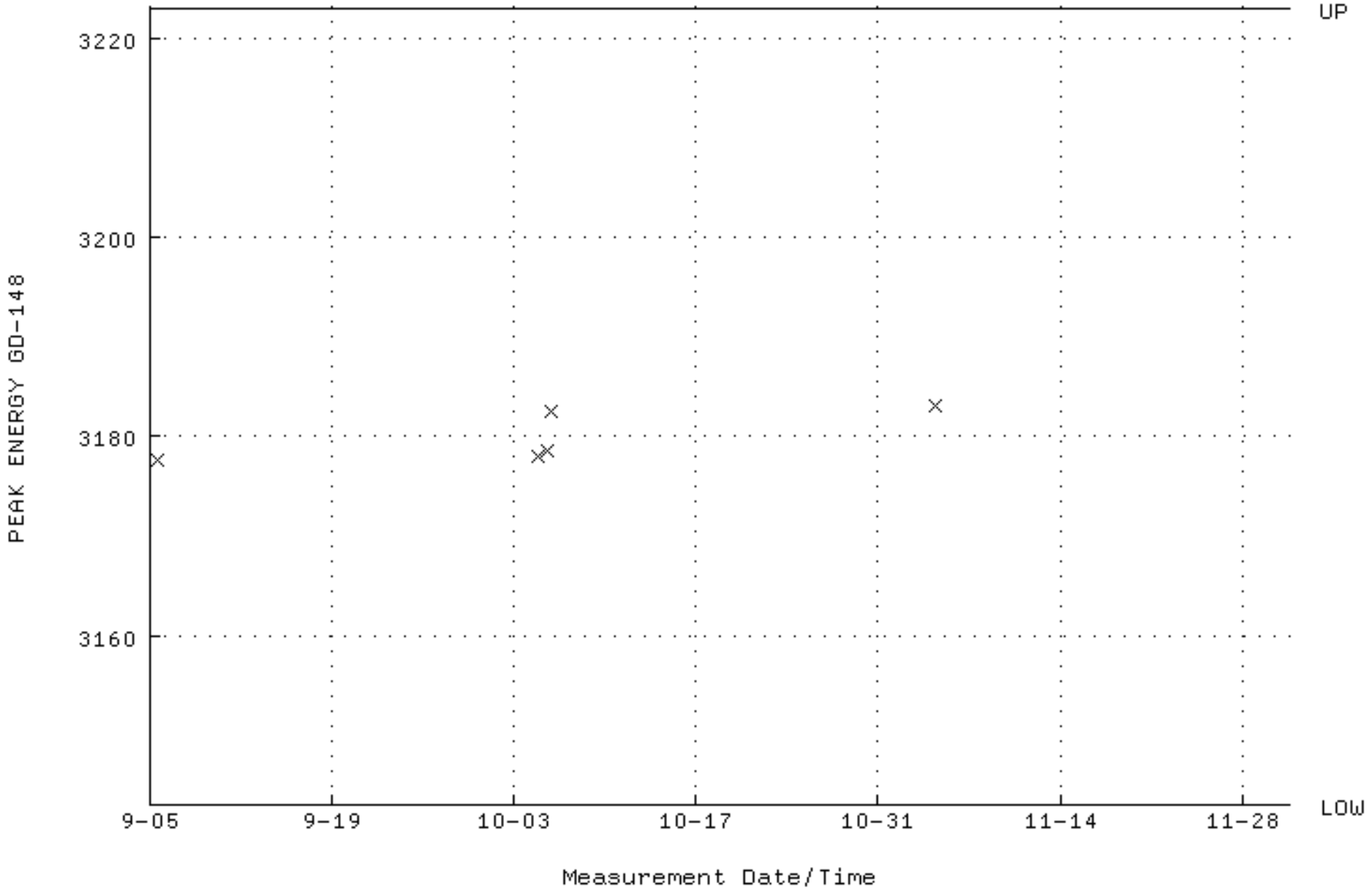
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-SEP-2011 13:23:25 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 80.1000 through 83.9000



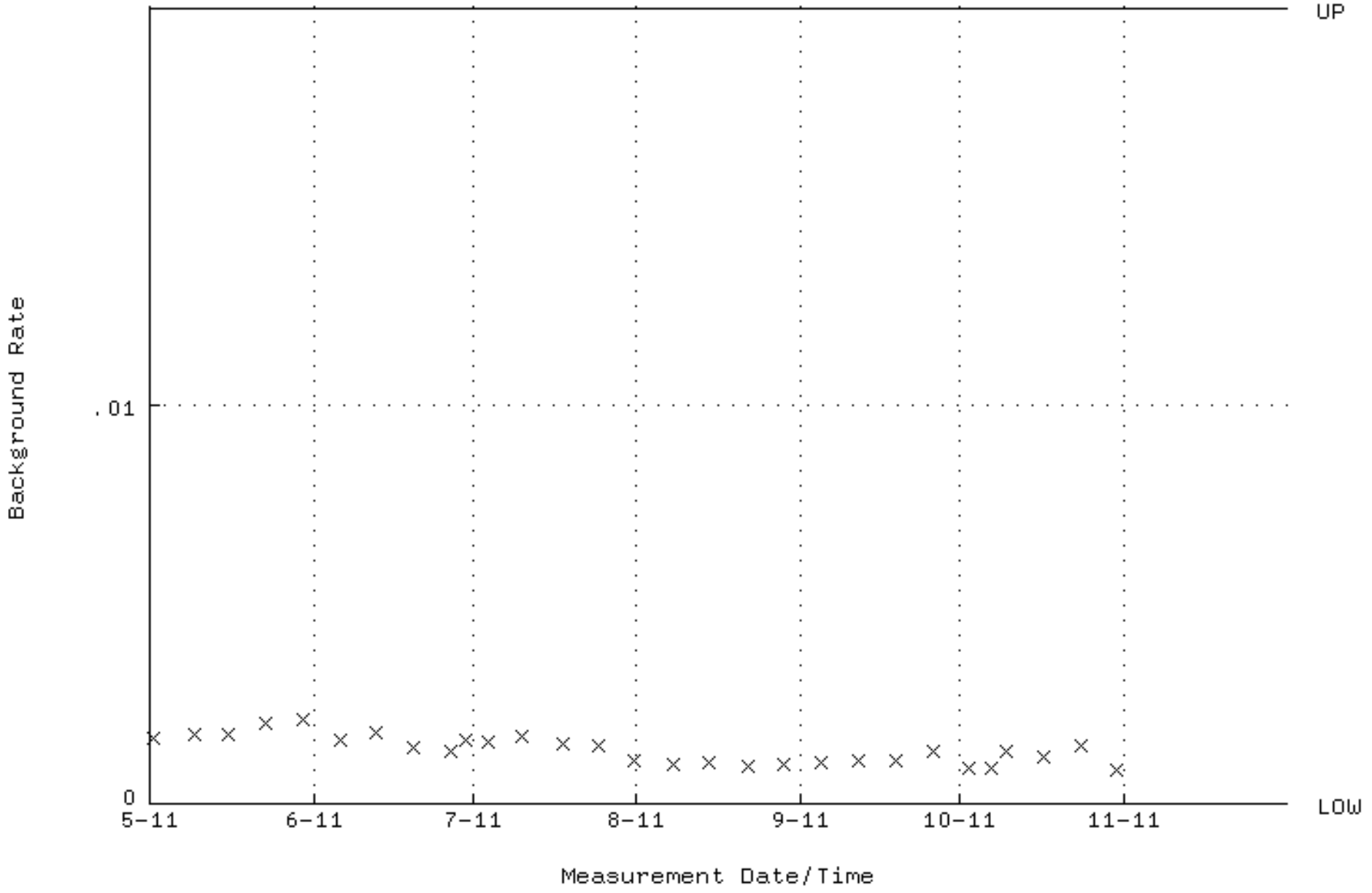
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;5
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-SEP-2011 13:23:25 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



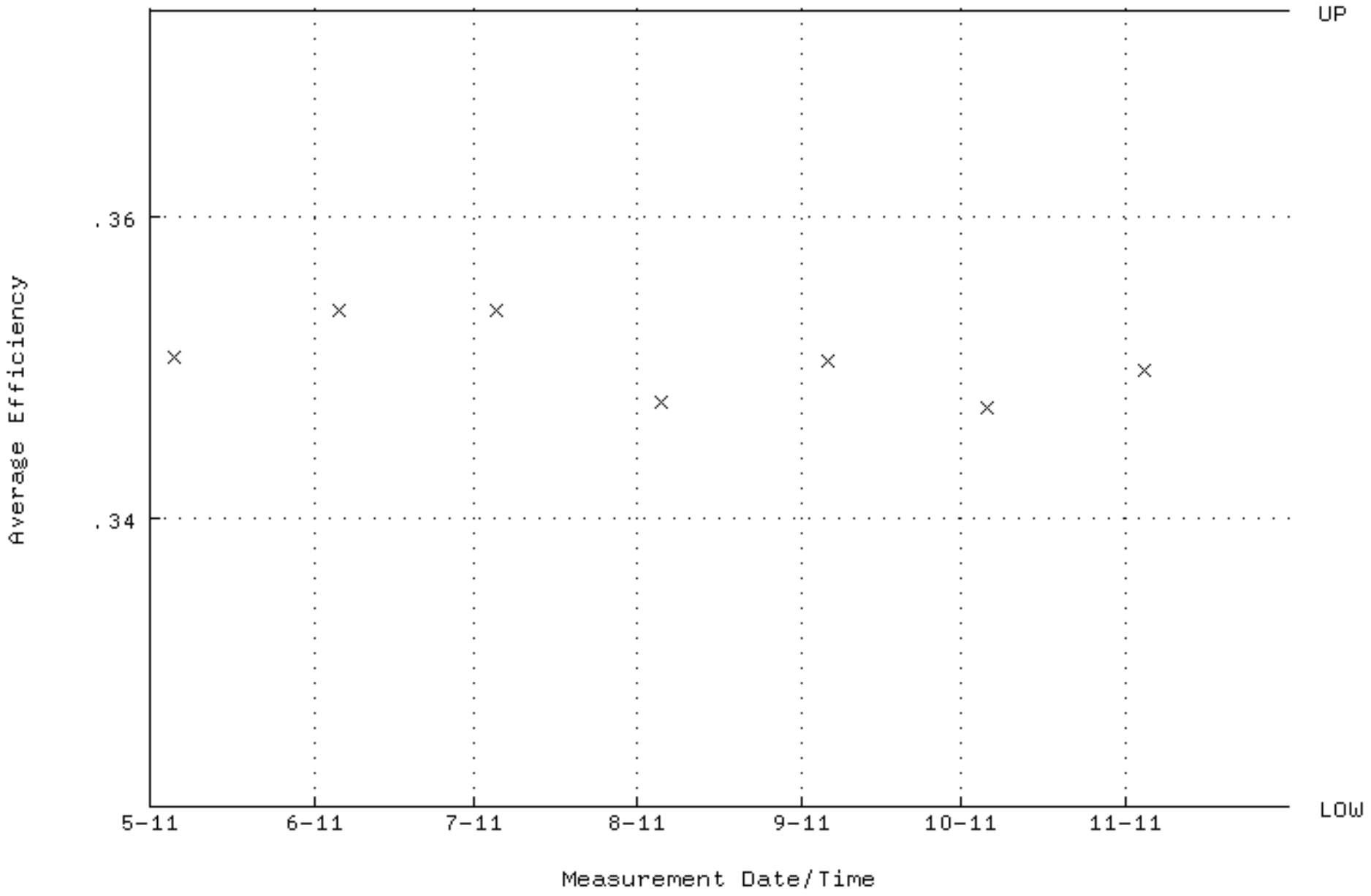
QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;5
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-SEP-2011 13:23:25 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



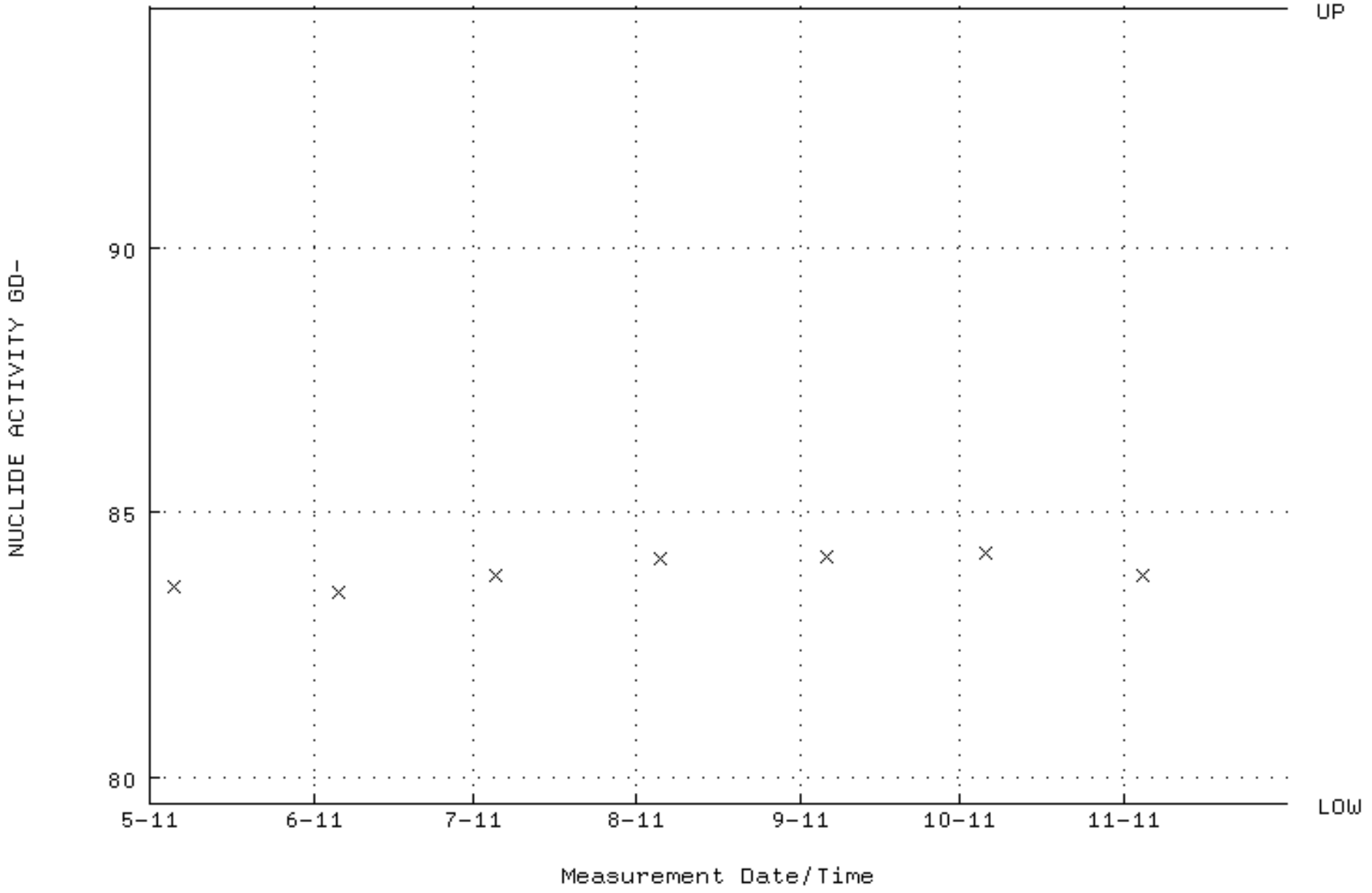
QA filename : DKA100:[ENV_ALPHA.QA.B]B037.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:50 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



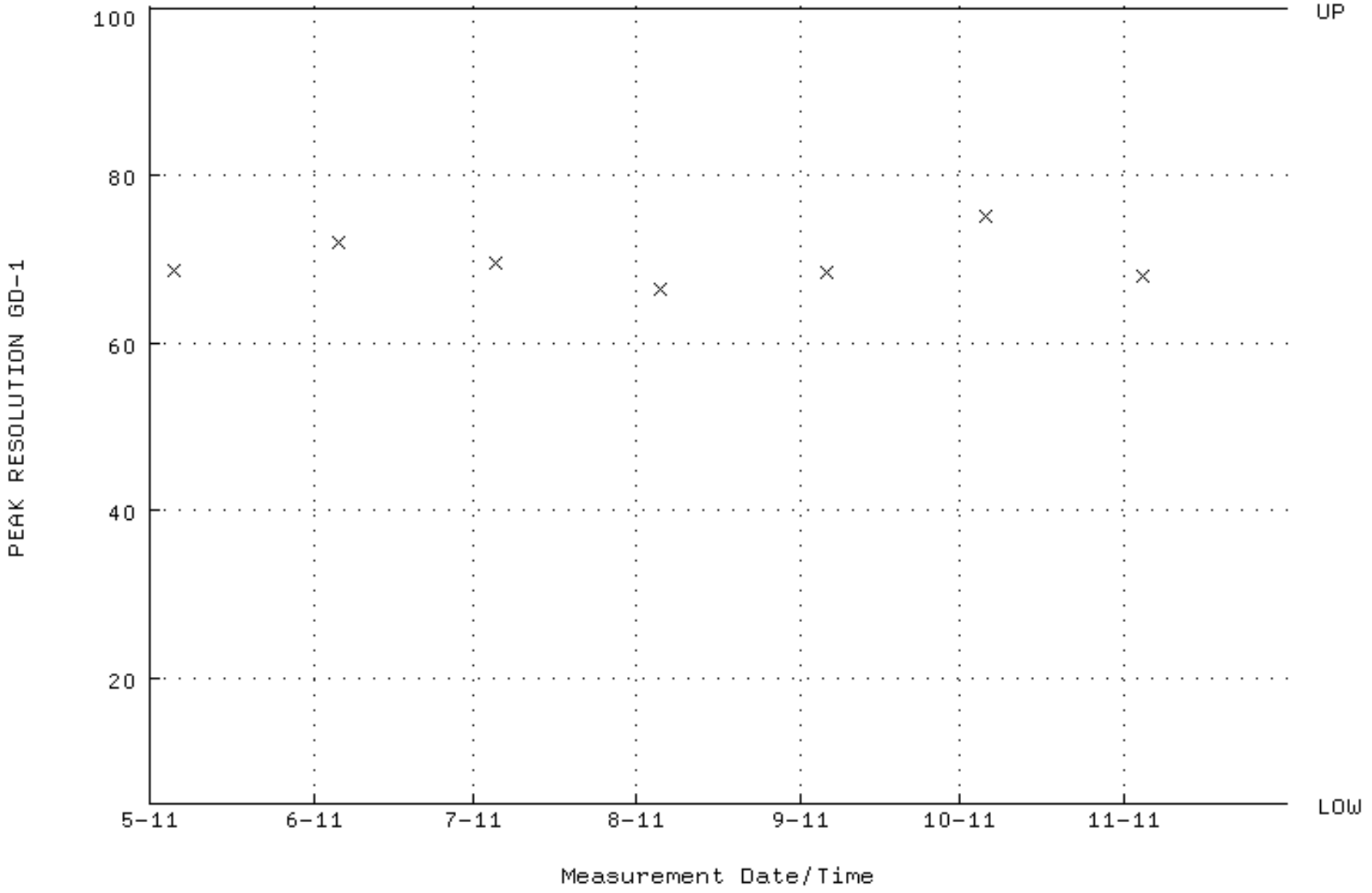
QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.320952 through 0.373562



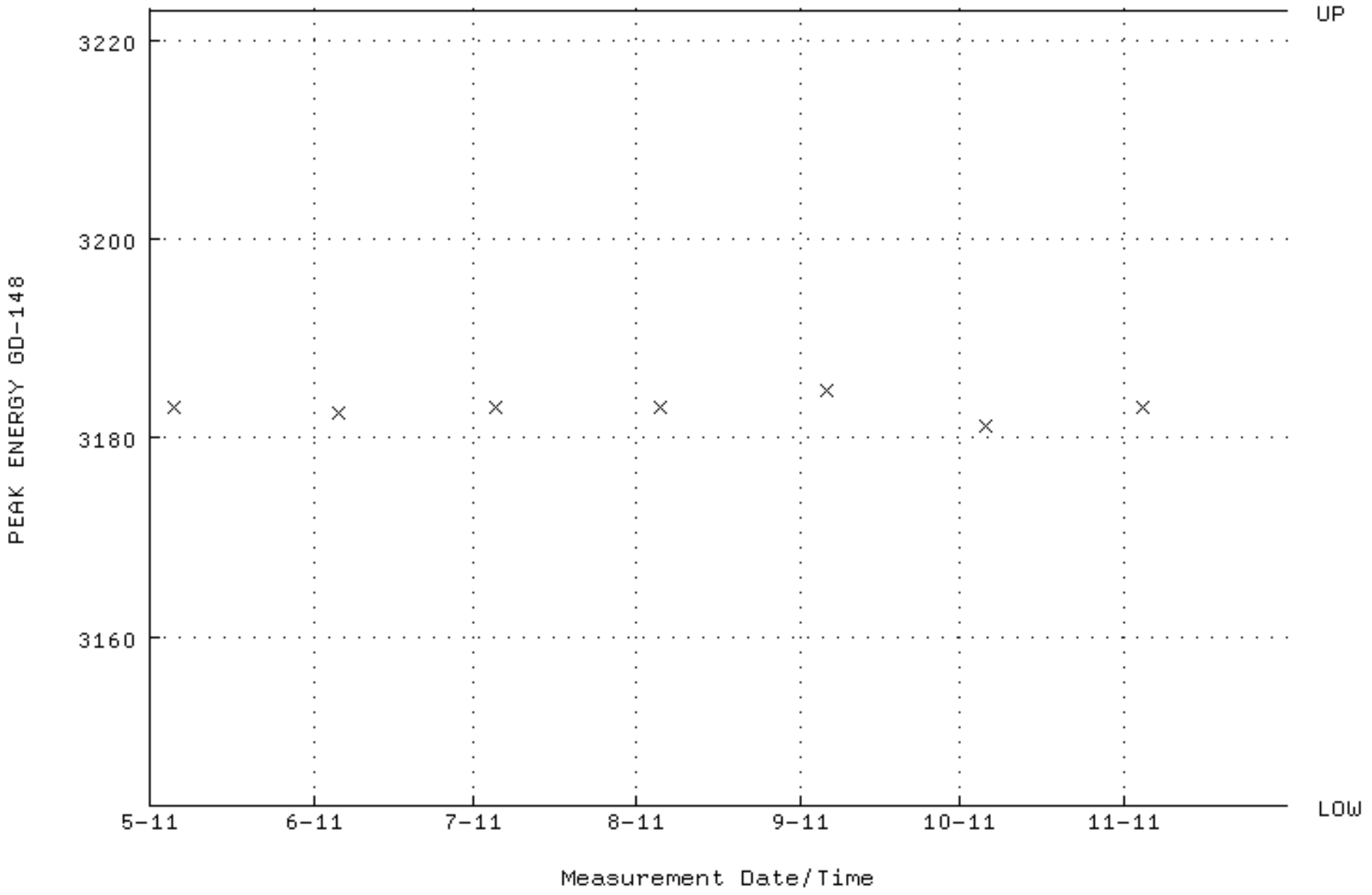
QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 79.5139 through 94.4951



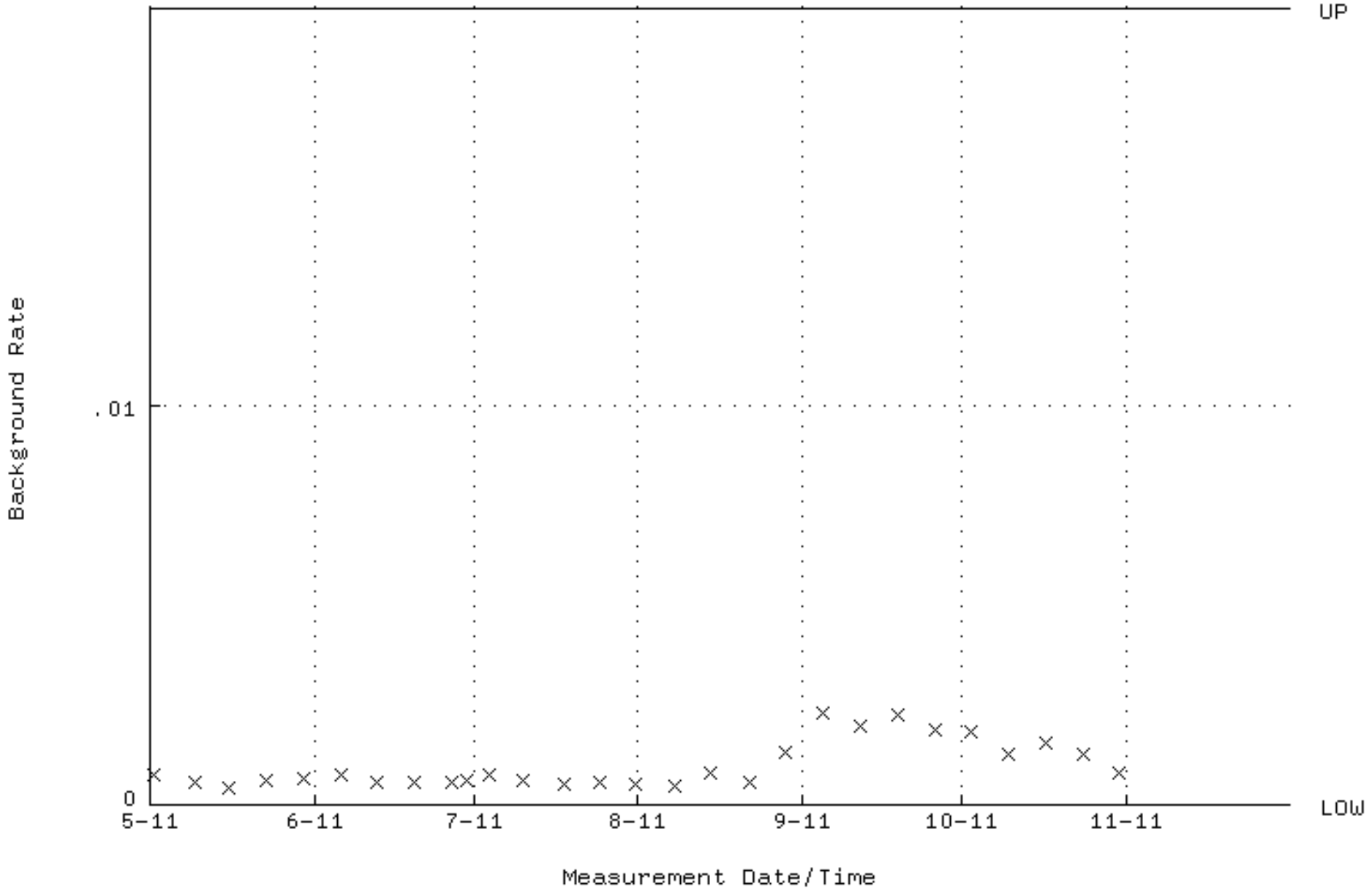
QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



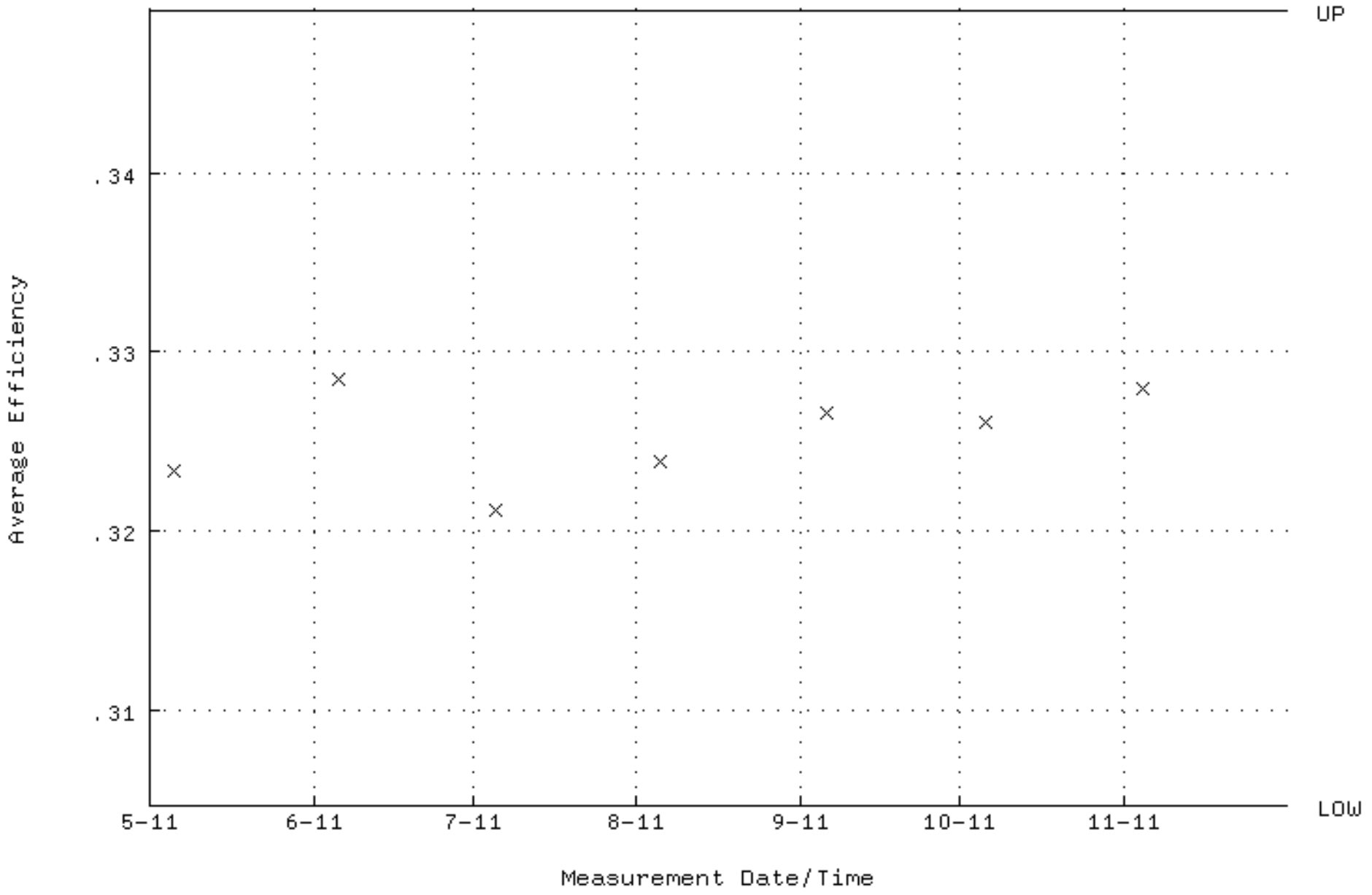
QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



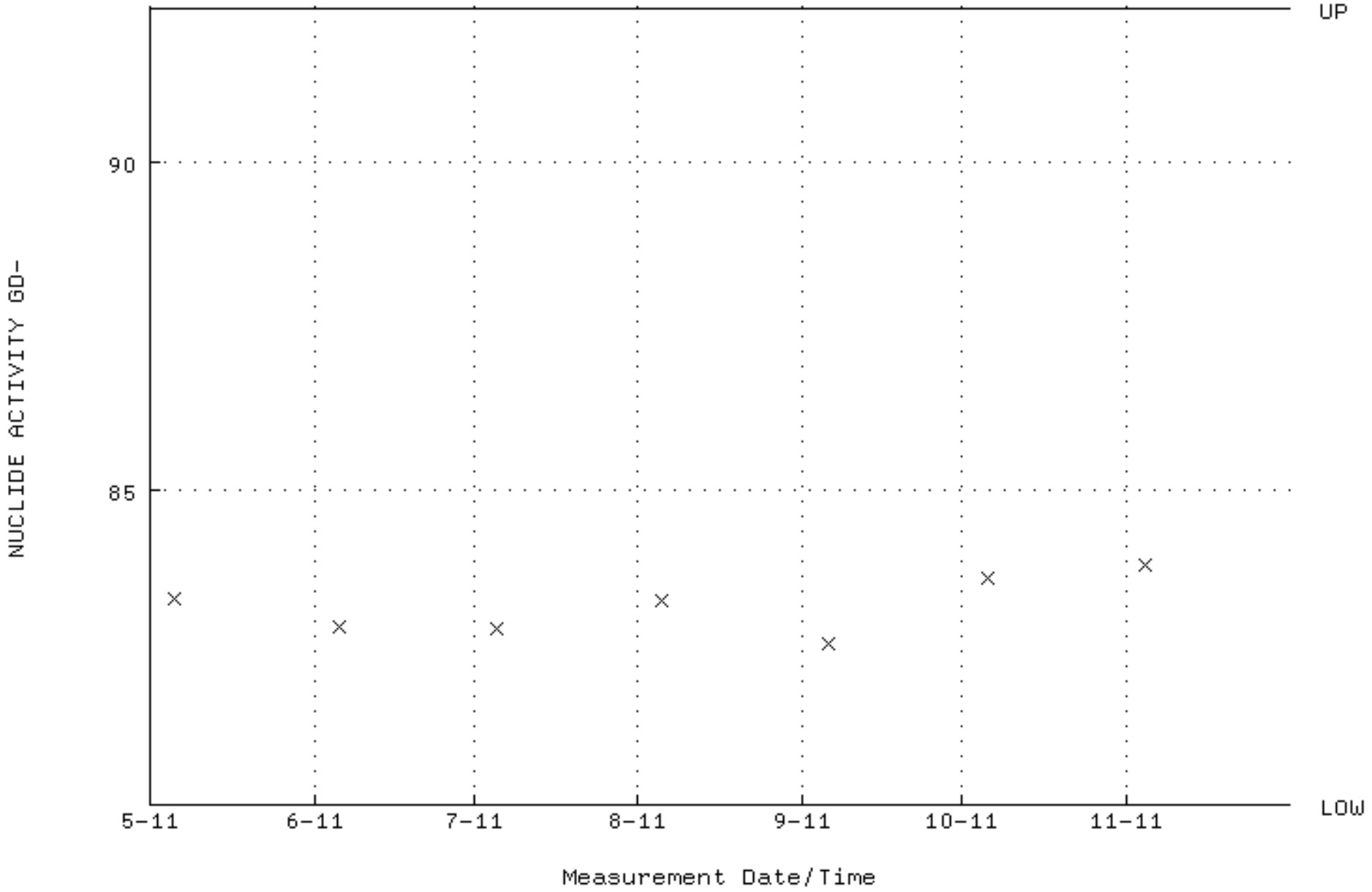
QA filename : DKA100:[ENV_ALPHA.QA.B]B038.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:50 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



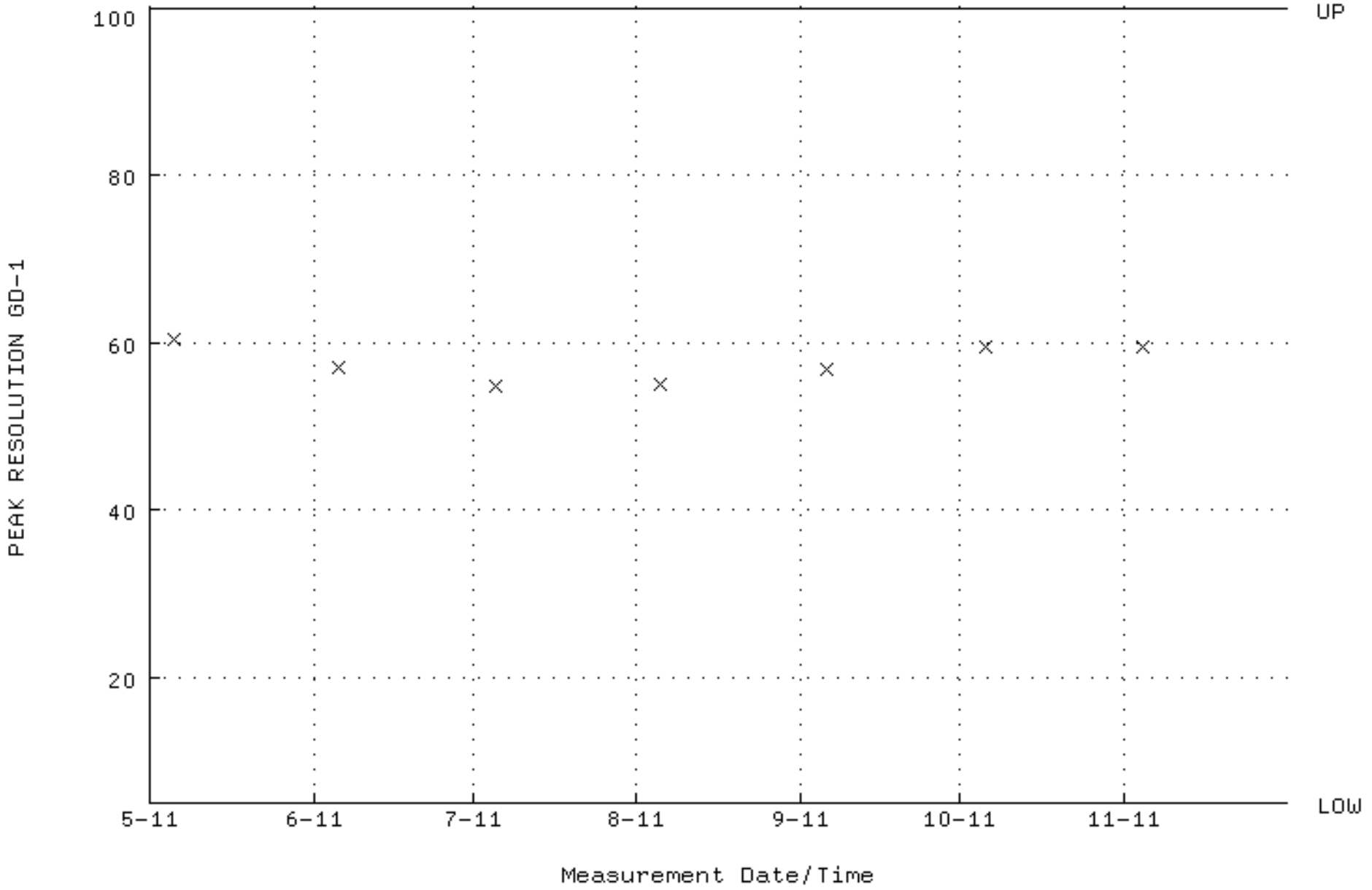
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.304652 through 0.349072



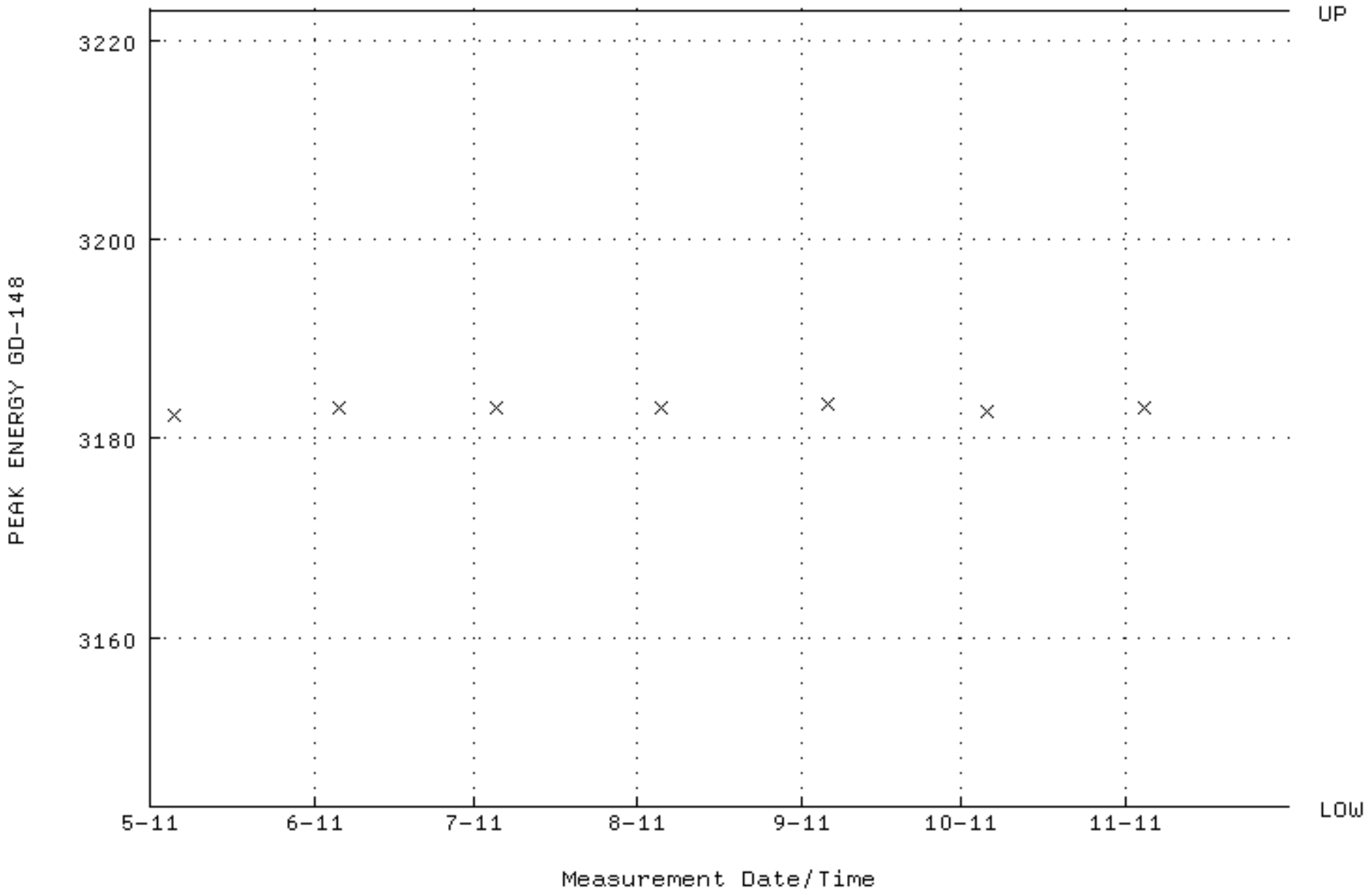
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 80.2027 through 92.3503



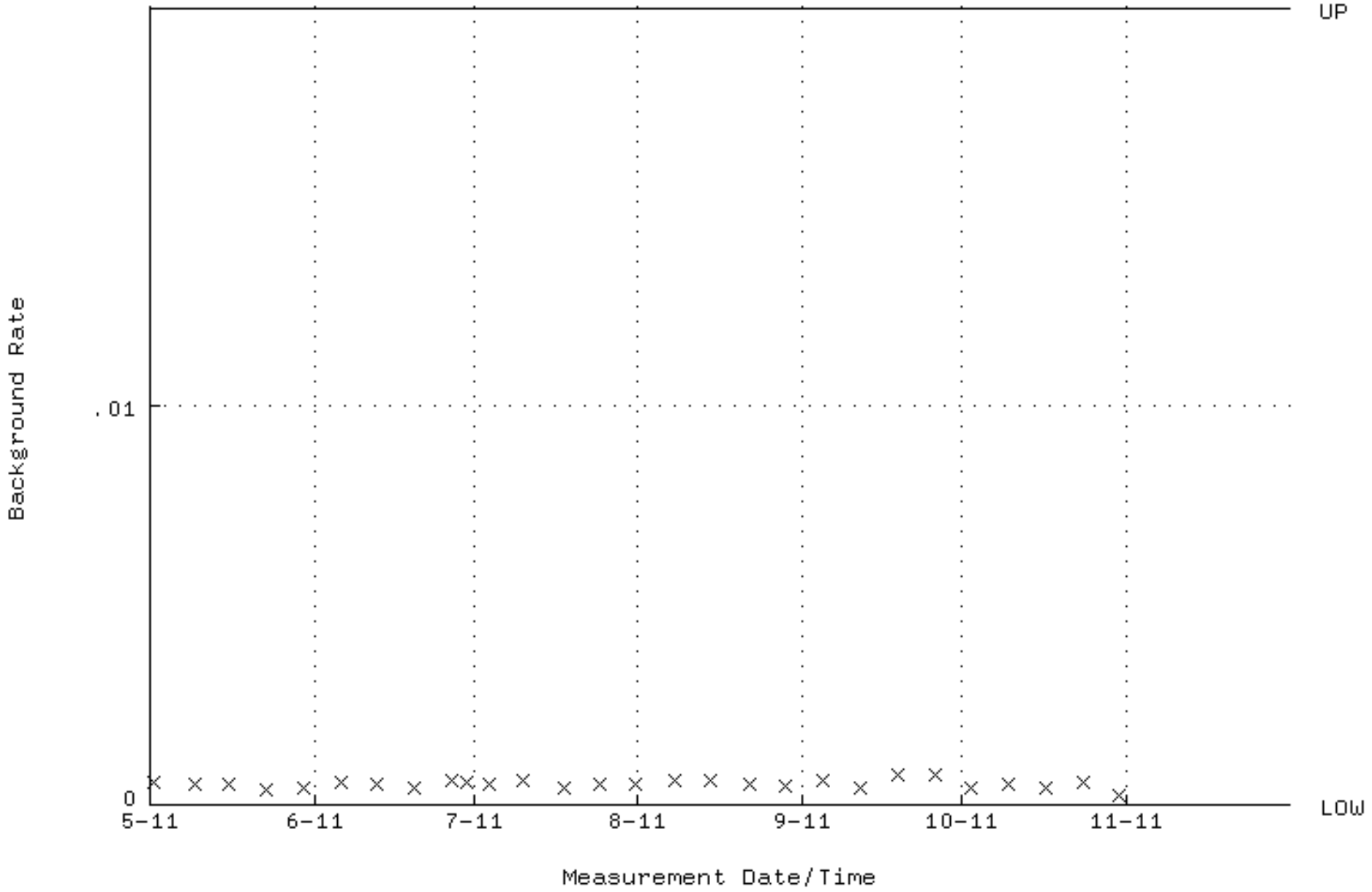
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



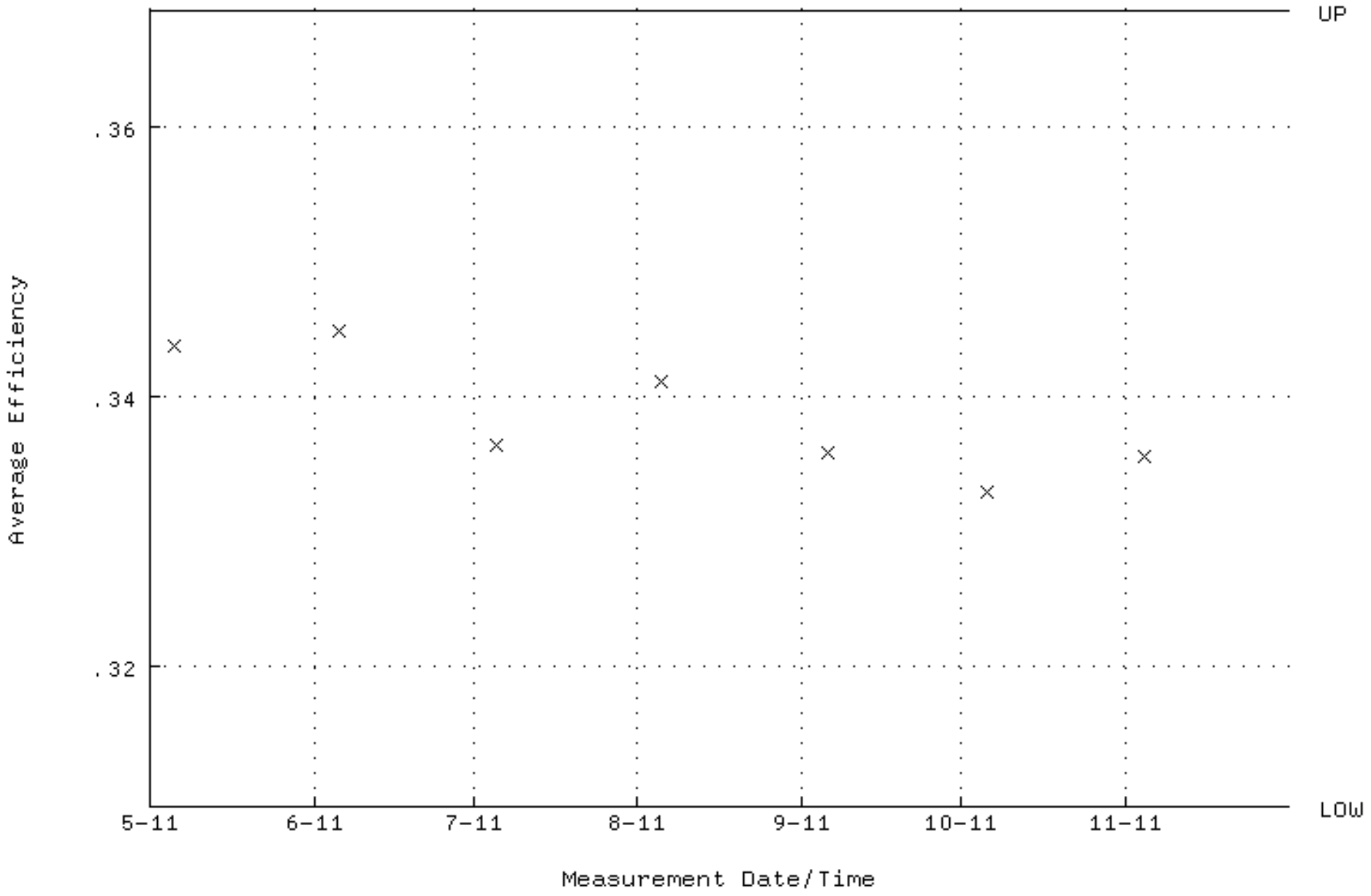
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



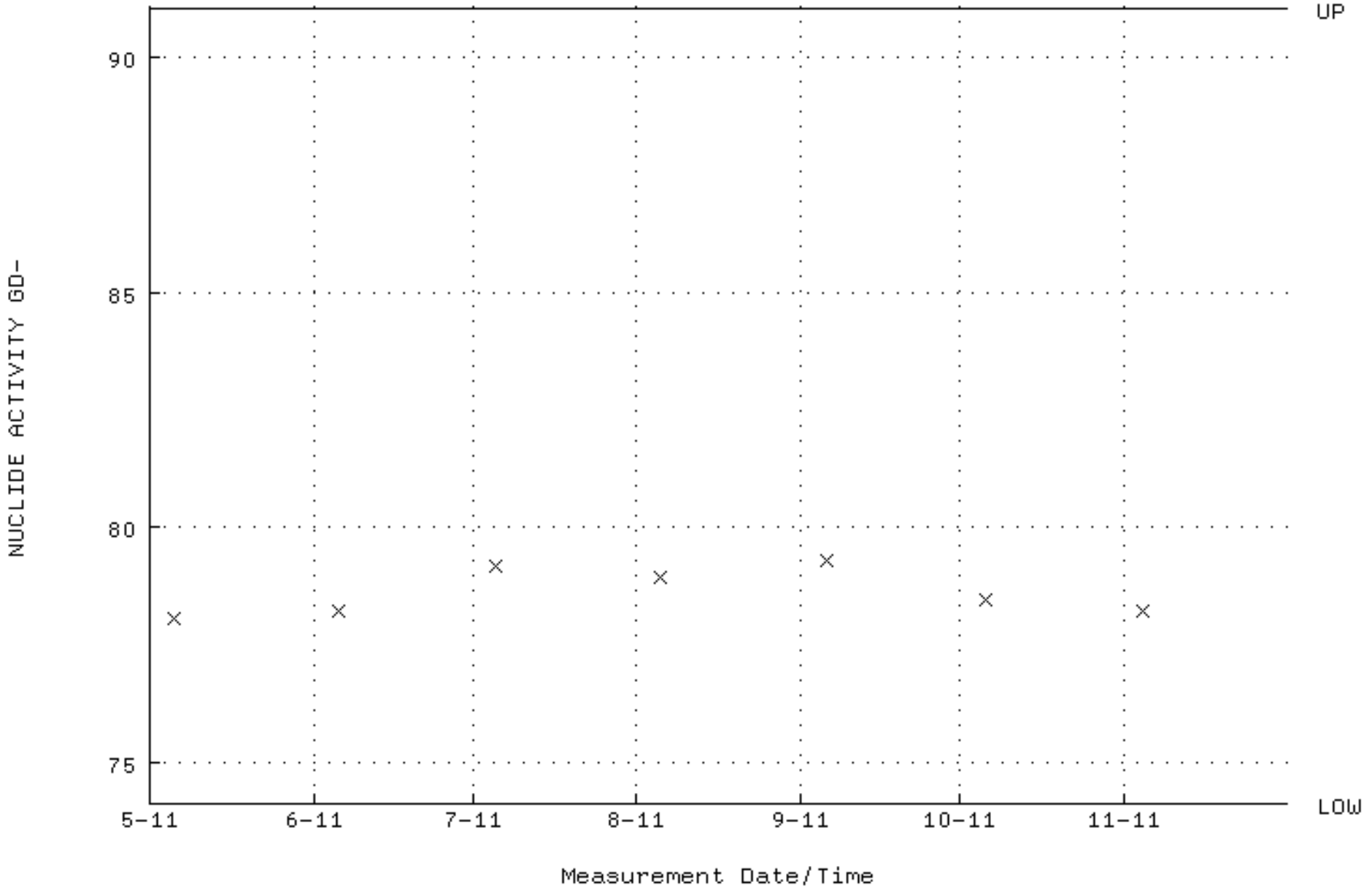
QA filename : DKA100:[ENV_ALPHA.QA.B]B040.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:50 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



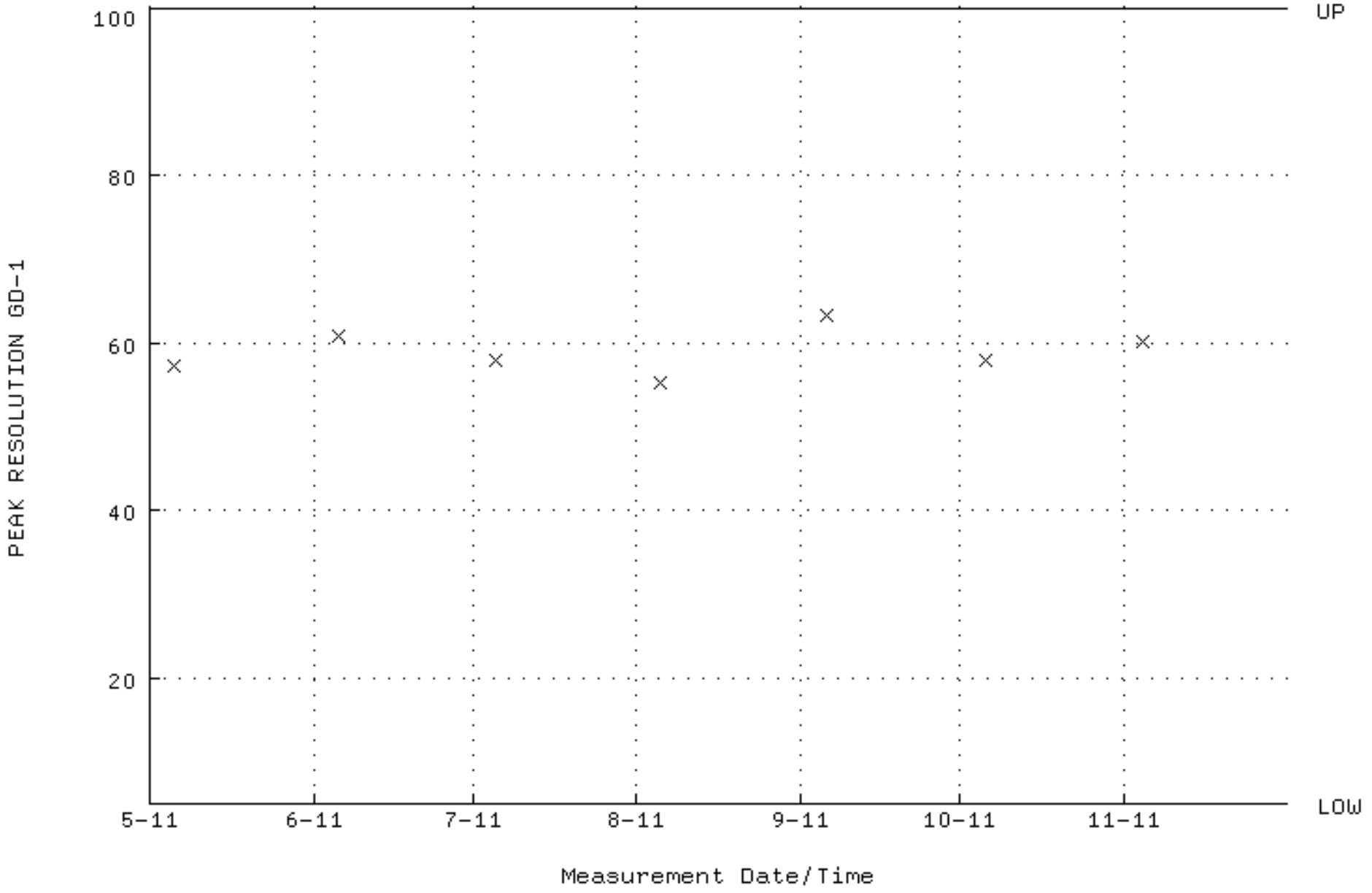
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.309646 through 0.368612



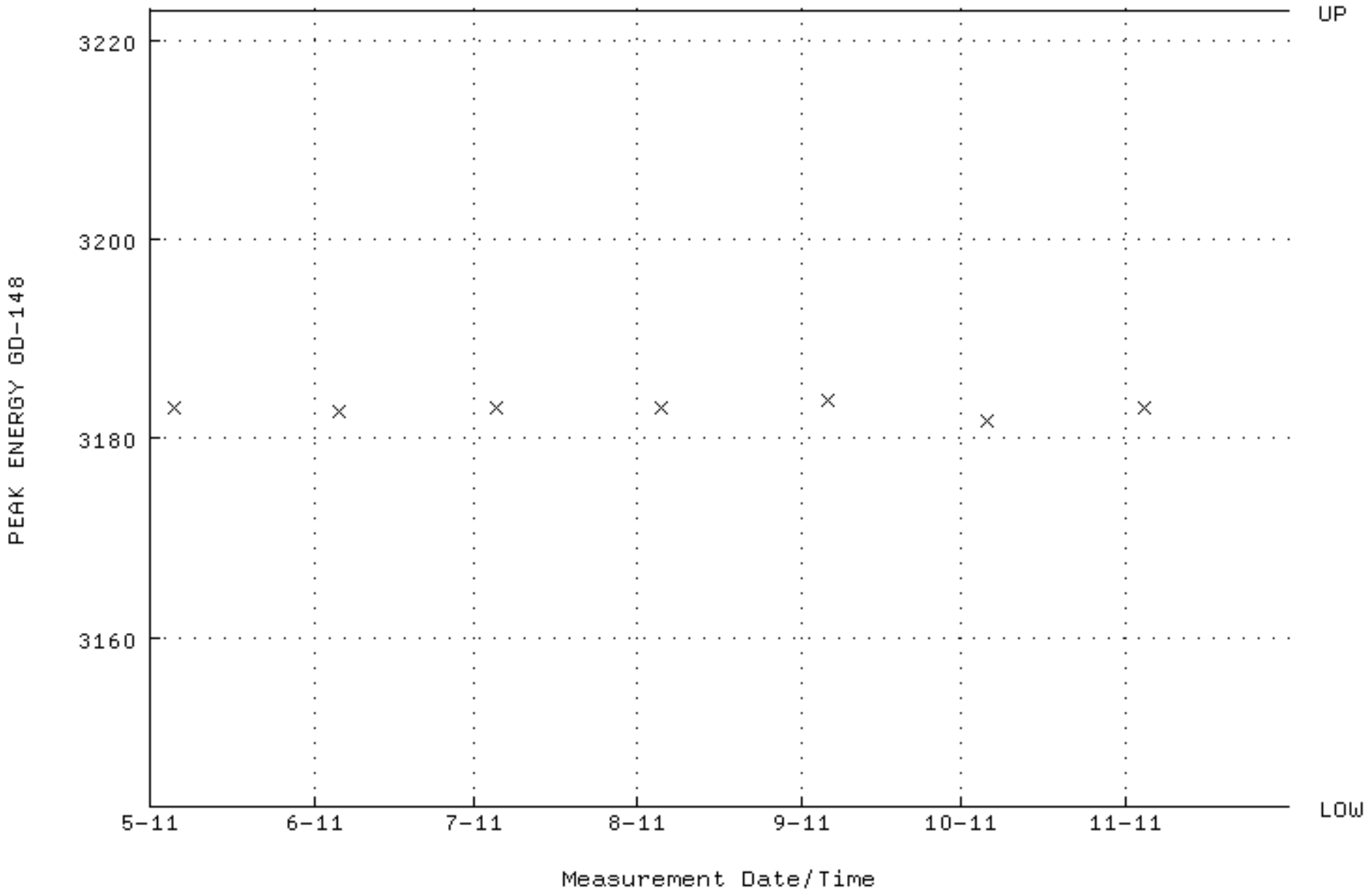
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 74.1174 through 91.0368



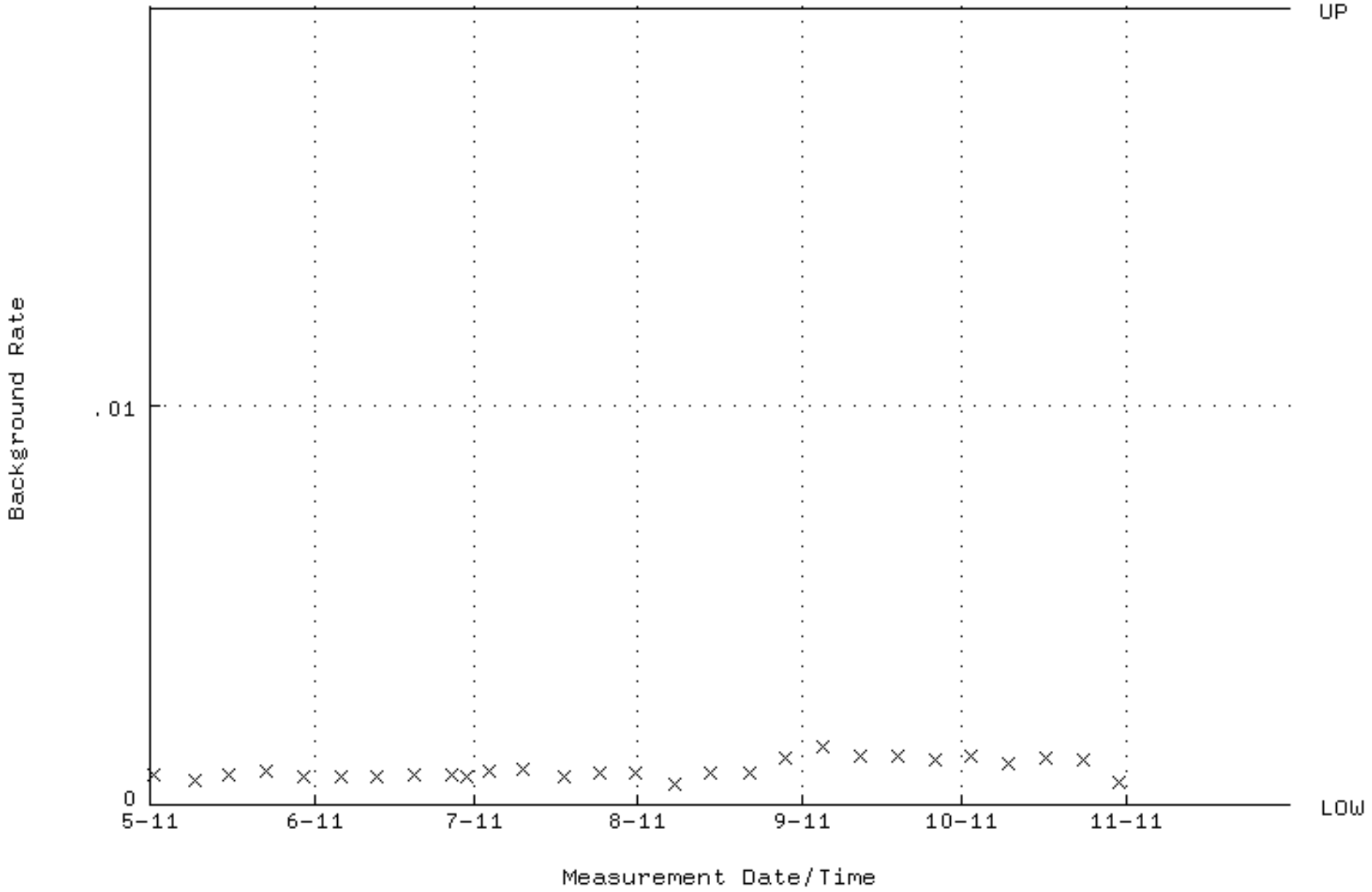
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



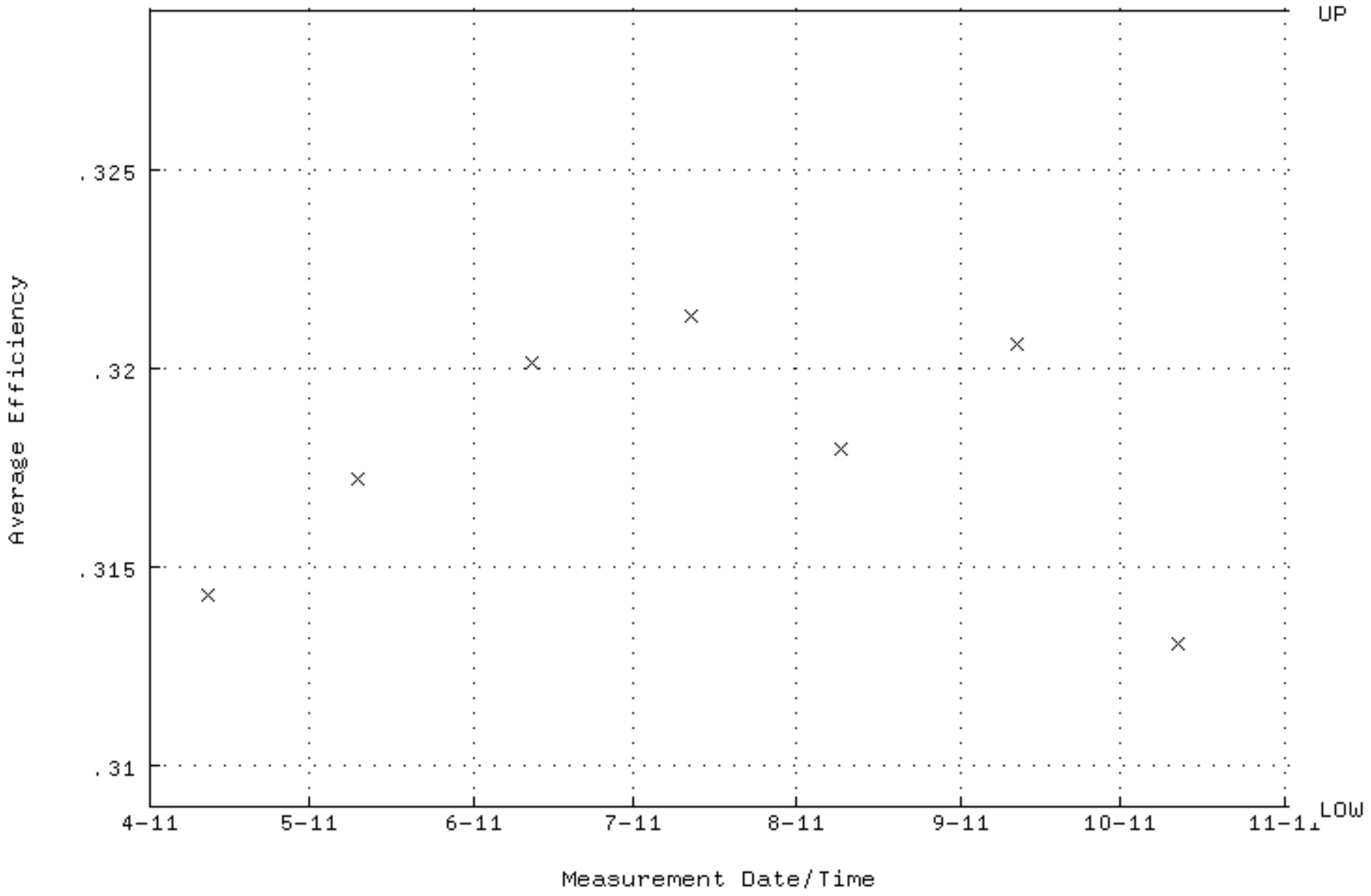
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 5-MAY-2011 12:35:00 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



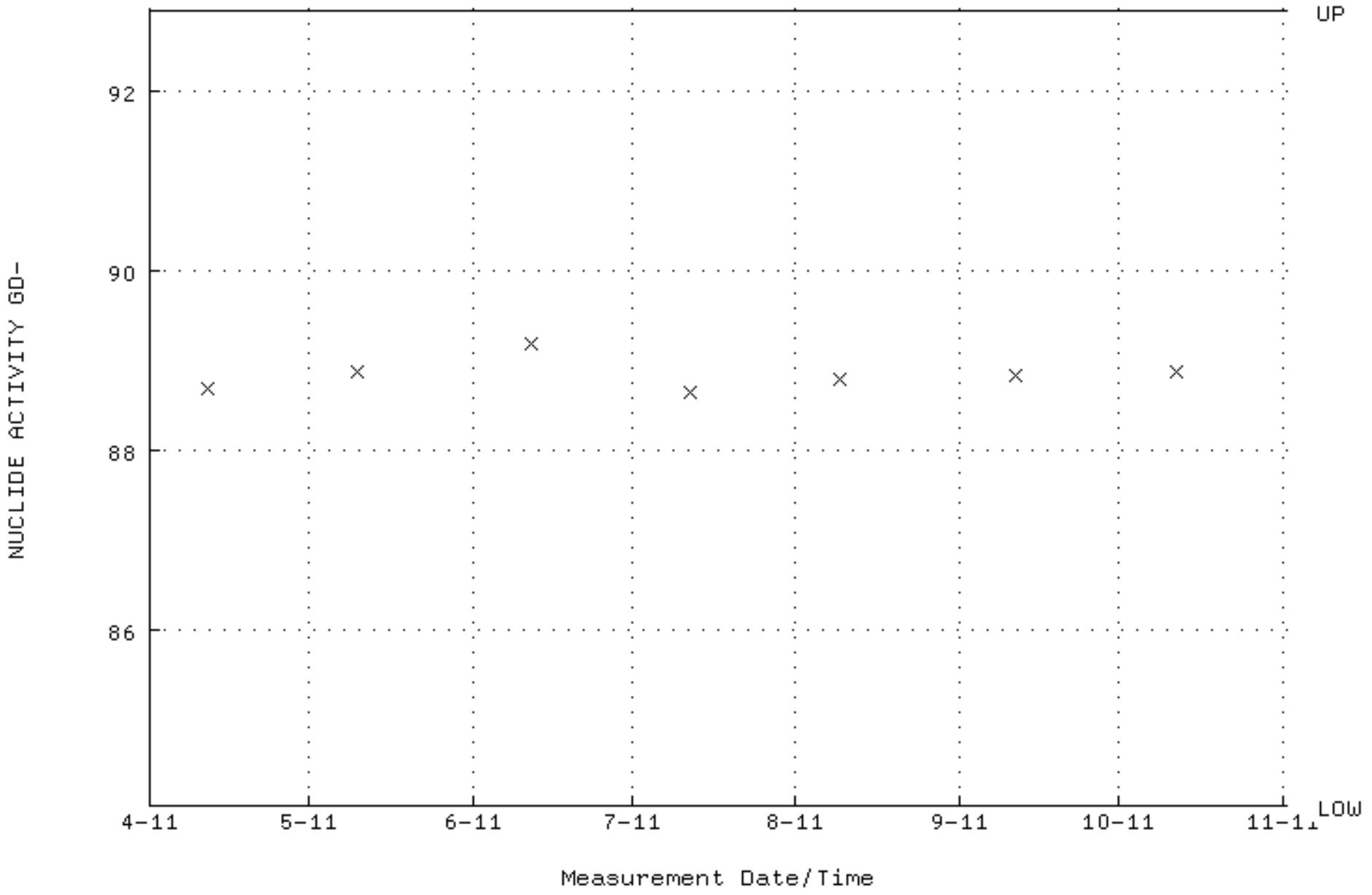
QA filename : DKA100:[ENV_ALPHA.QA.B]B042.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-MAY-2011 17:07:50 through 1-DEC-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



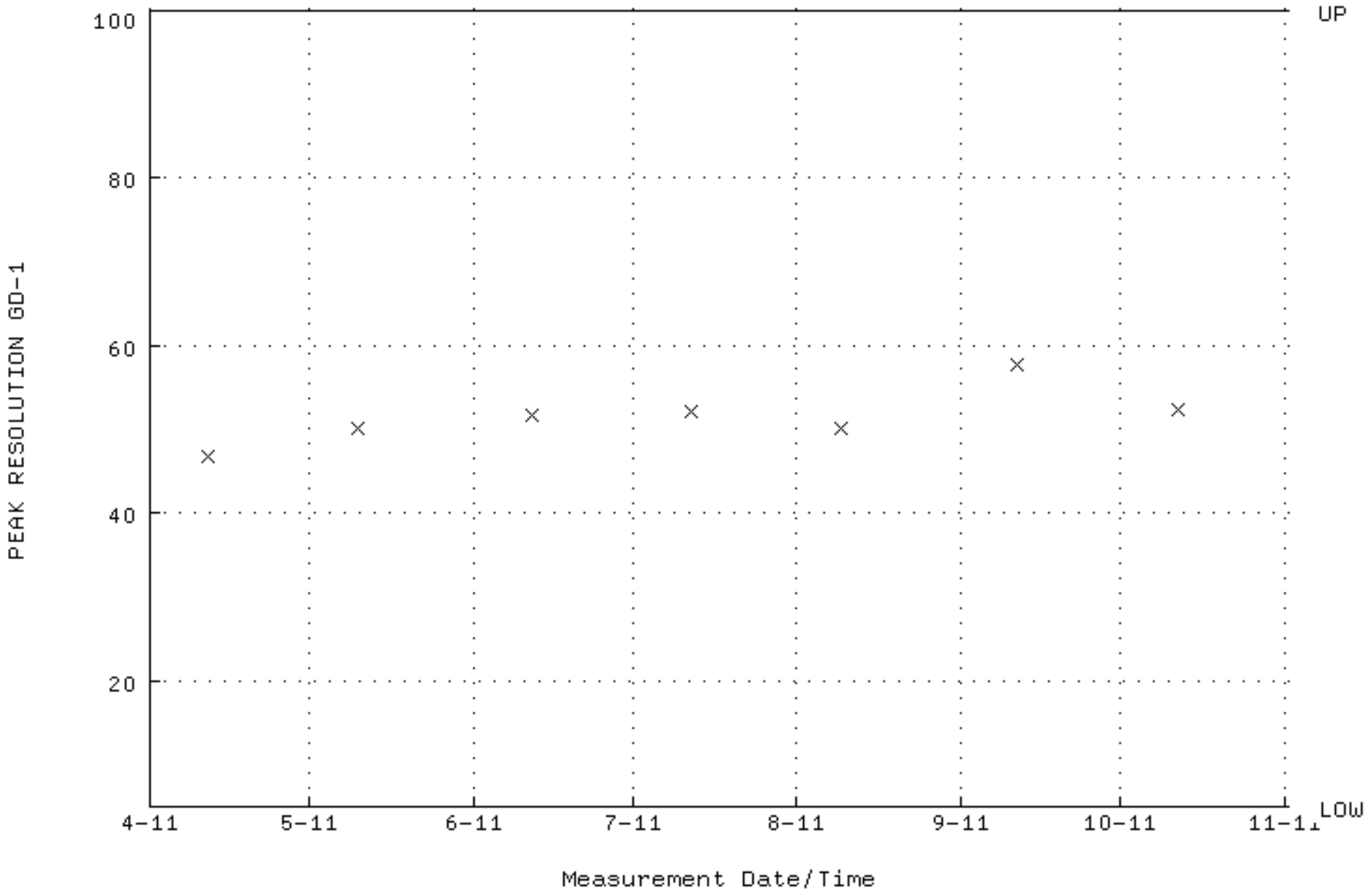
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.308982 through 0.328982



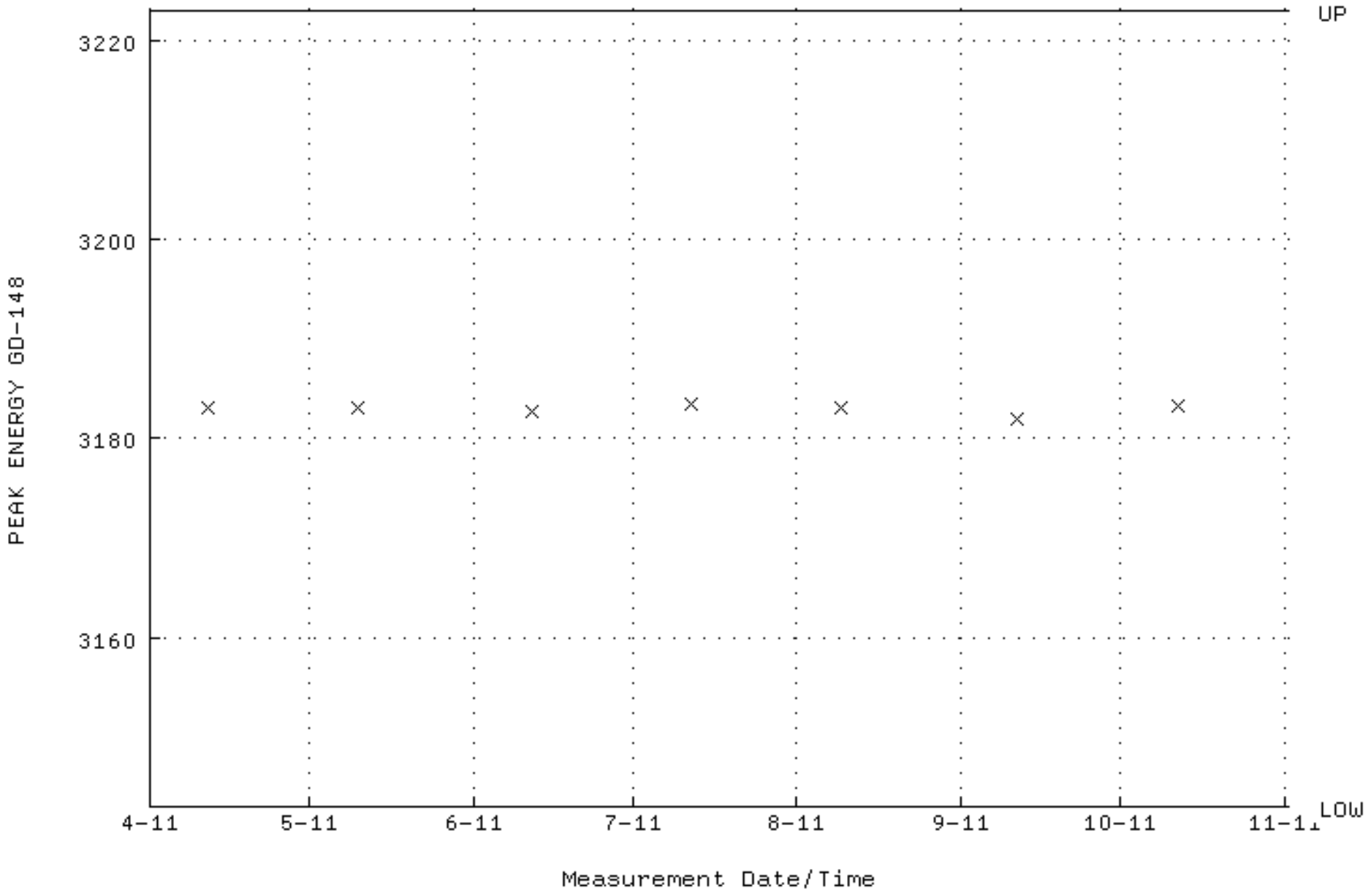
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 84.0522 through 92.8998



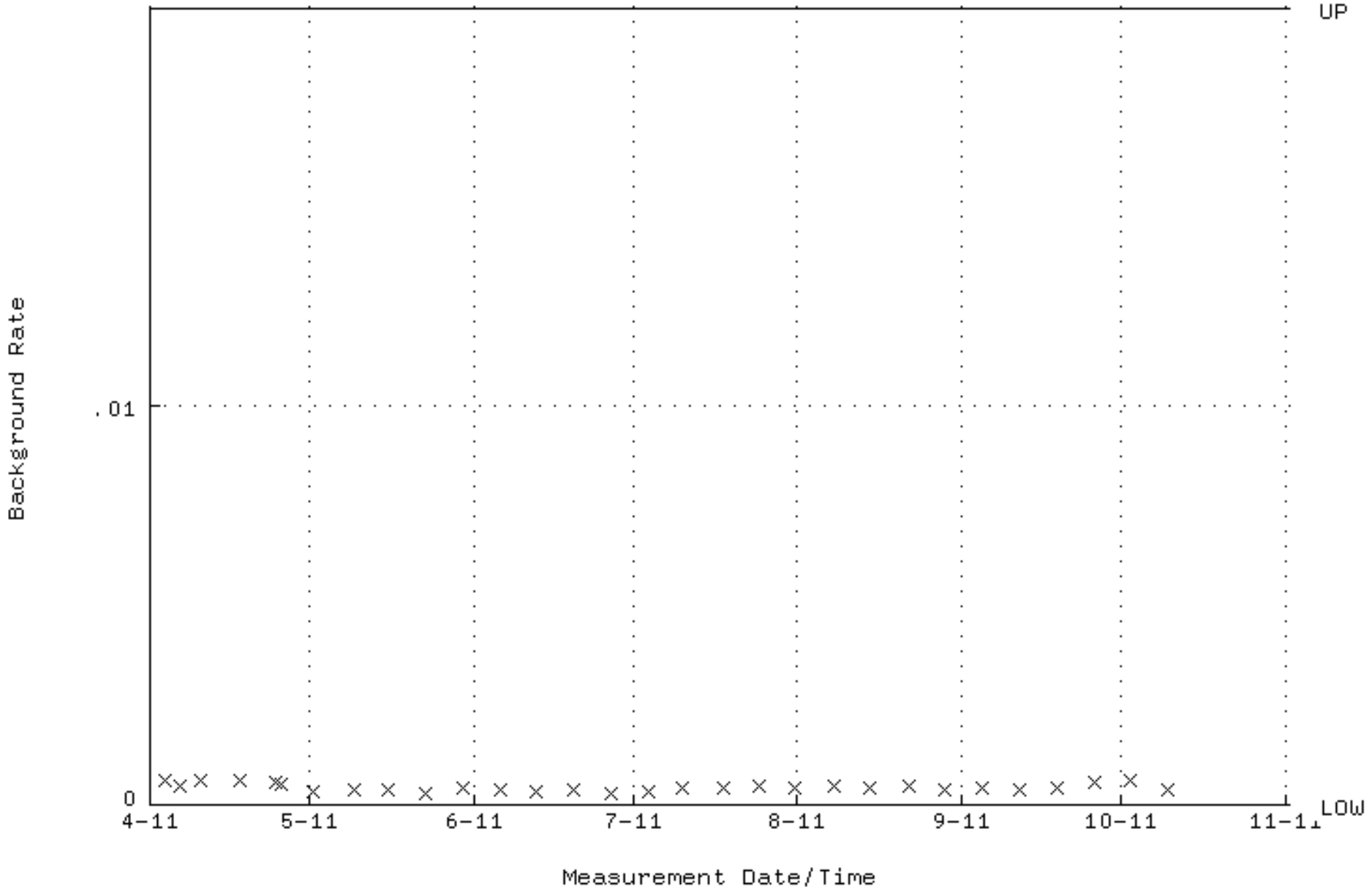
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



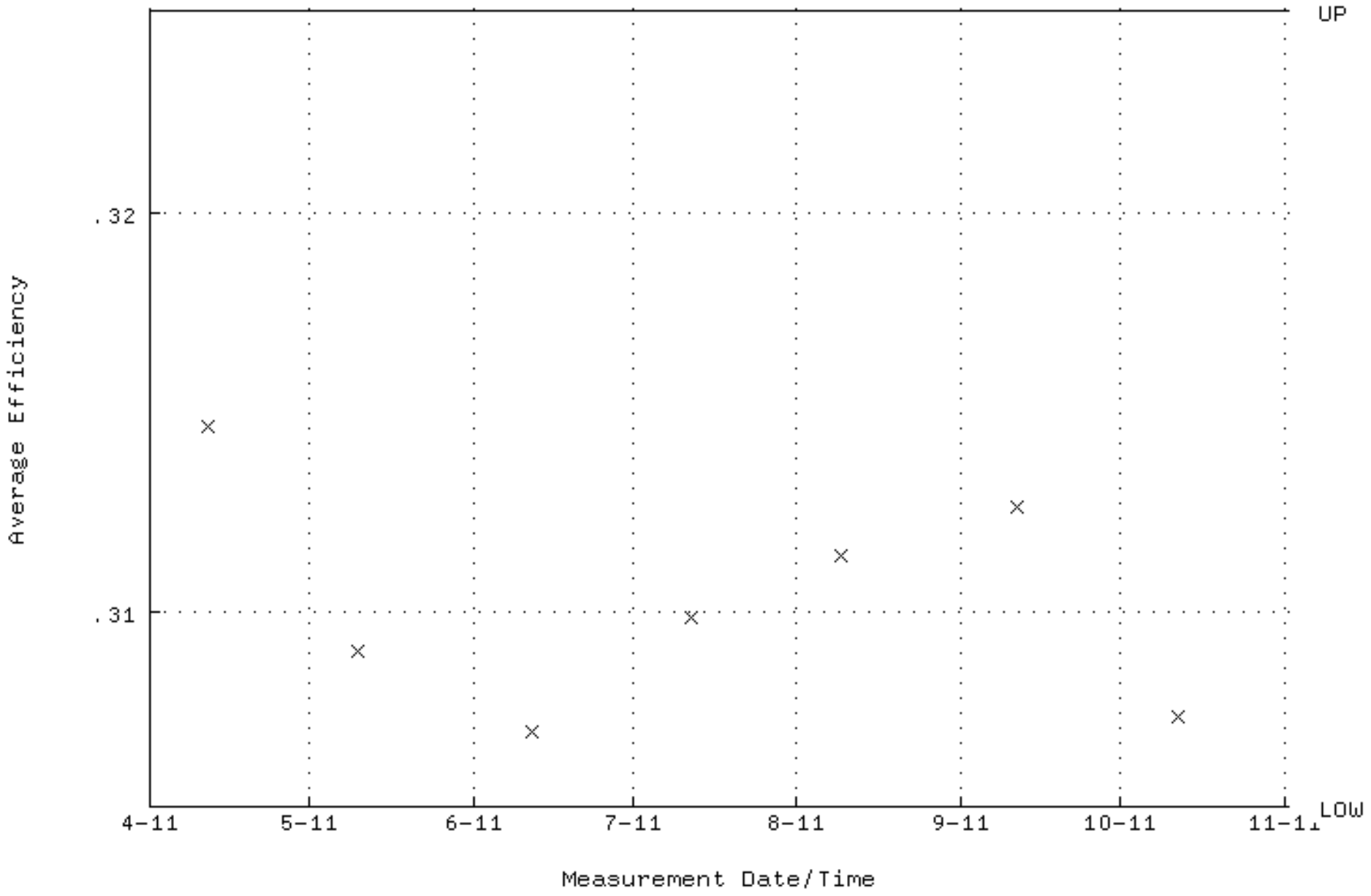
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



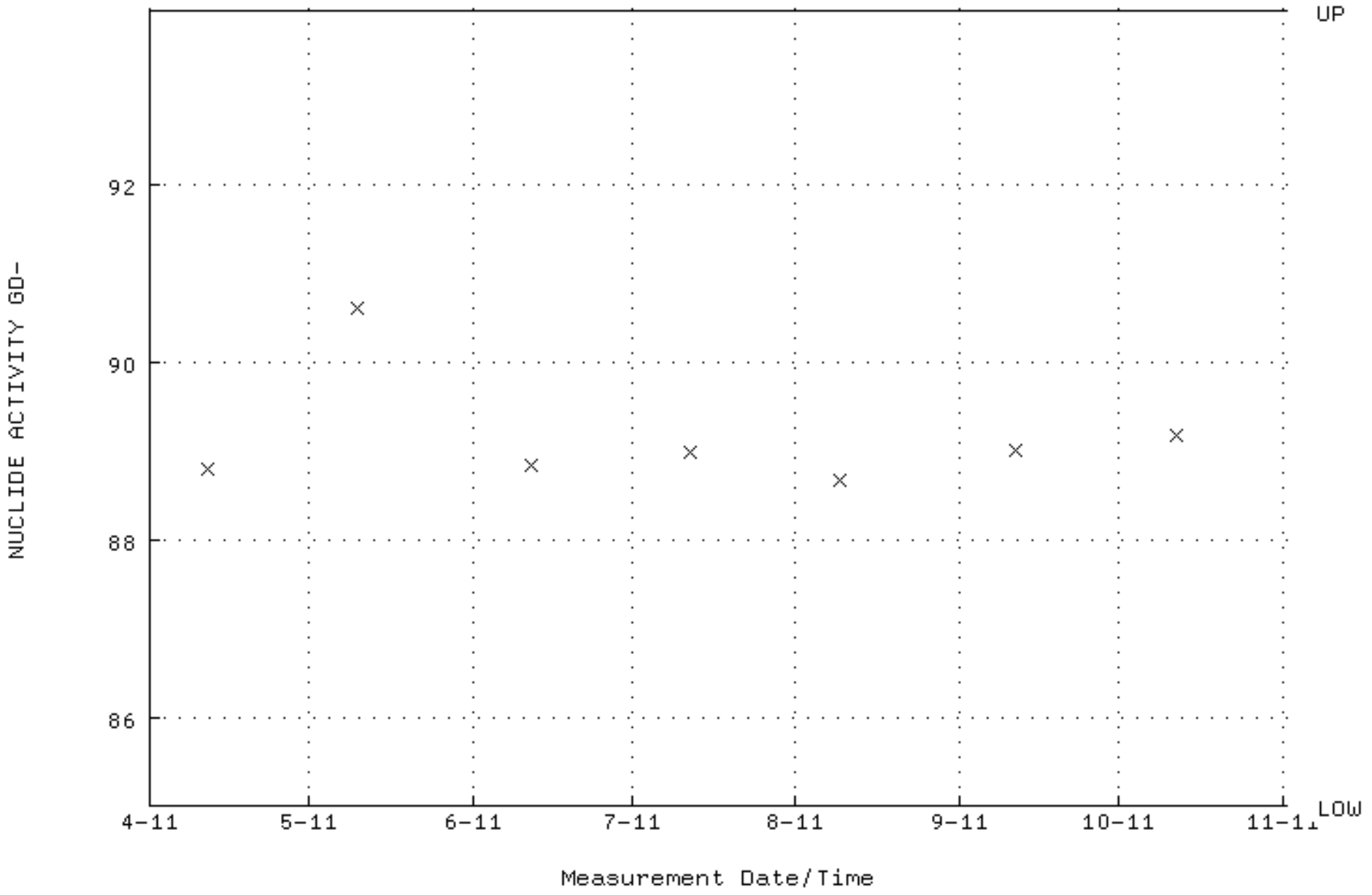
QA filename : DKA100:[ENV_ALPHA.QA.B]B072.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



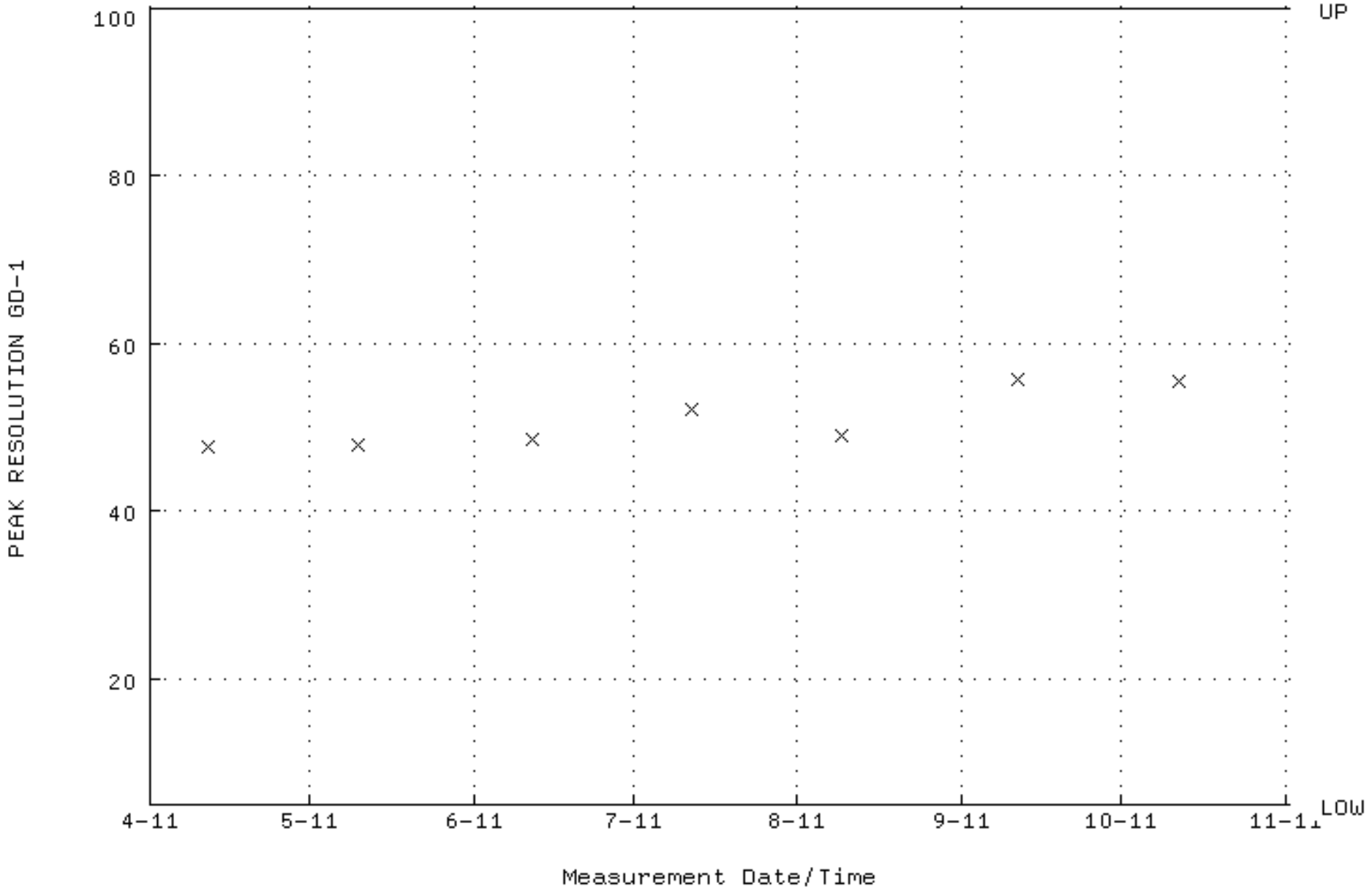
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.305087 through 0.325087



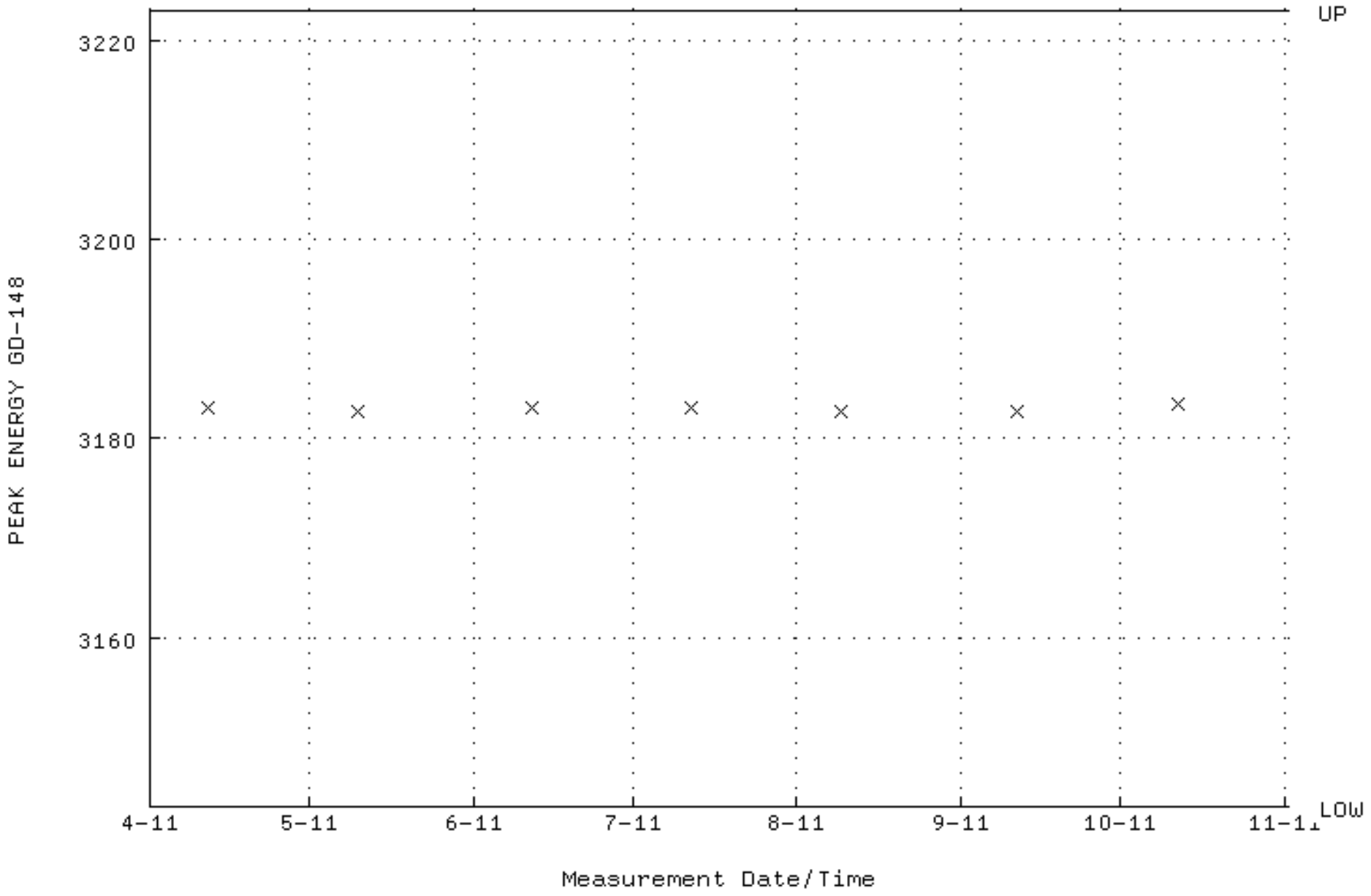
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.0161 through 93.9651



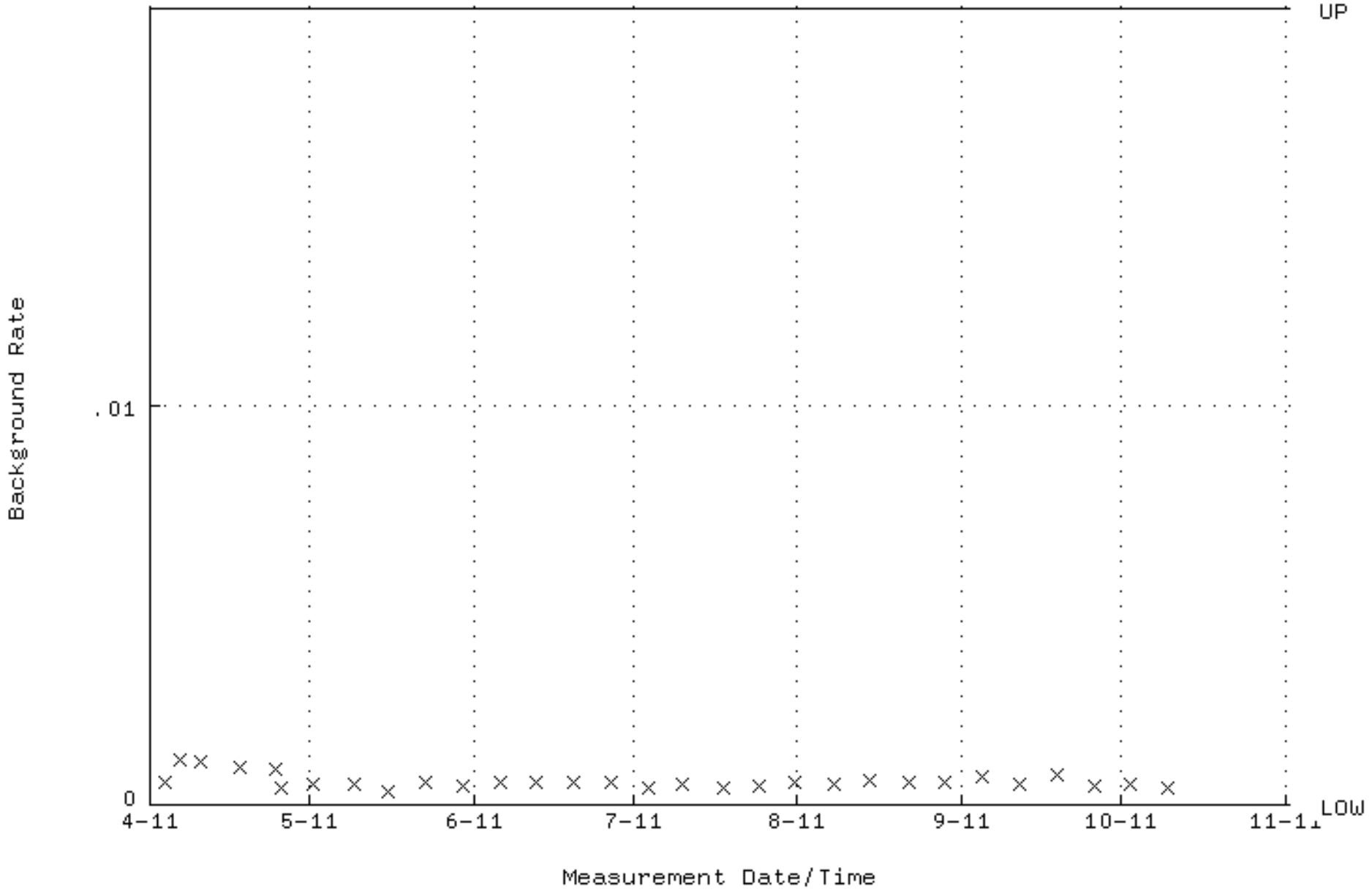
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



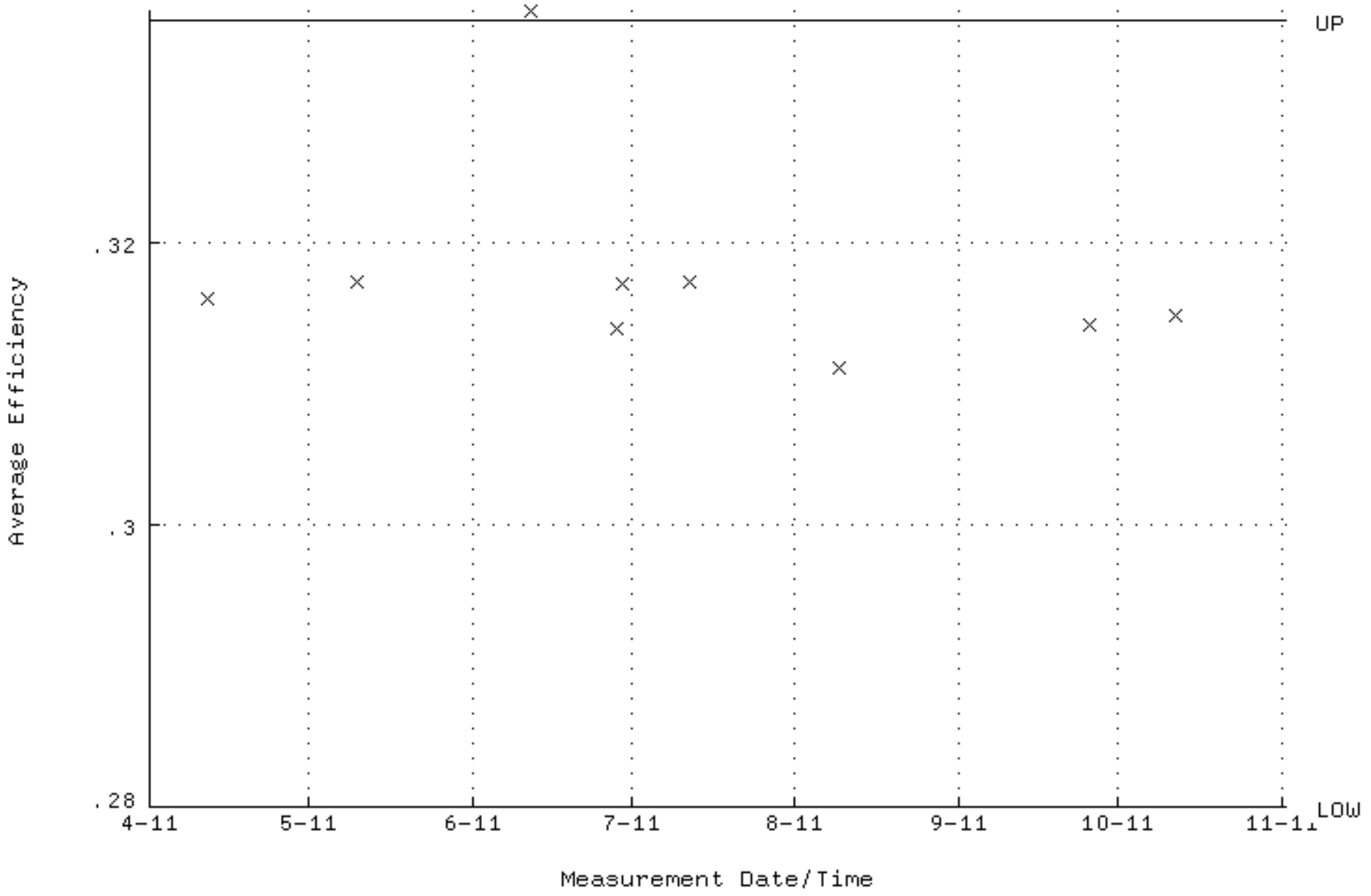
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;6
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



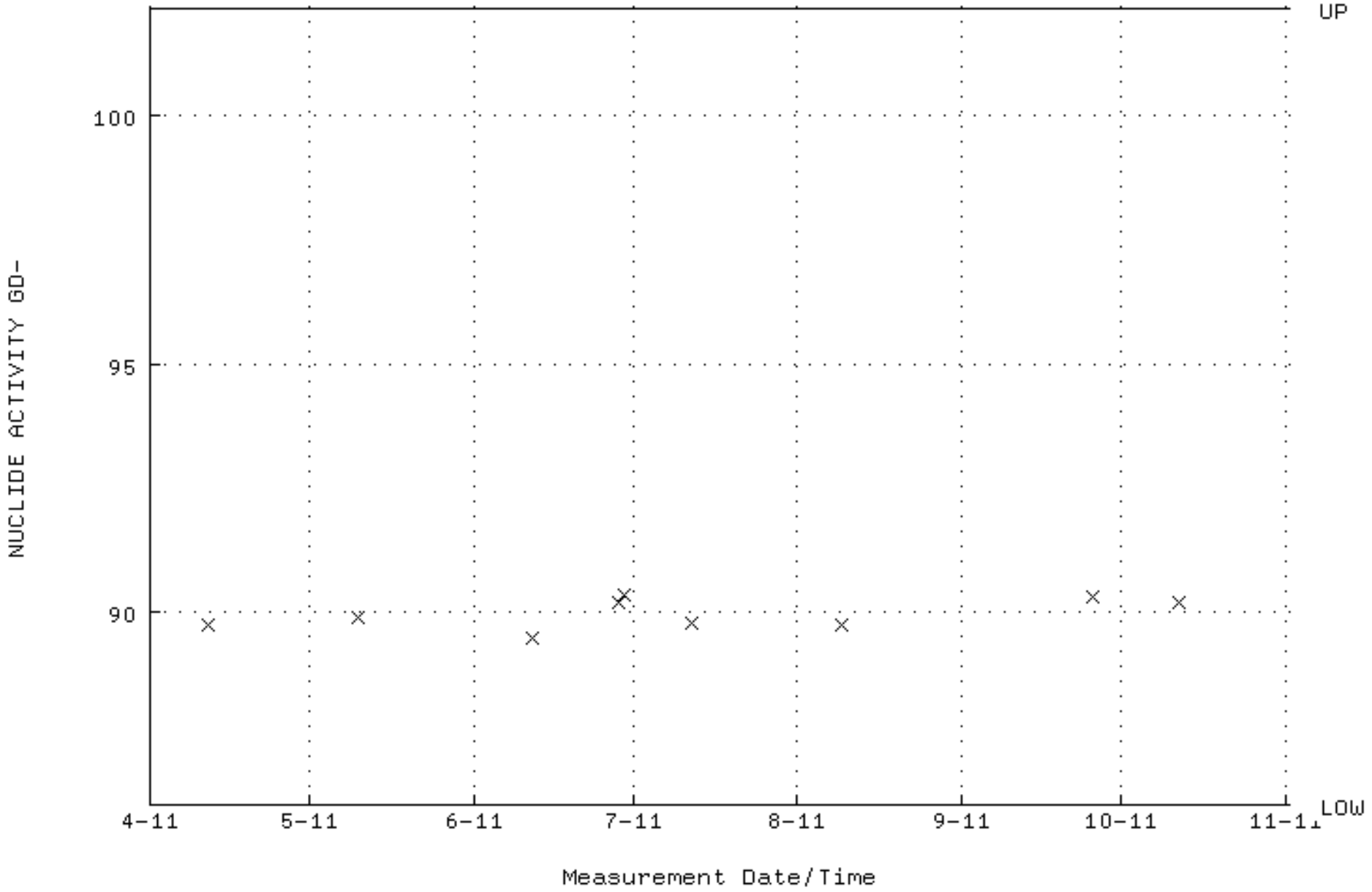
QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



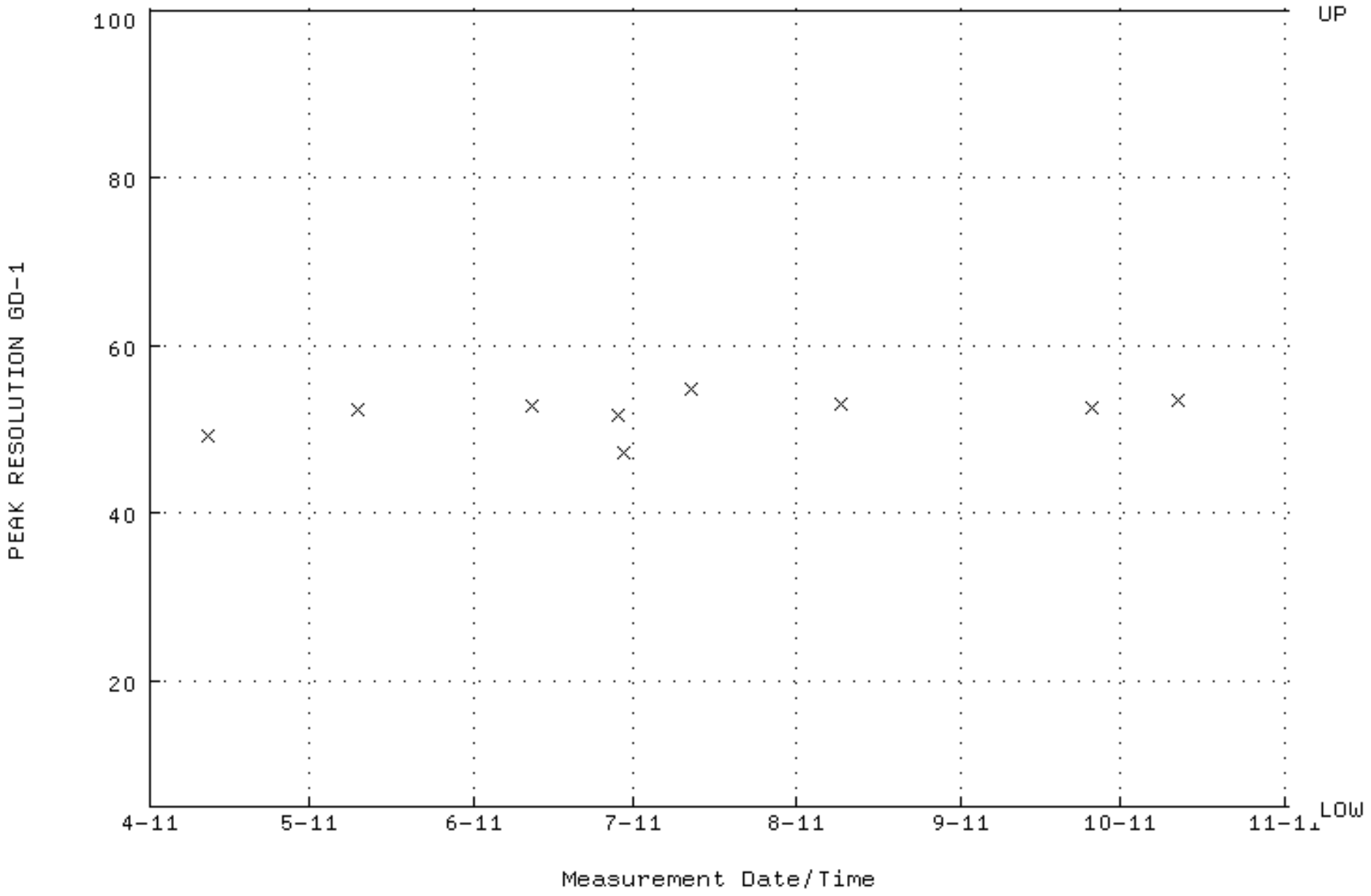
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.279983 through 0.335803



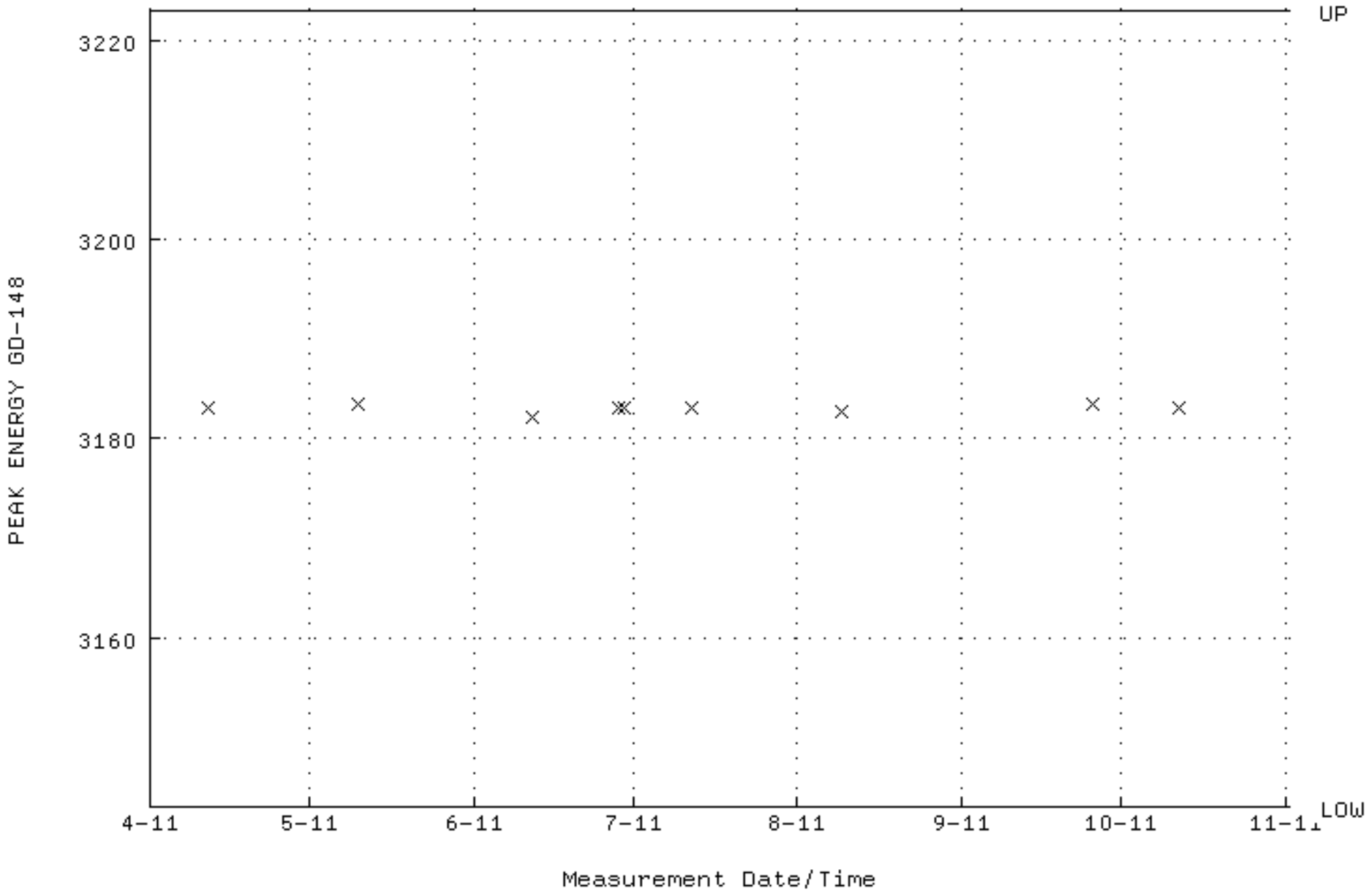
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 86.1031 through 102.173



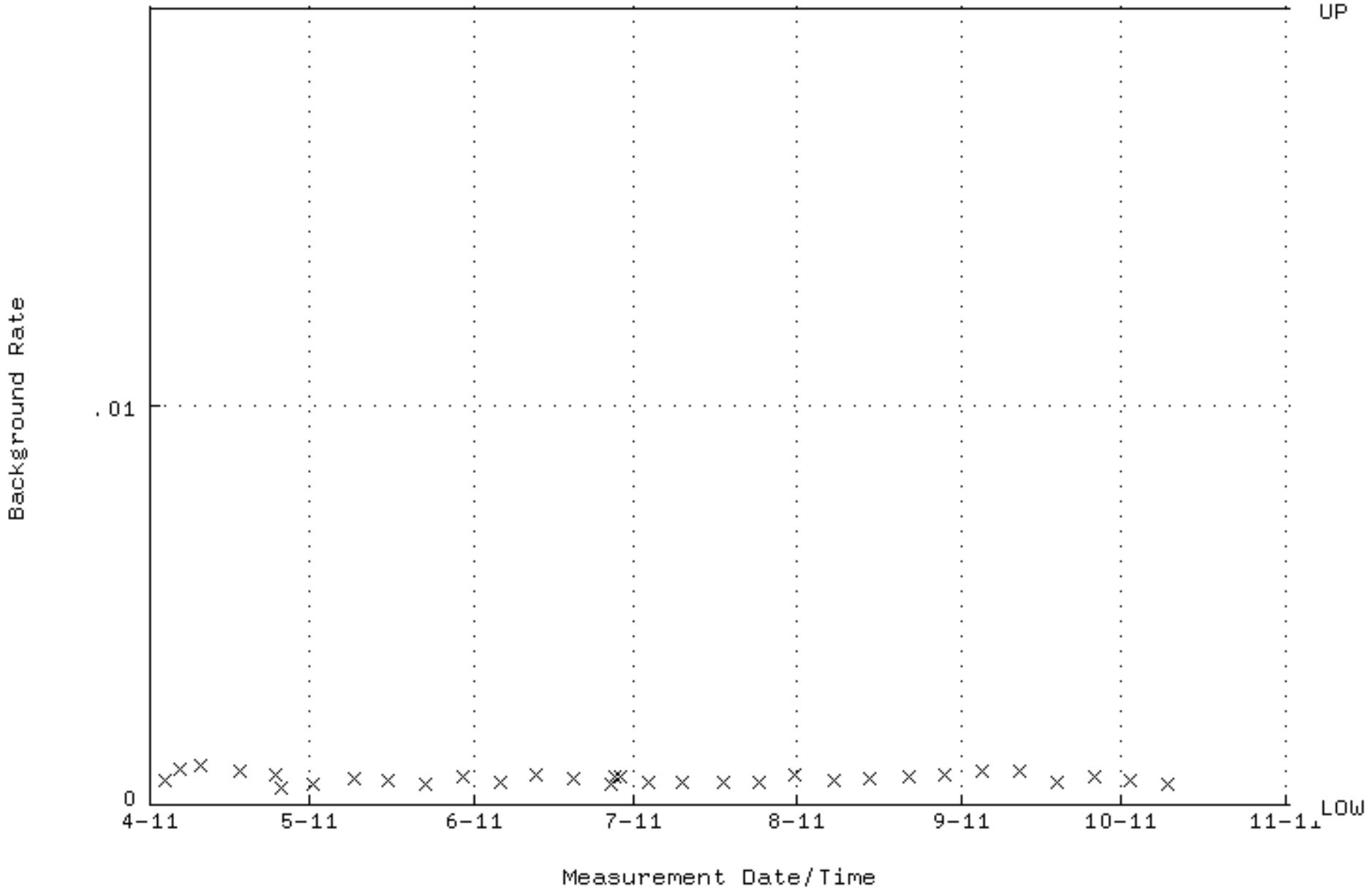
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



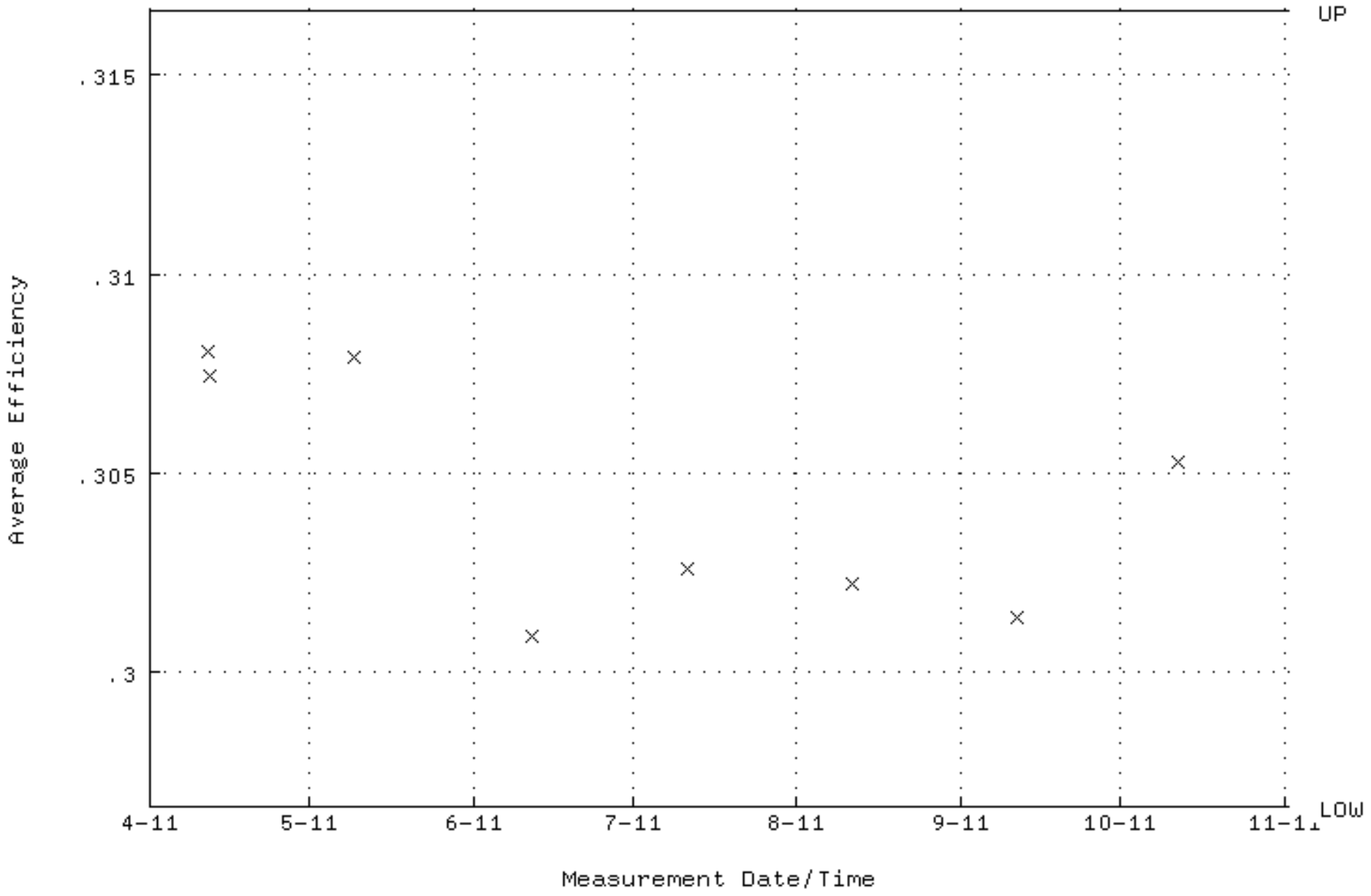
QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:12 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



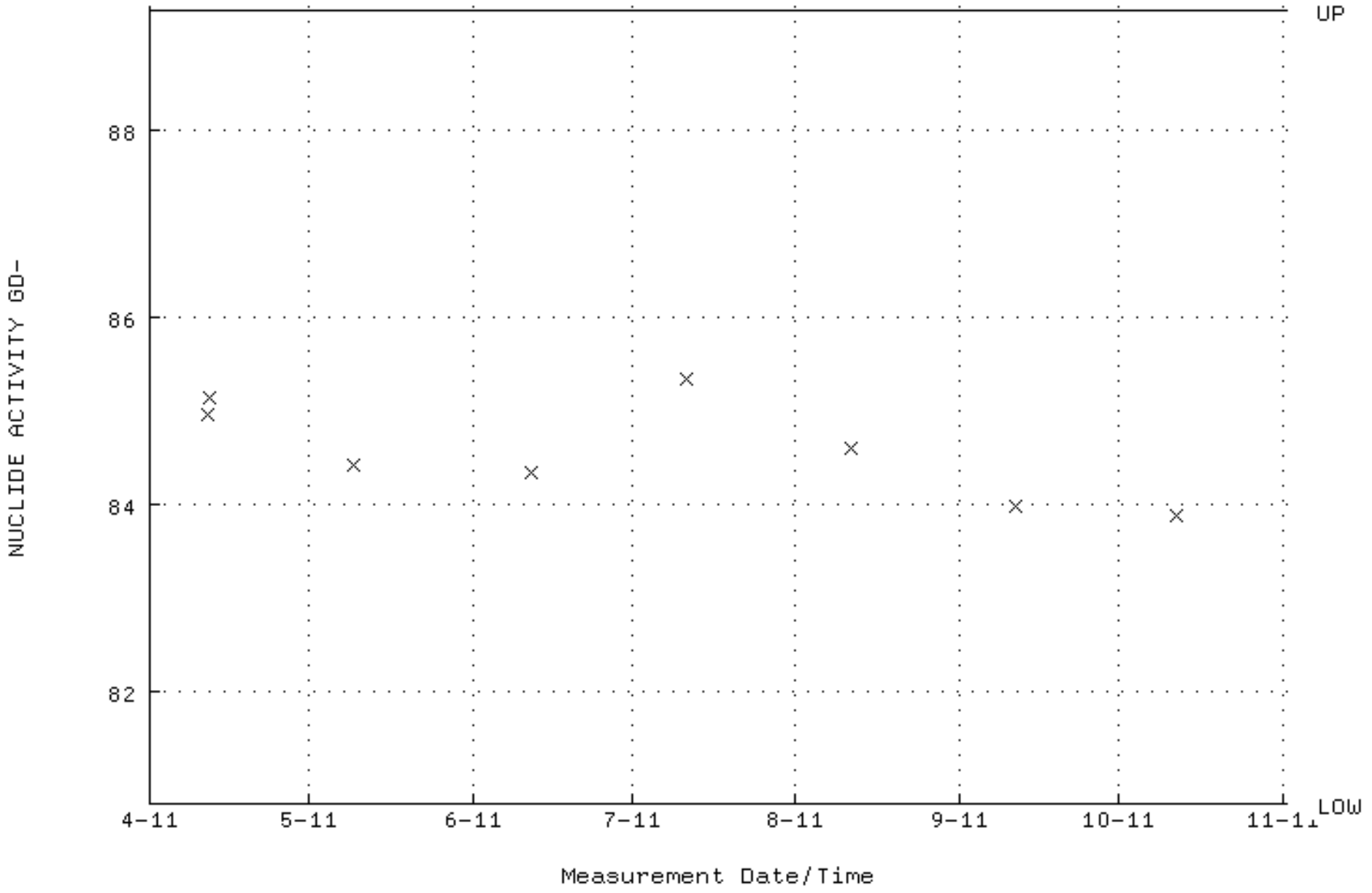
QA filename : DKA100:[ENV_ALPHA.QA.B]B075.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



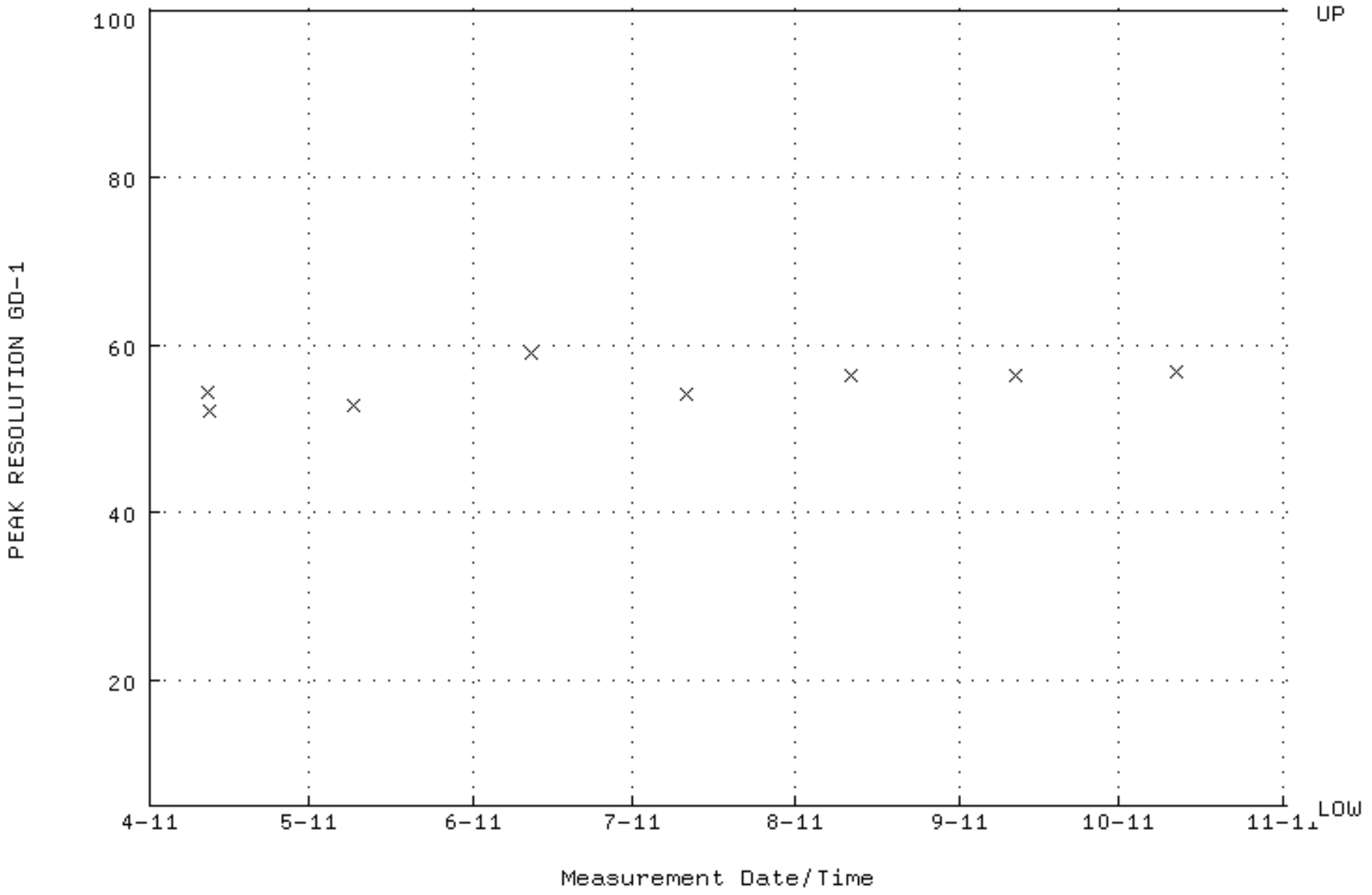
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.296613 through 0.316613



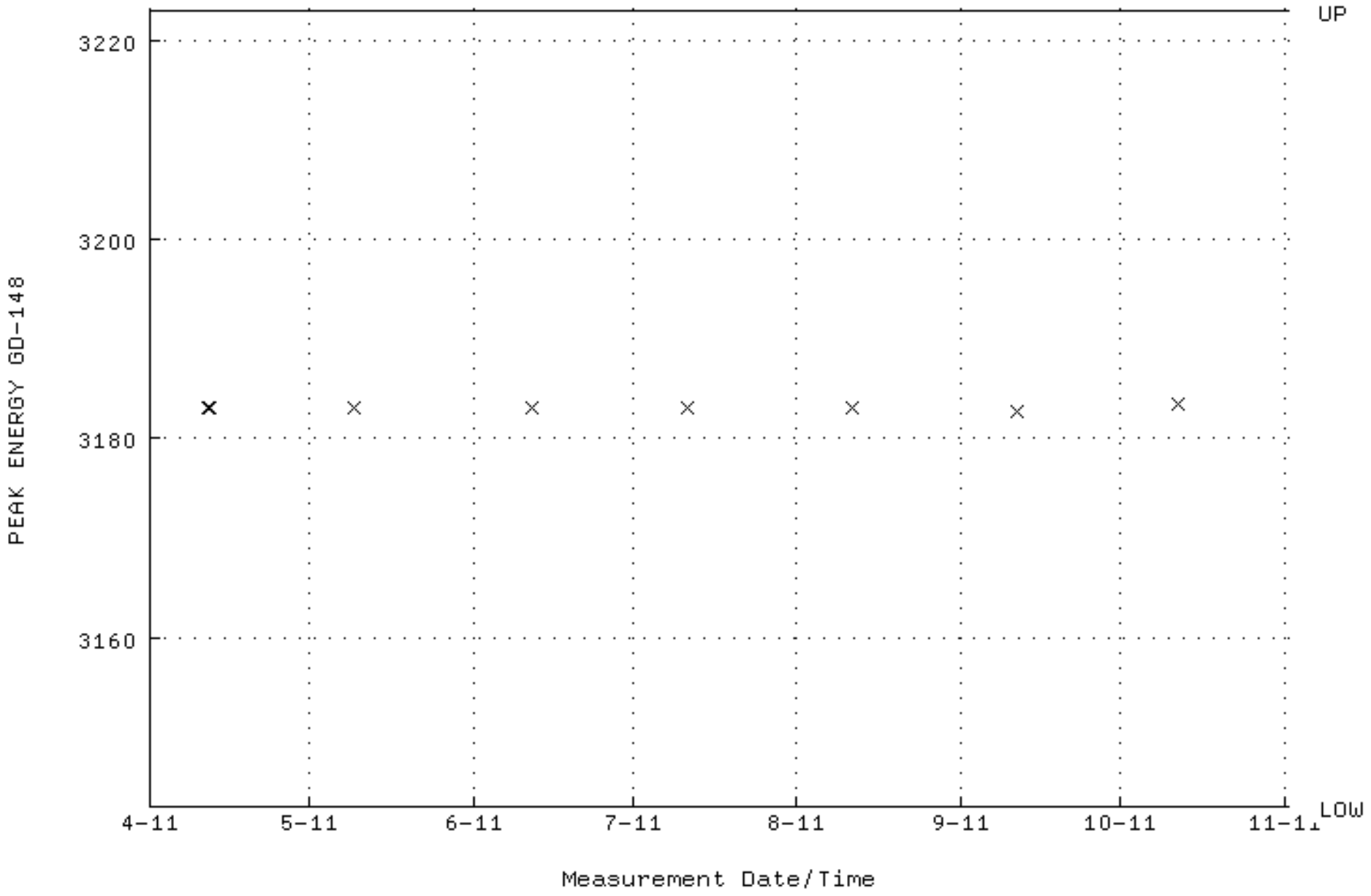
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 80.8009 through 89.3063



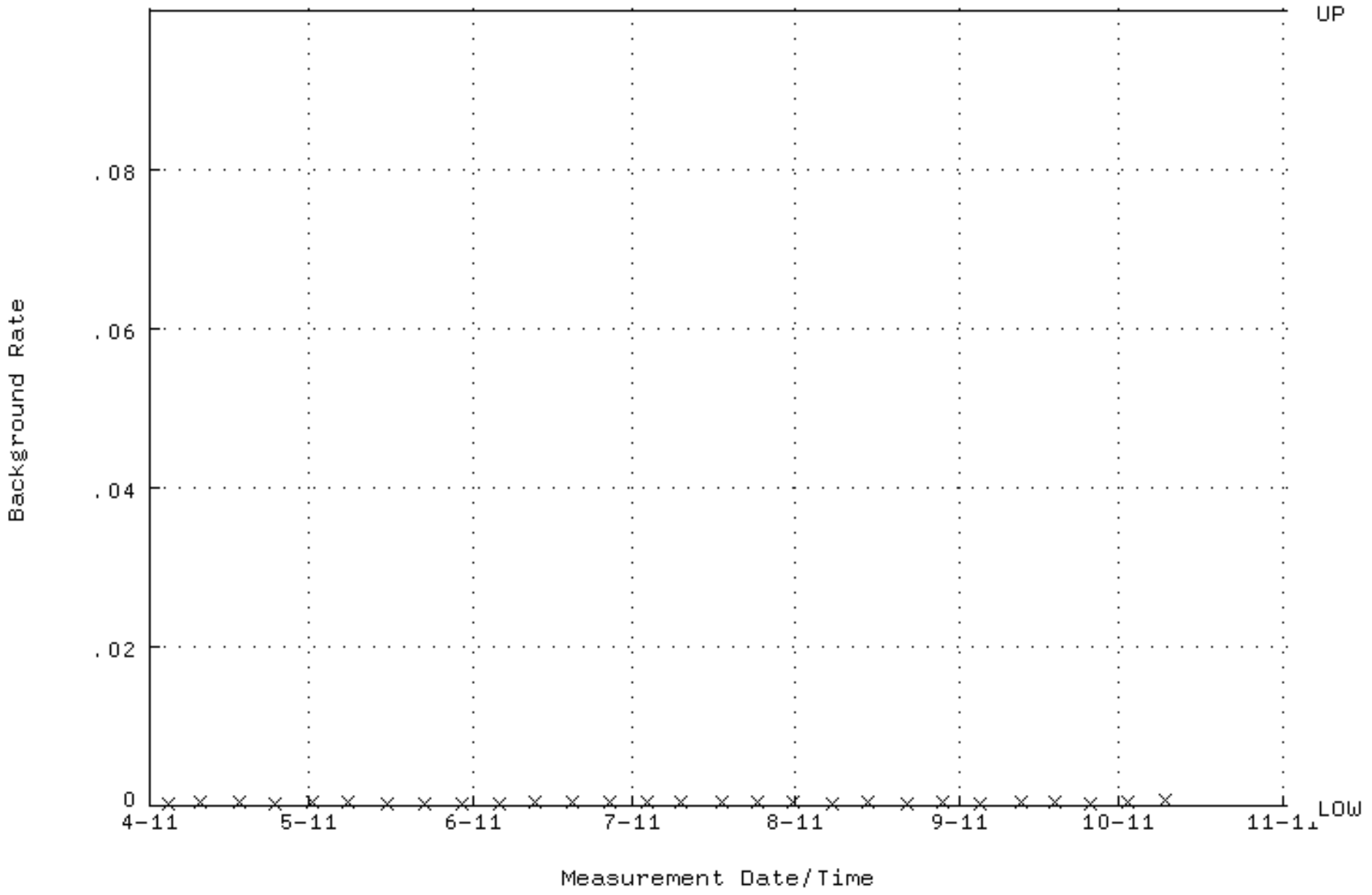
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;2
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



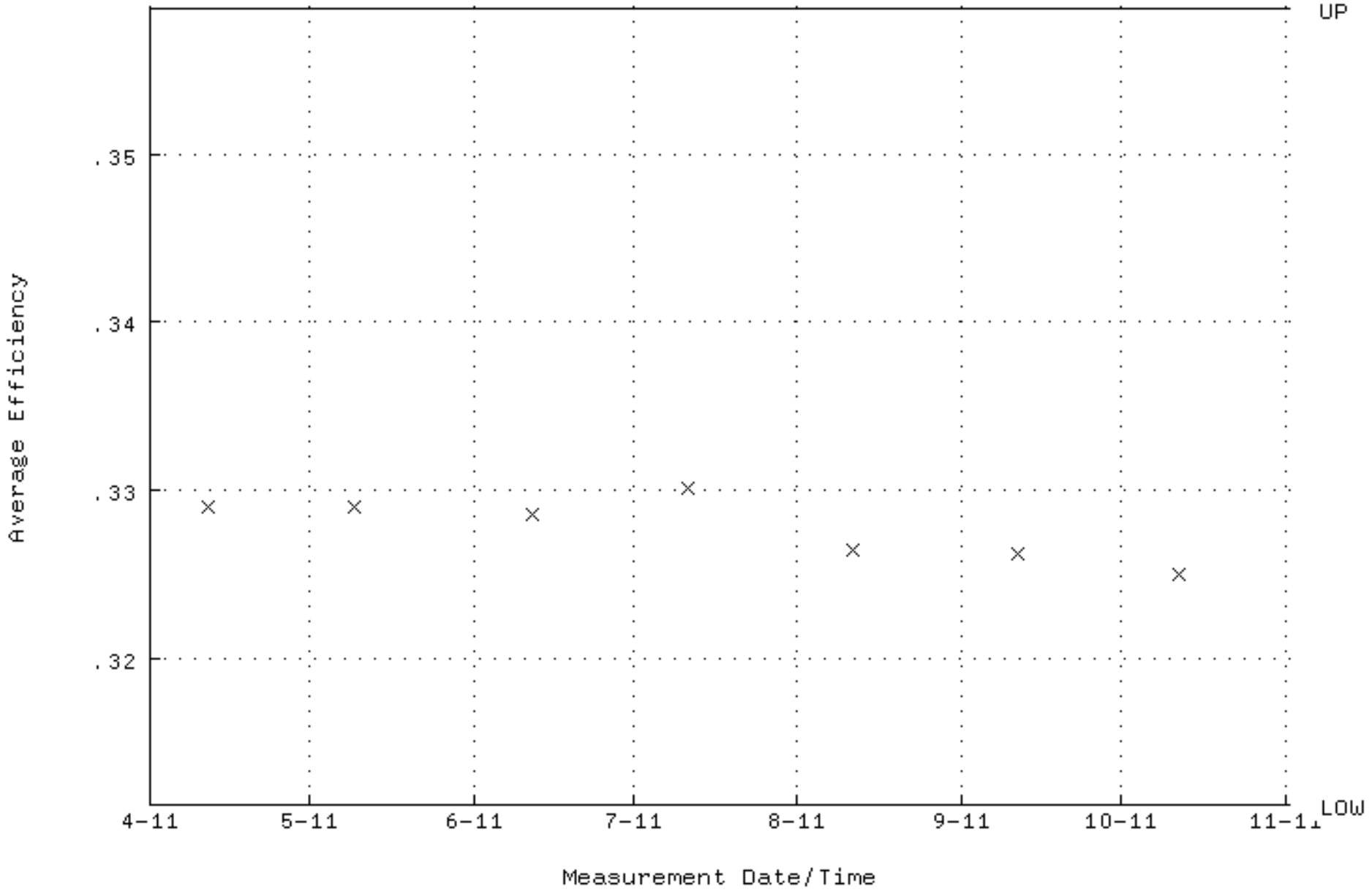
QA filename : DKA100:[ENV_ALPHA.QA.W]W089.QAF;2
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



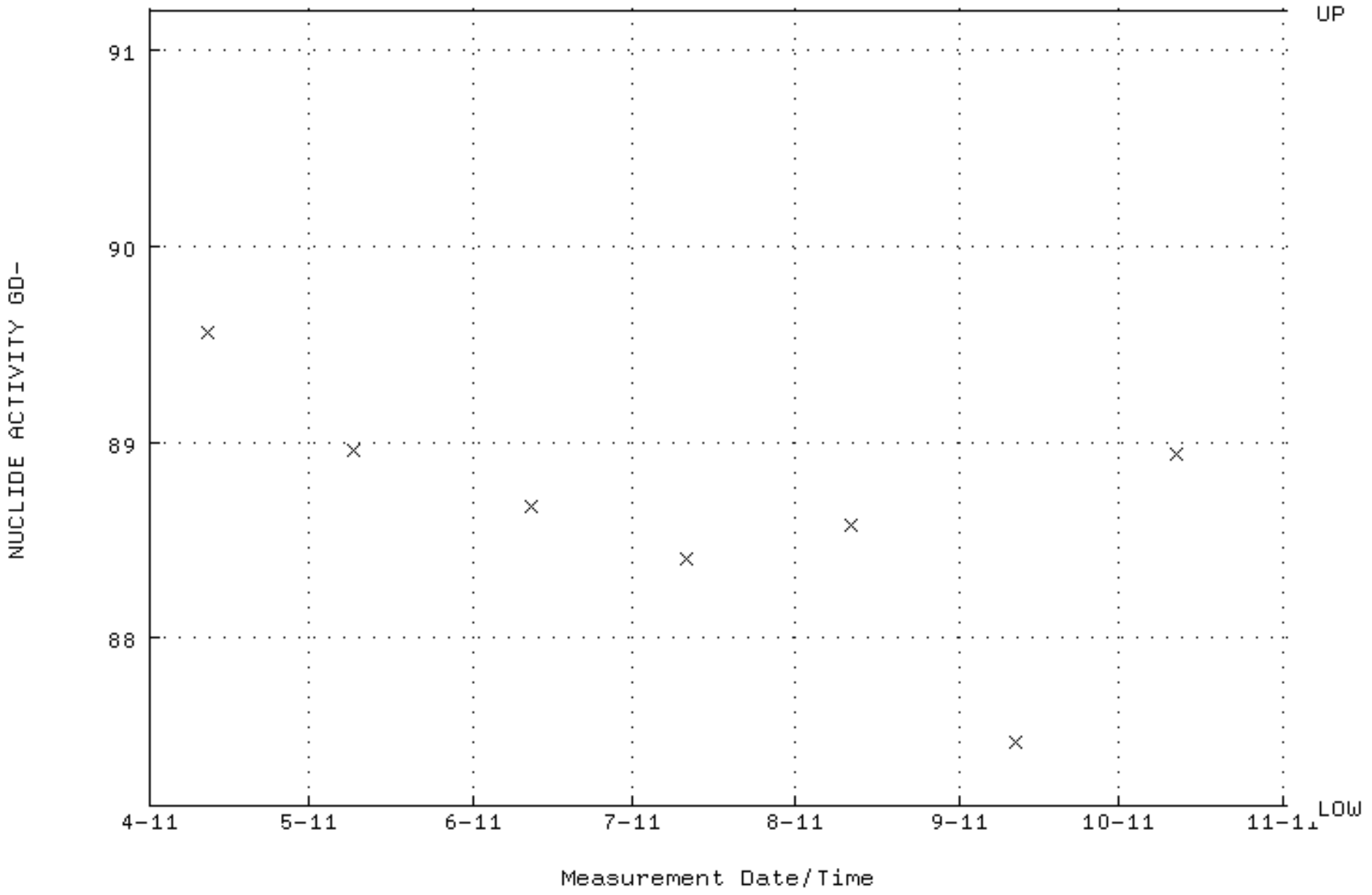
QA filename : DKA100:[ENV_ALPHA.QA.B]B089.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-APR-2011 15:04:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



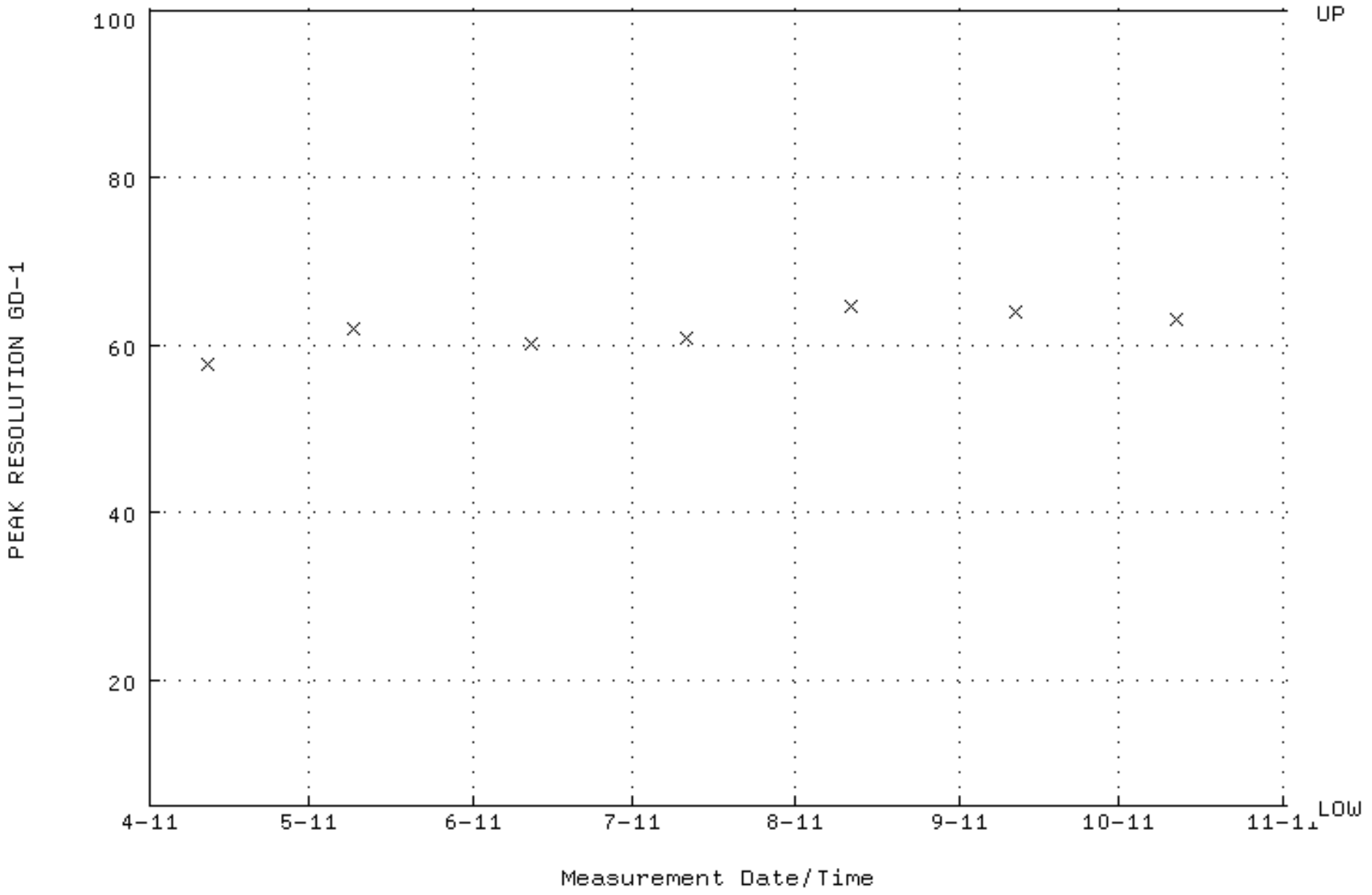
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.311260 through 0.358692



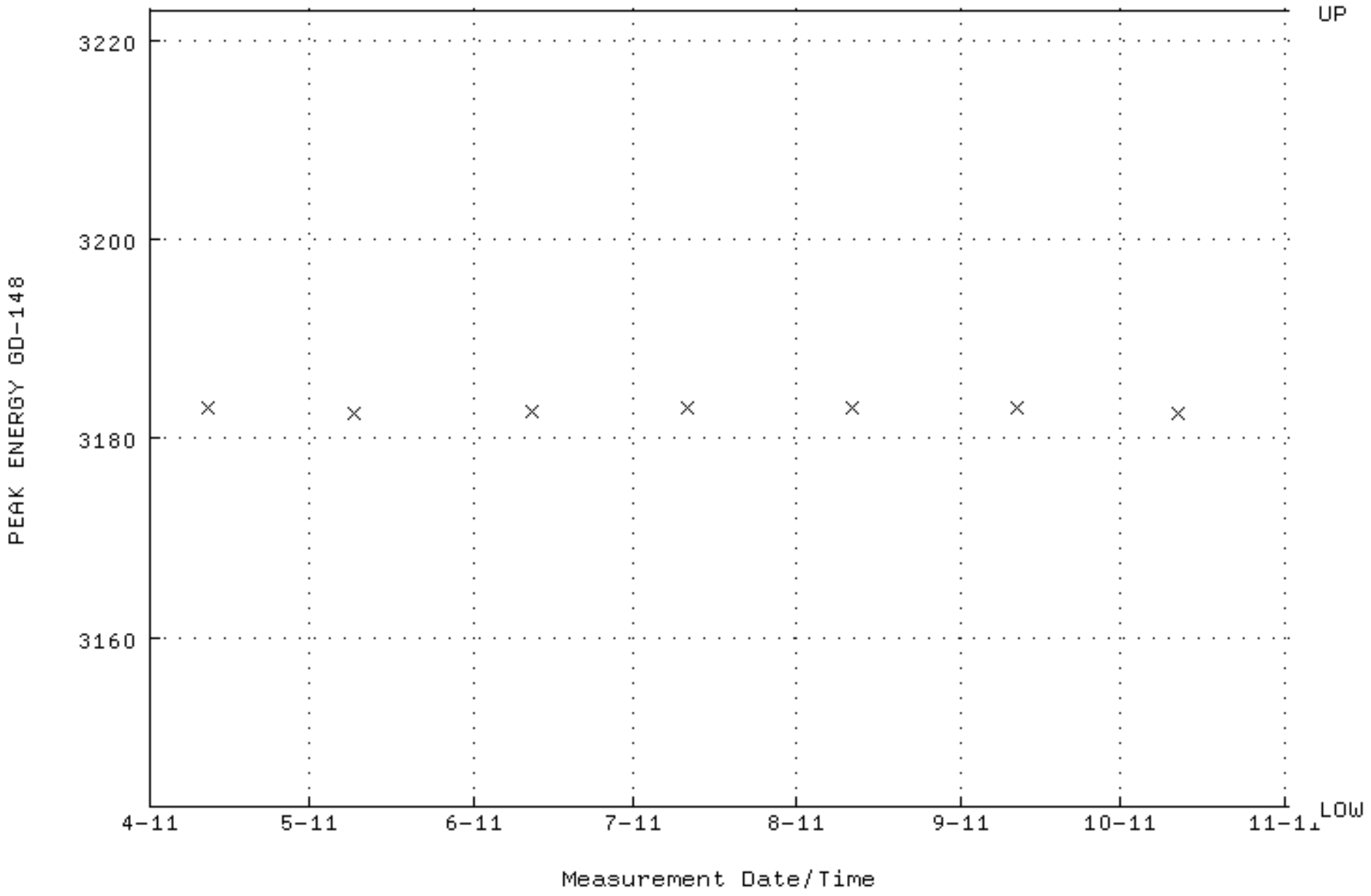
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 87.1435 through 91.2025



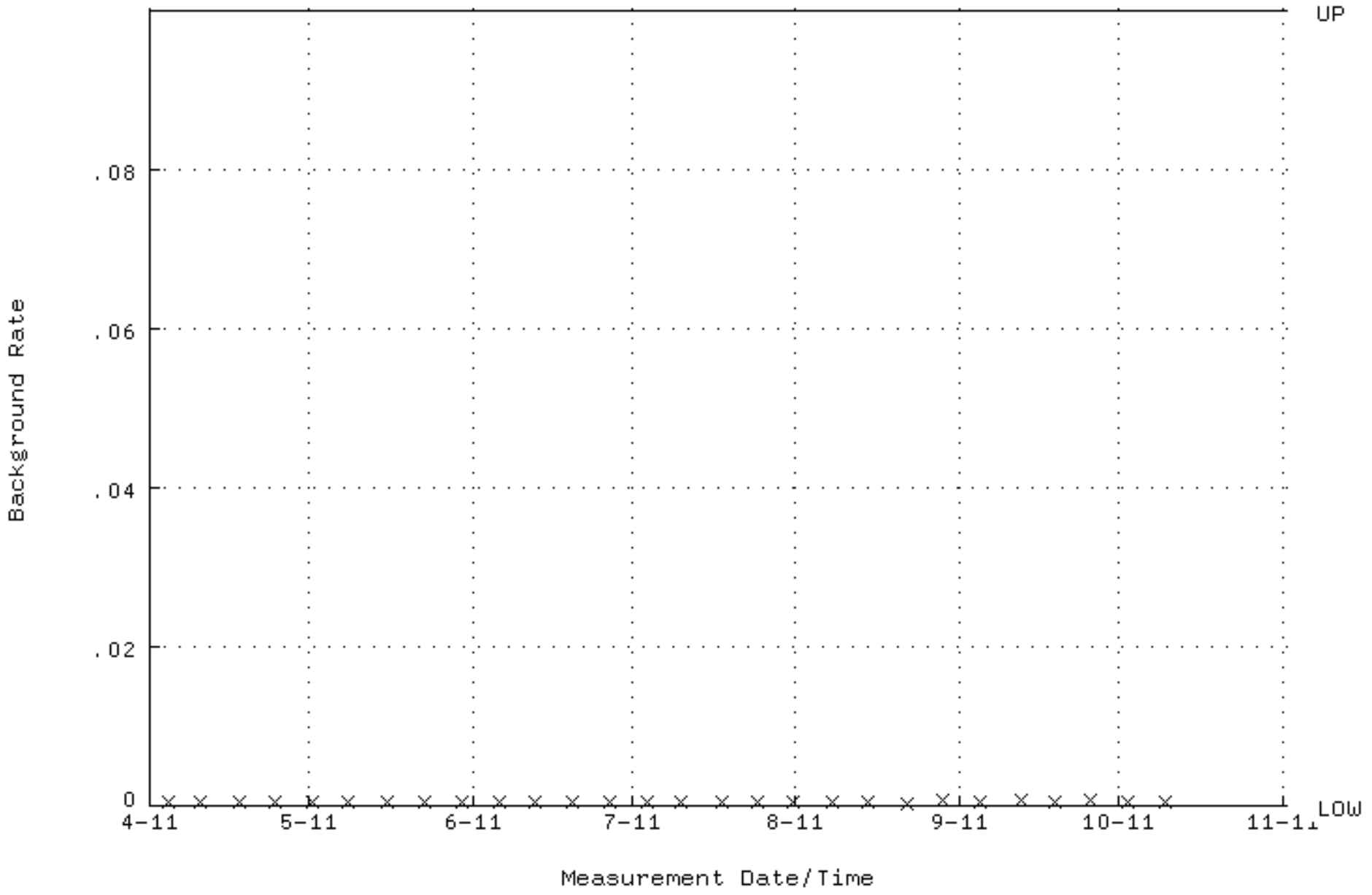
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



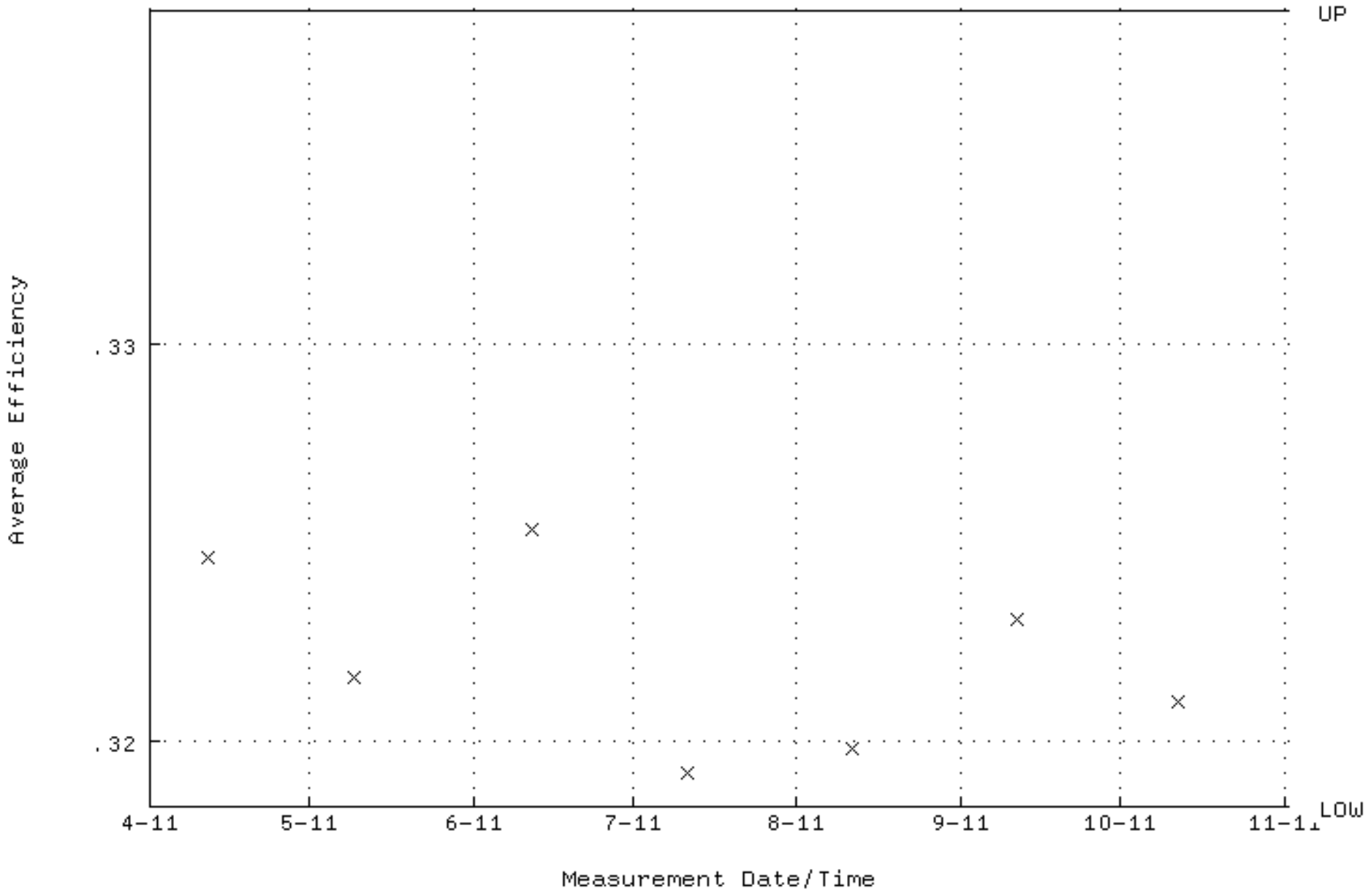
QA filename : DKA100:[ENV_ALPHA.QA.W]W090.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



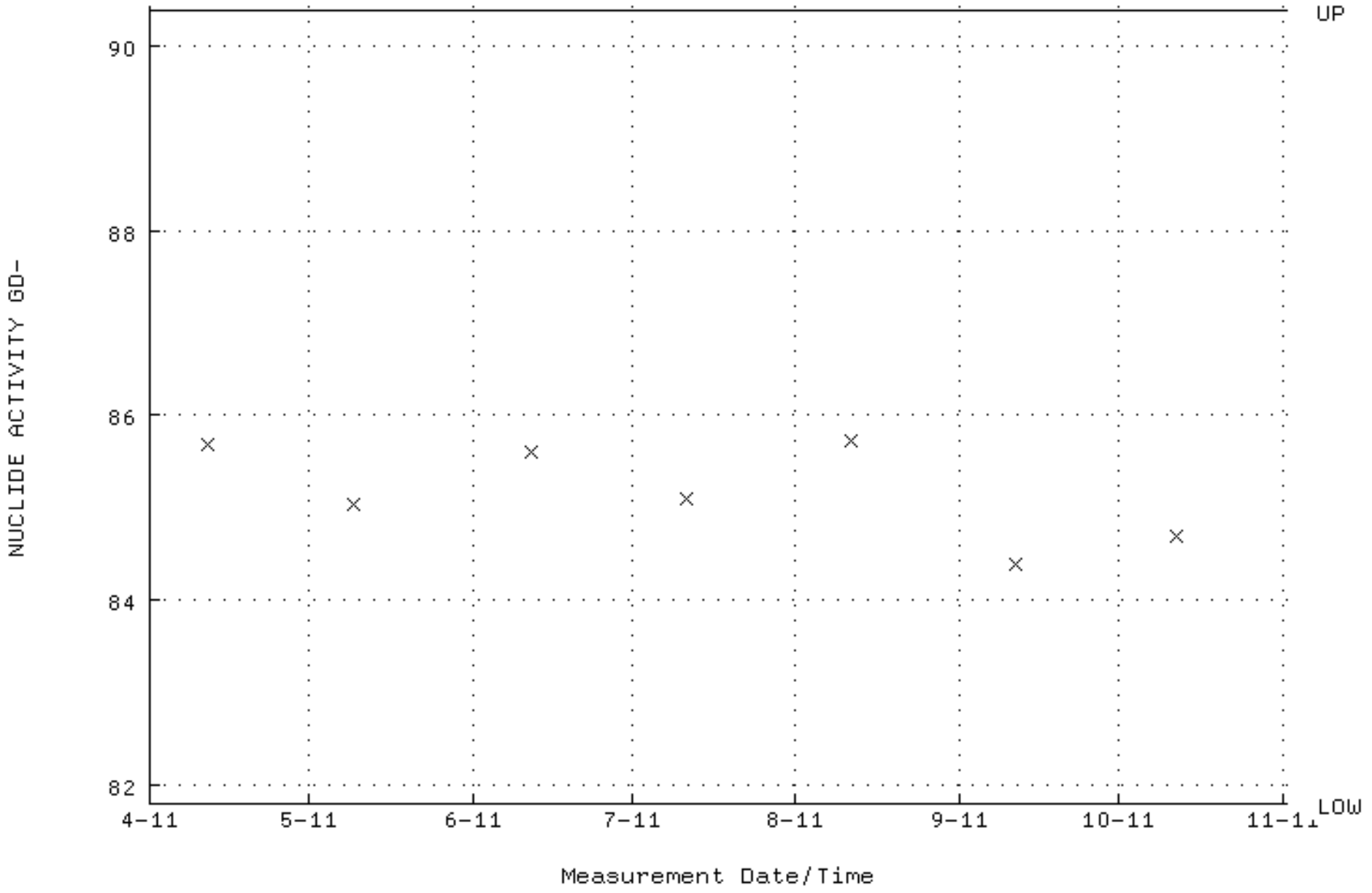
QA filename : DKA100:[ENV_ALPHA.QA.B]B090.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-APR-2011 15:04:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



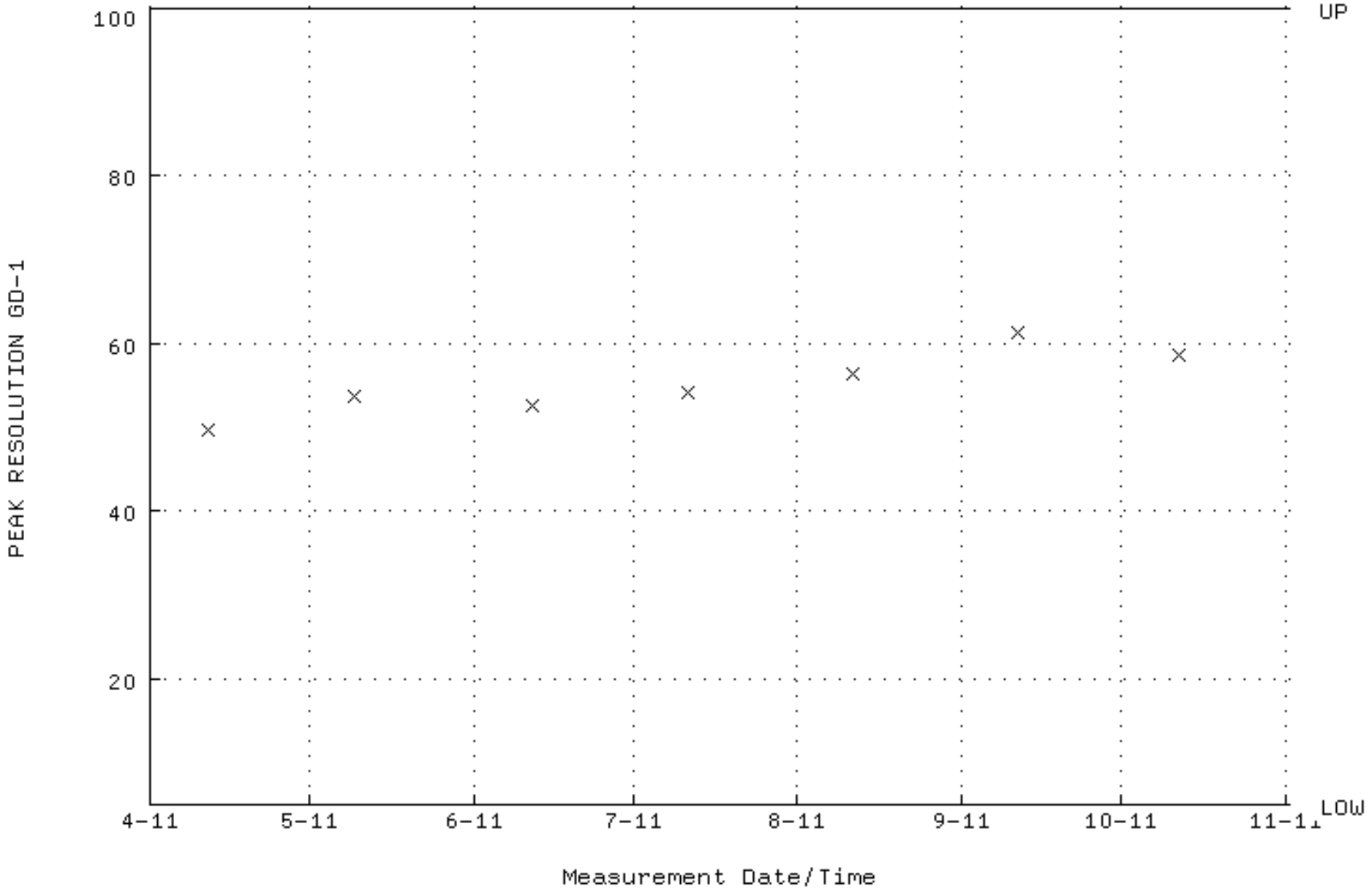
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.318355 through 0.338355



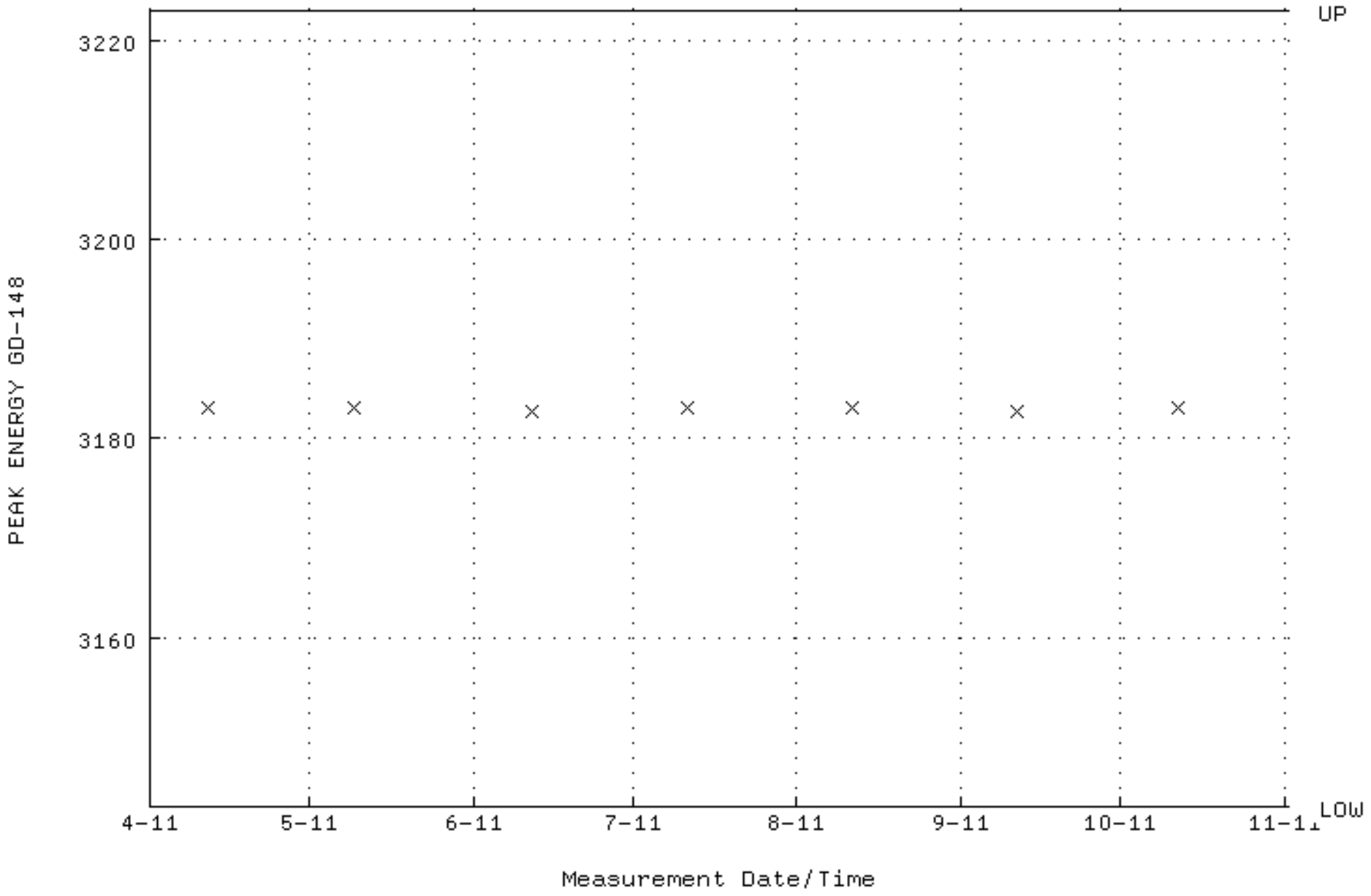
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 81.7941 through 90.4040



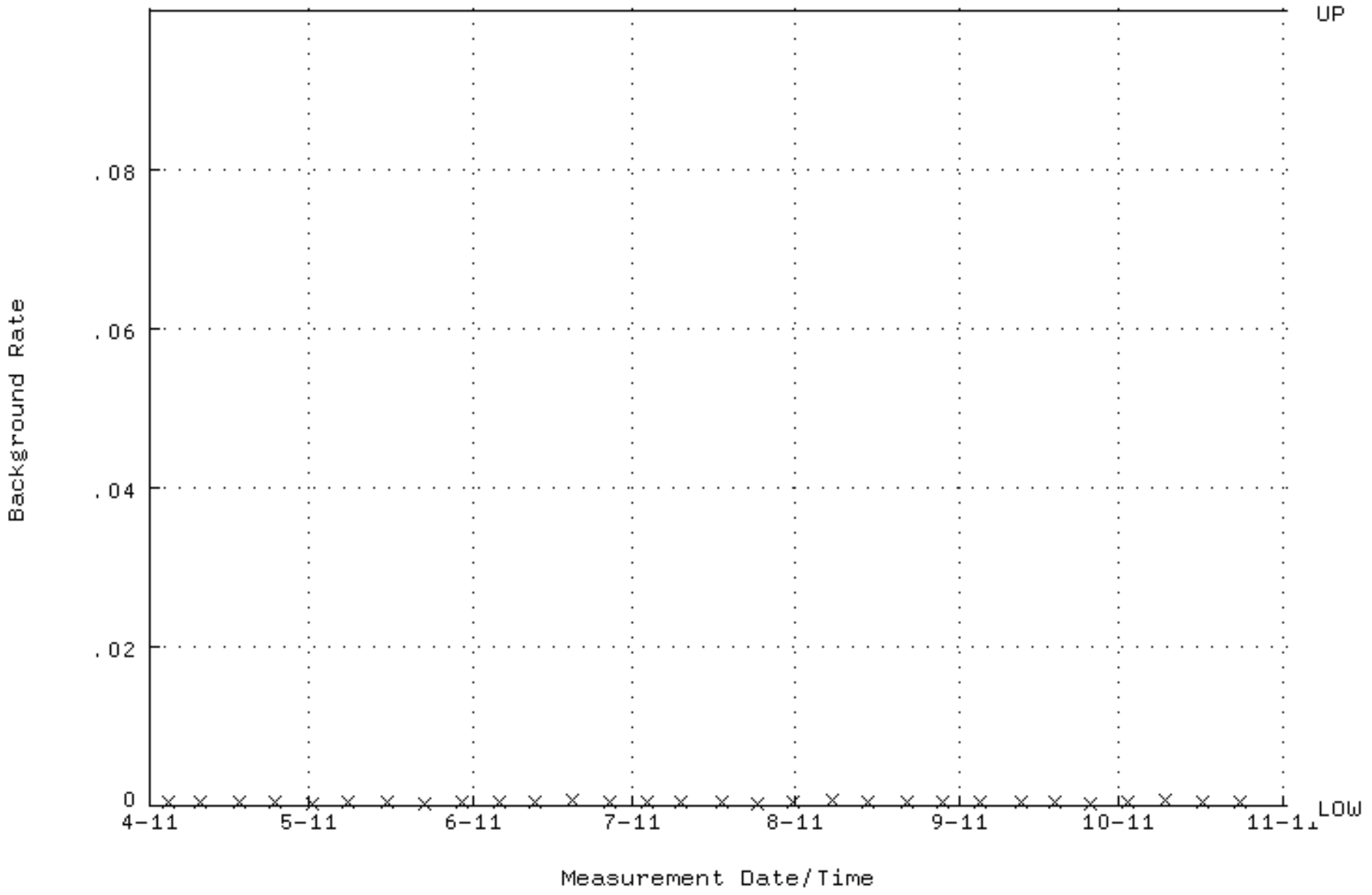
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



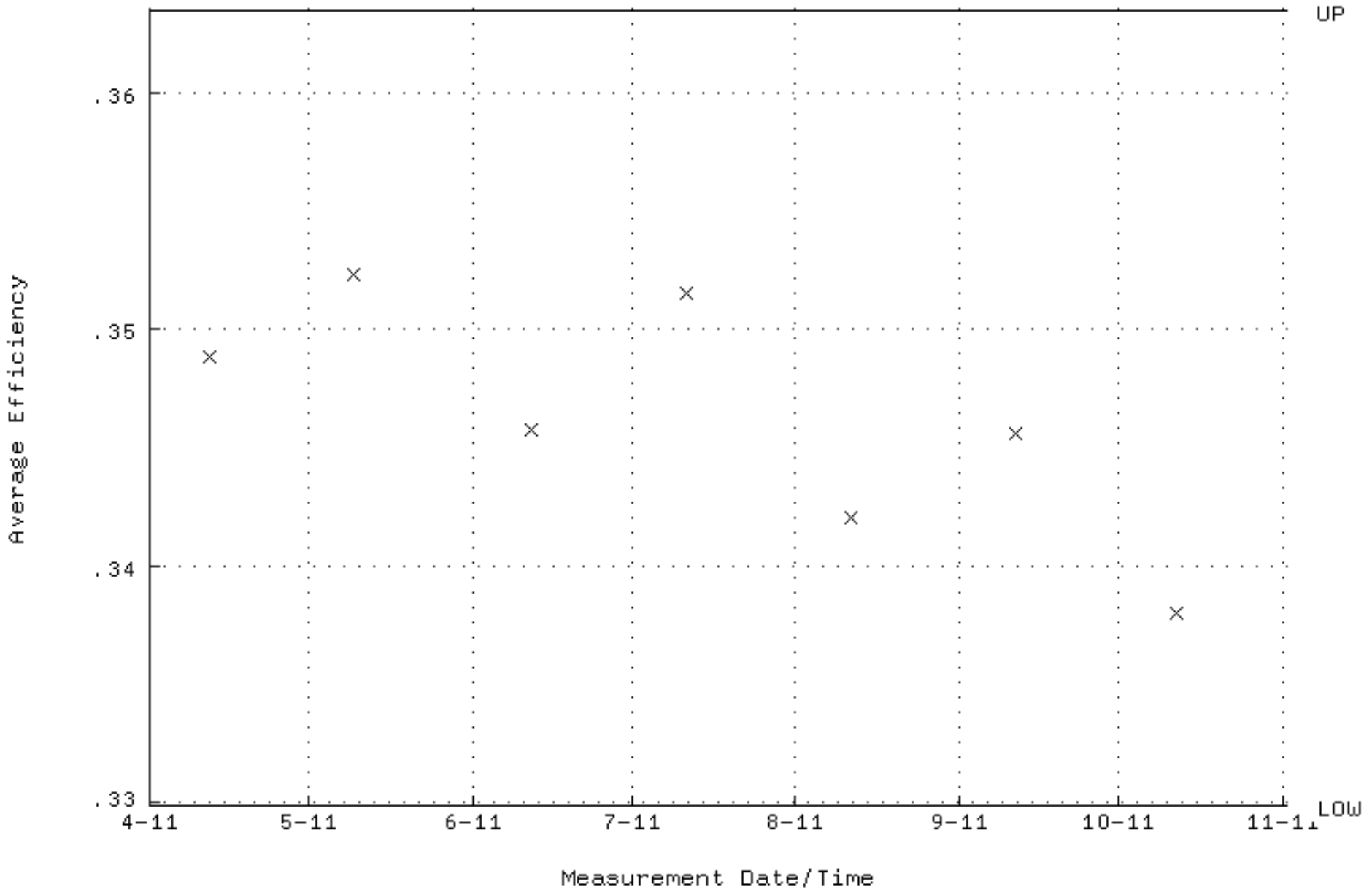
QA filename : DKA100:[ENV_ALPHA.QA.W]W092.QAF;1
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 00:03:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



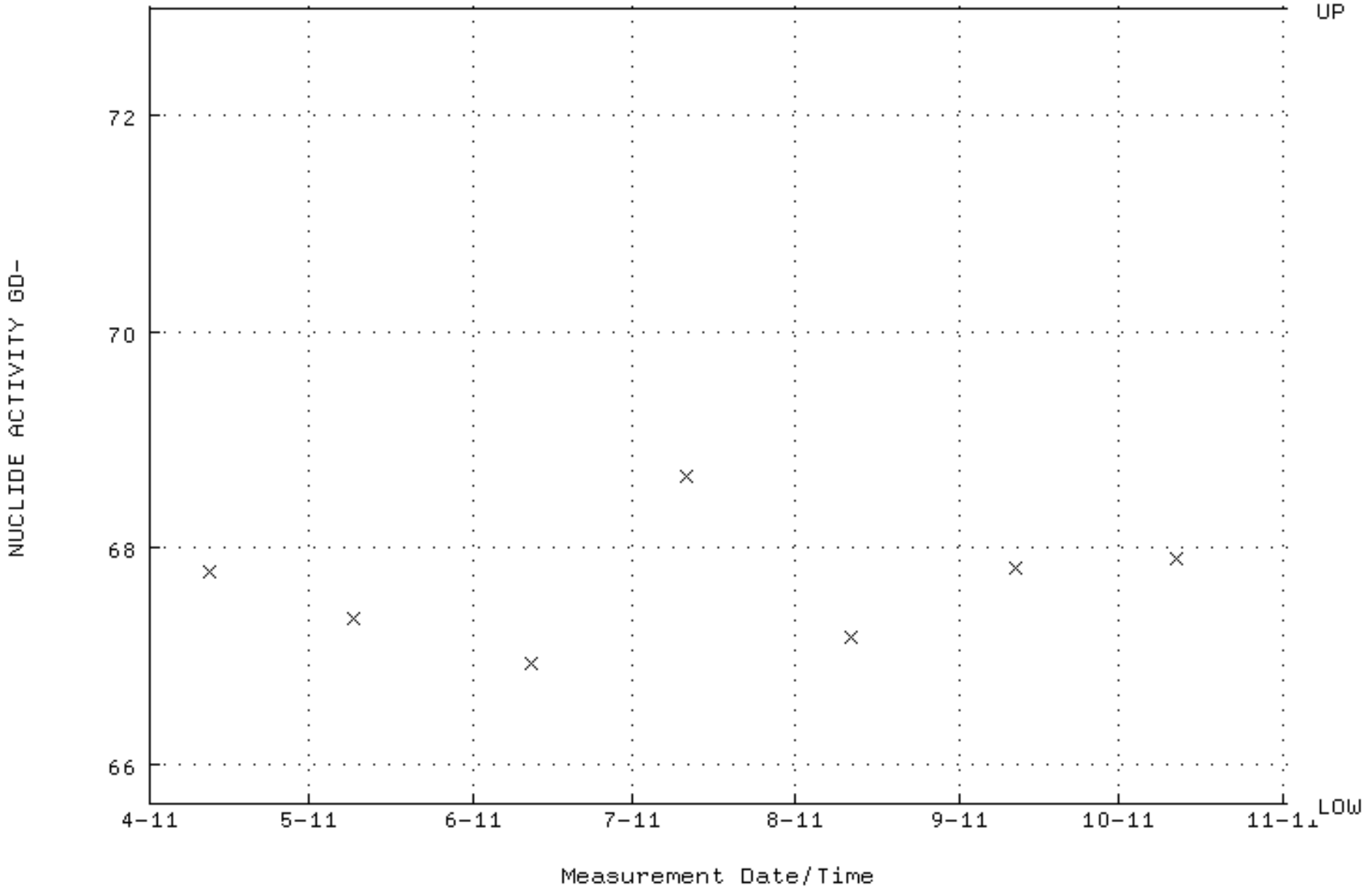
QA filename : DKA100:[ENV_ALPHA.QA.B]B092.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-APR-2011 15:04:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



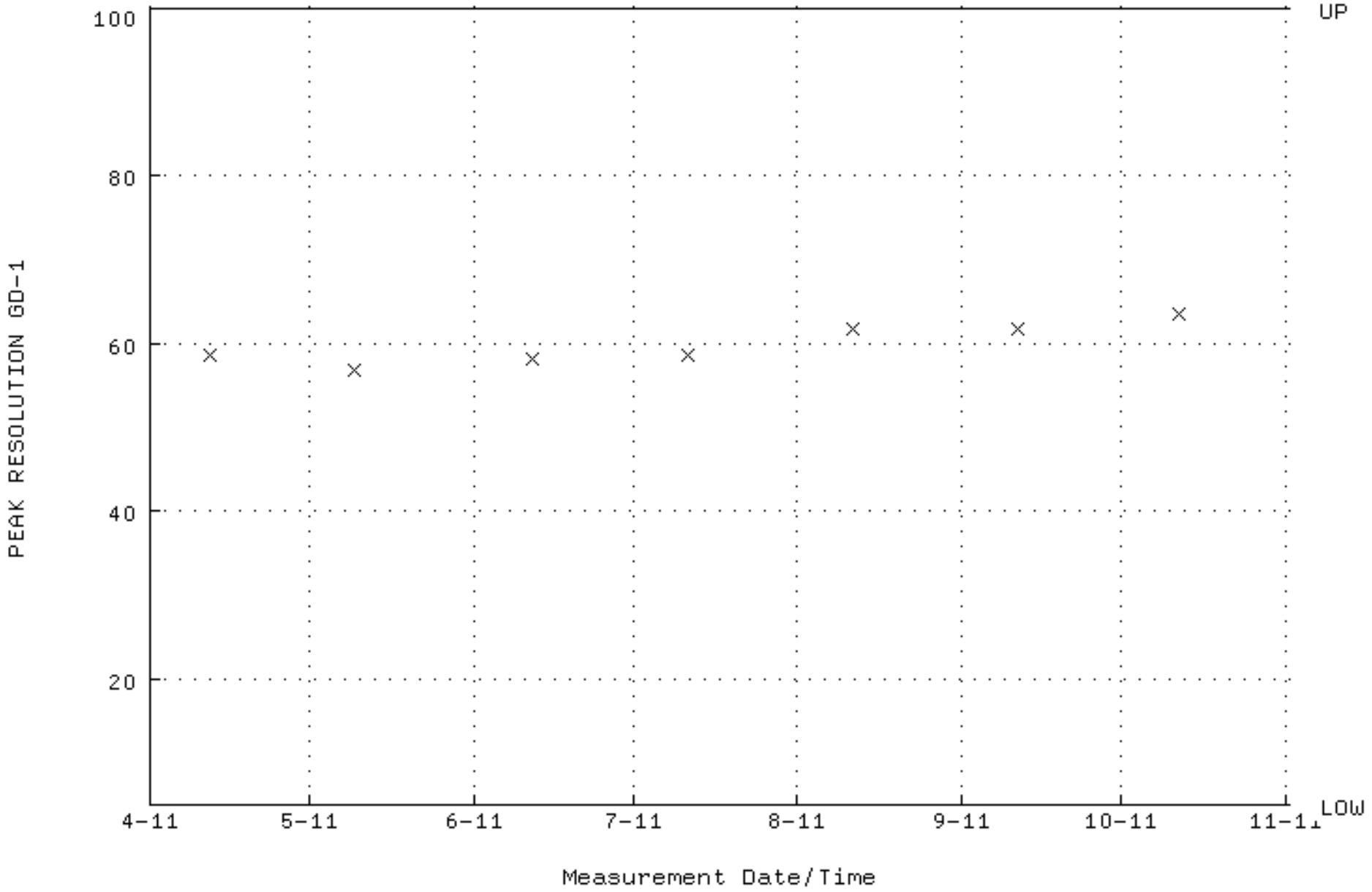
QA filename : DKA100:[ENV_ALPHA.QA.W]W108.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.329849 through 0.363457



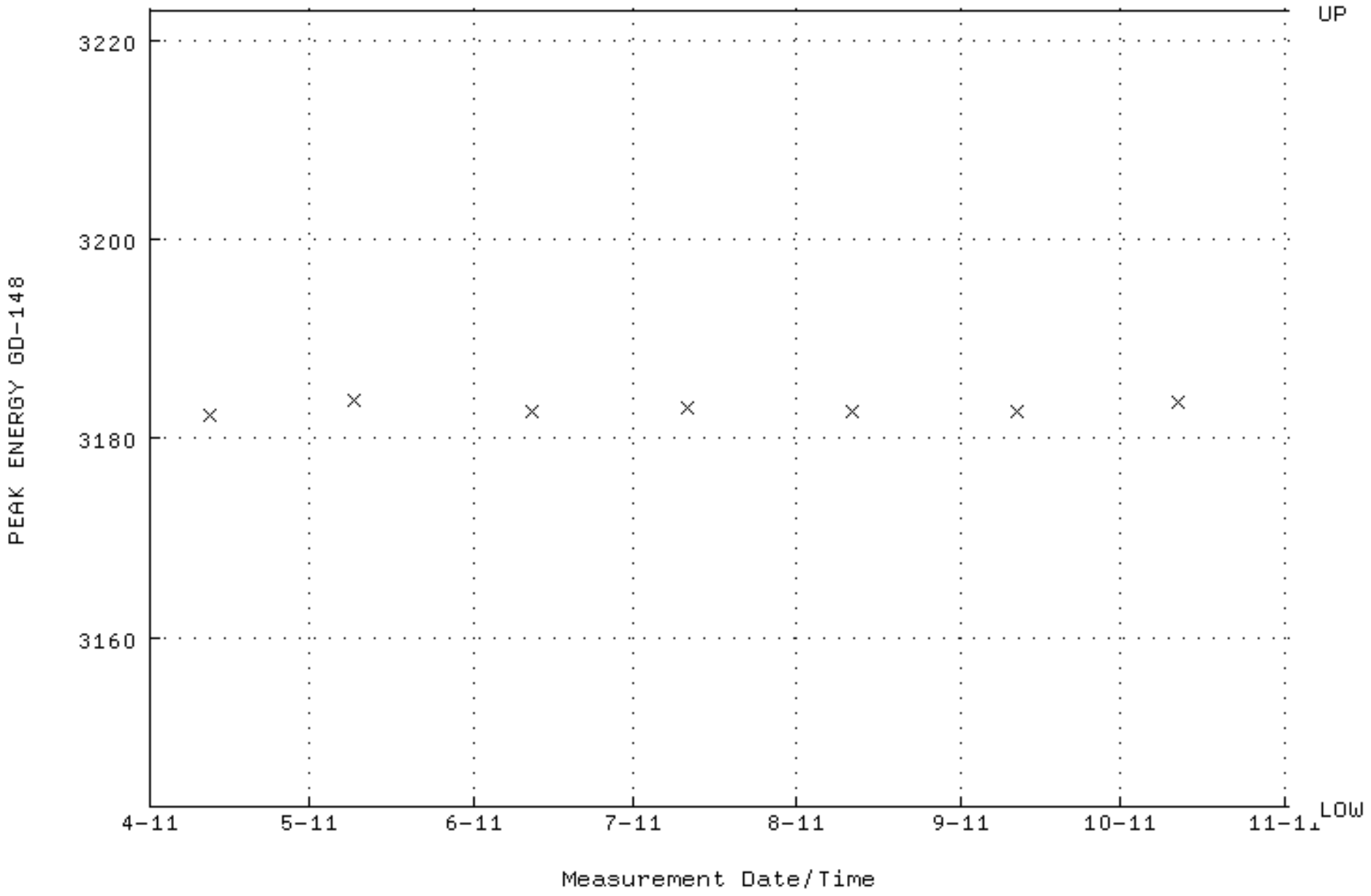
QA filename : DKA100:[ENV_ALPHA.QA.W]W108.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 65.6345 through 72.9951



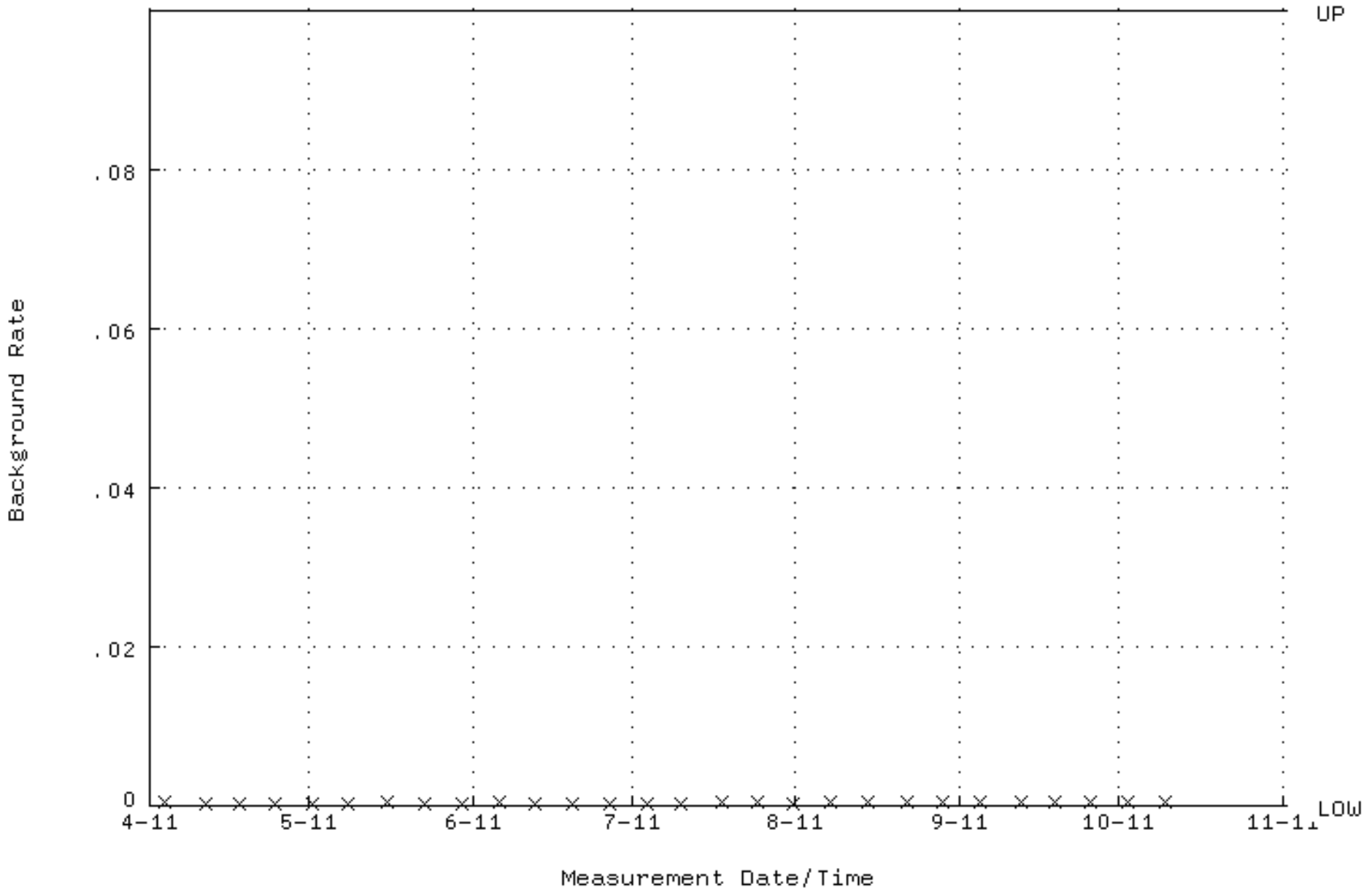
QA filename : DKA100:[ENV_ALPHA.QA.W]W108.QAF;3
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



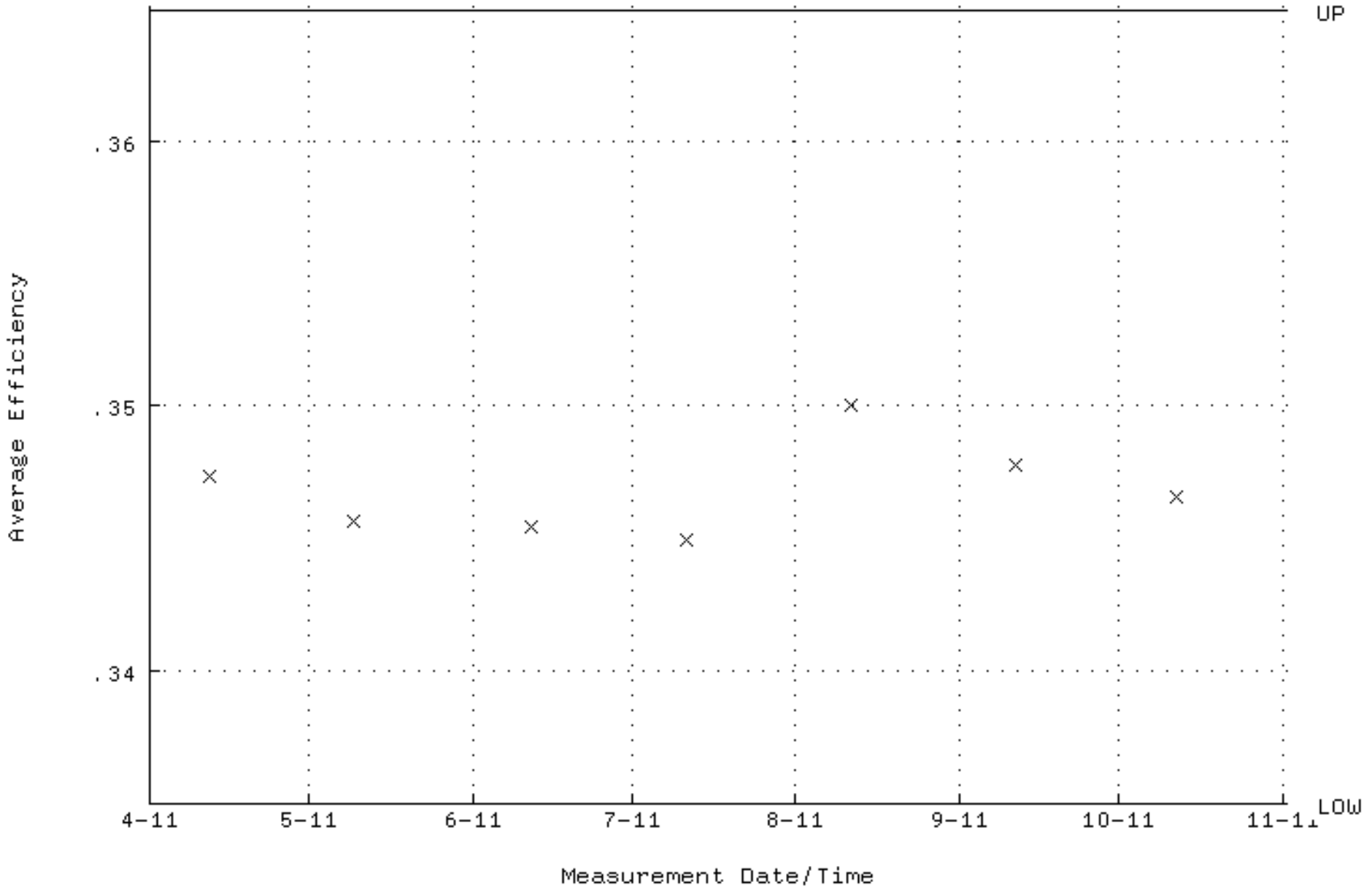
QA filename : DKA100:[ENV_ALPHA.QA.W]W108.QAF;3
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



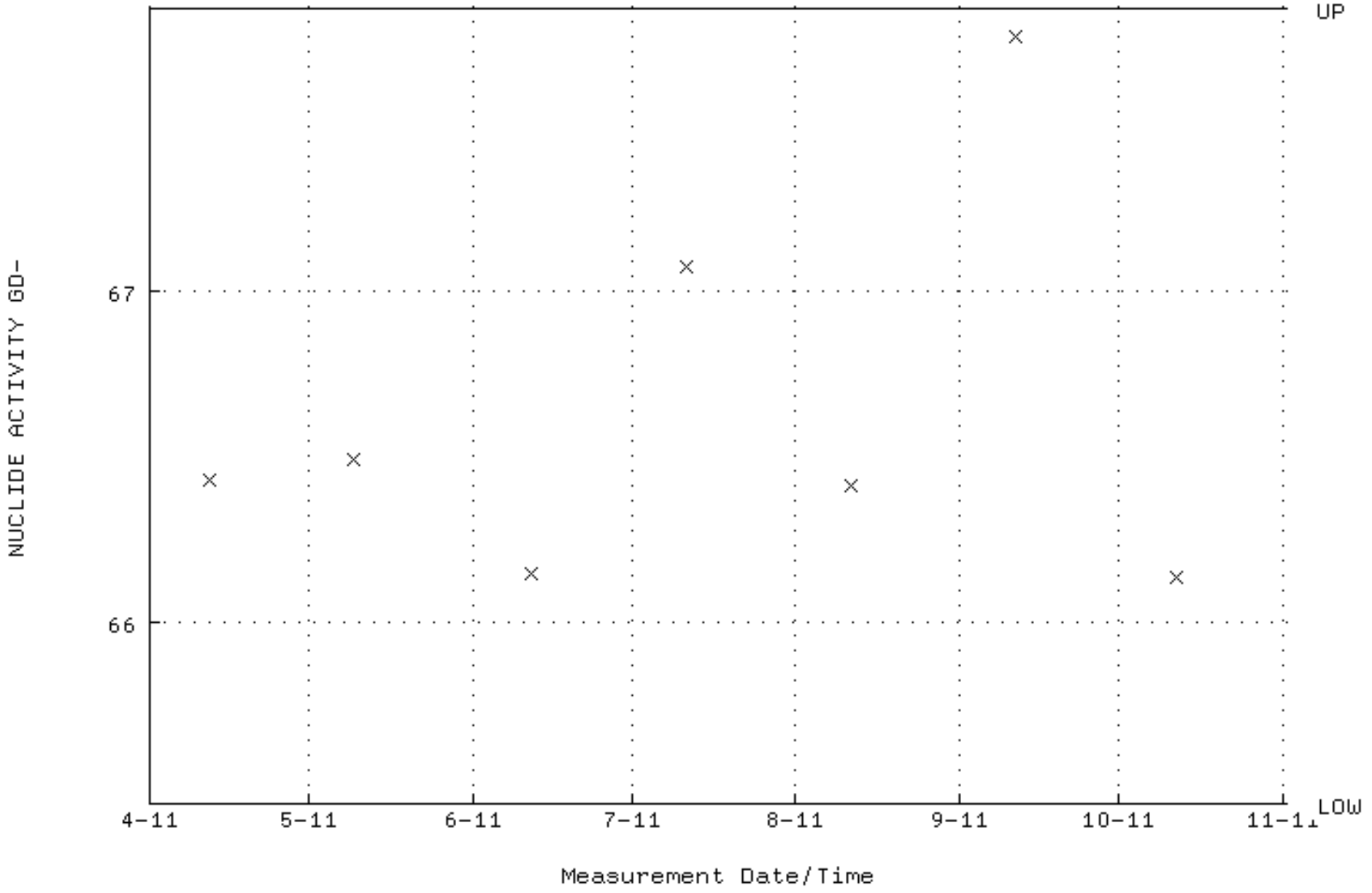
QA filename : DKA100:[ENV_ALPHA.QA.B]B108.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:57 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



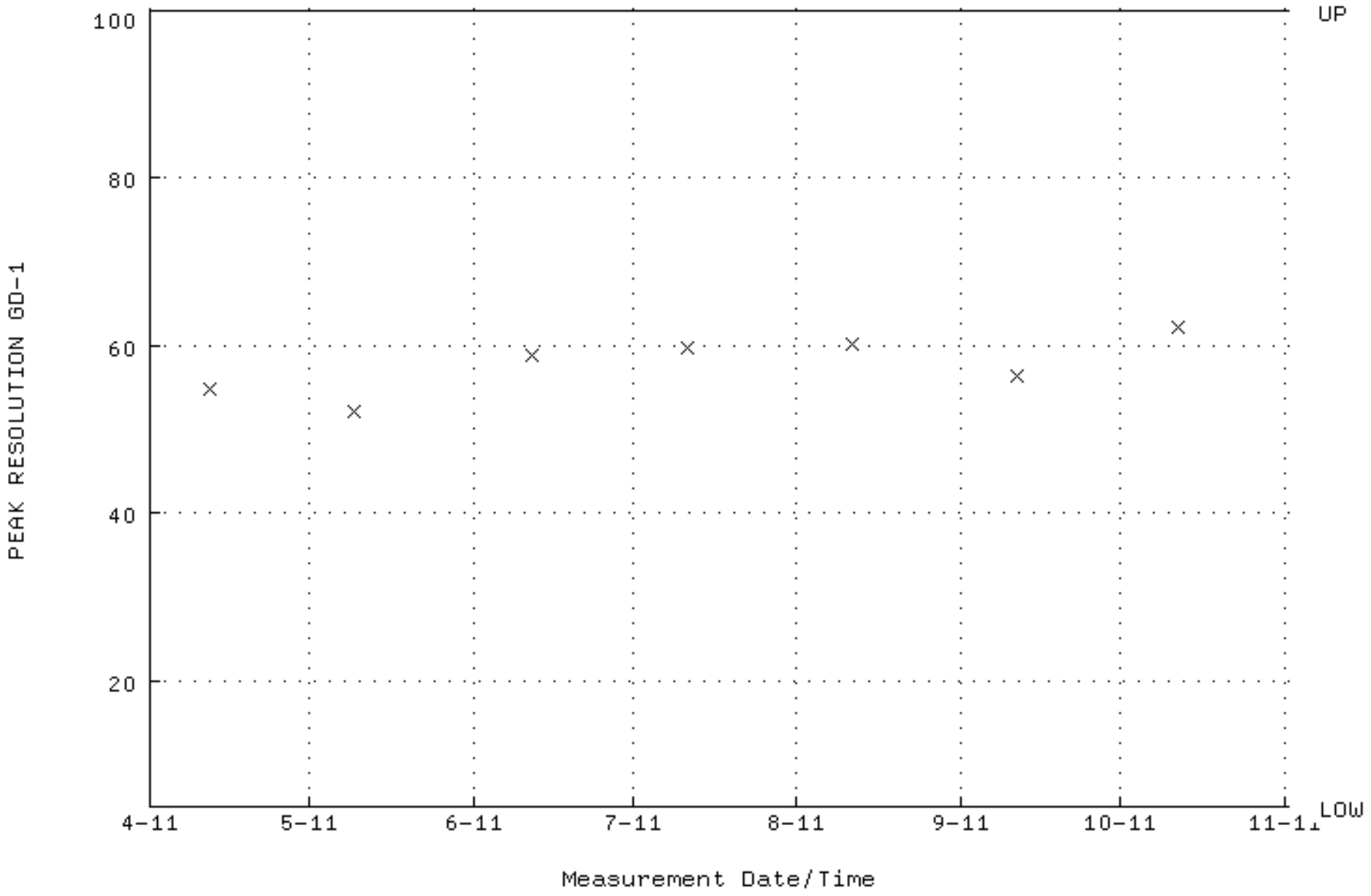
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.335000 through 0.365000



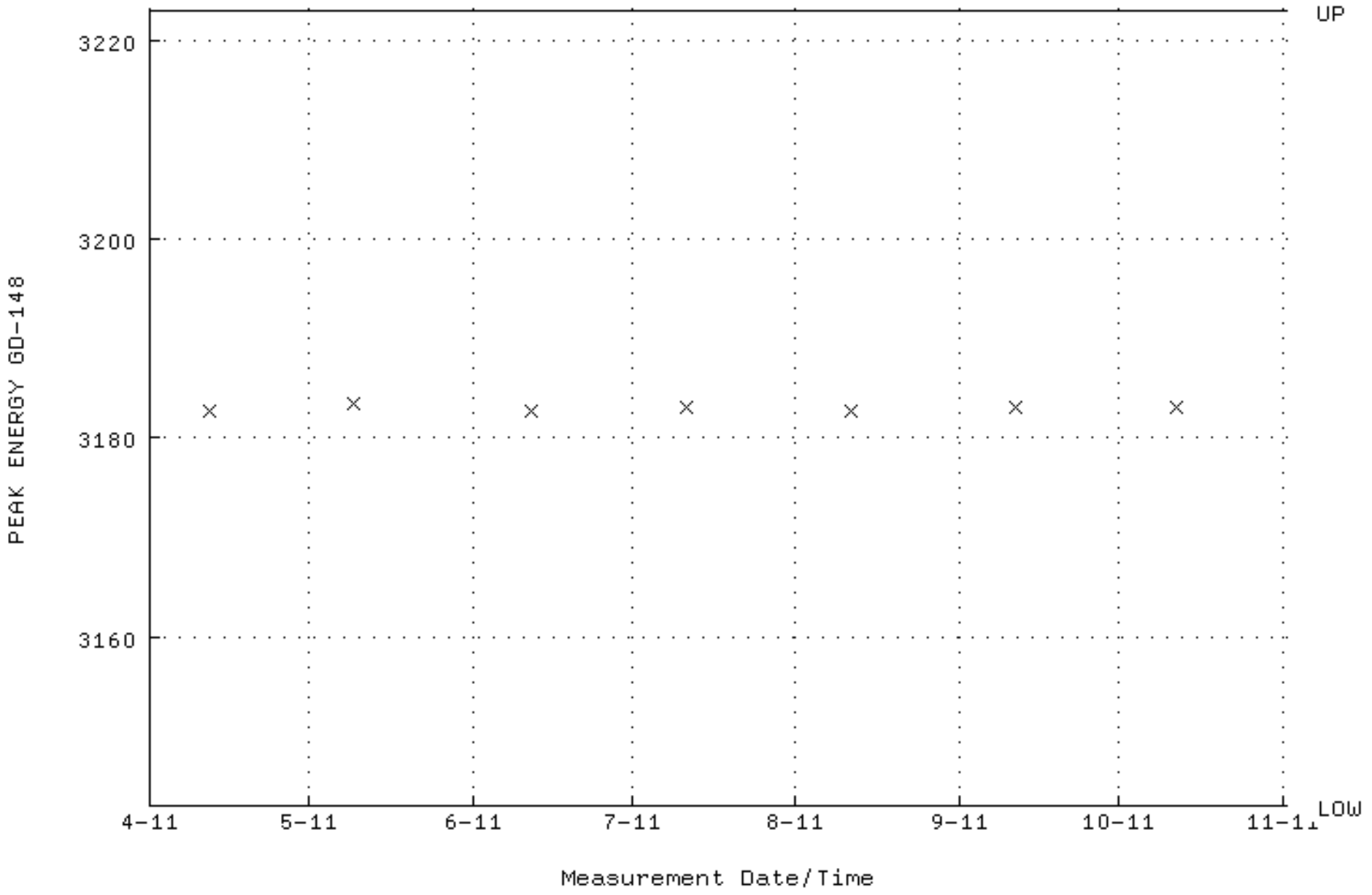
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 65.4511 through 67.8527



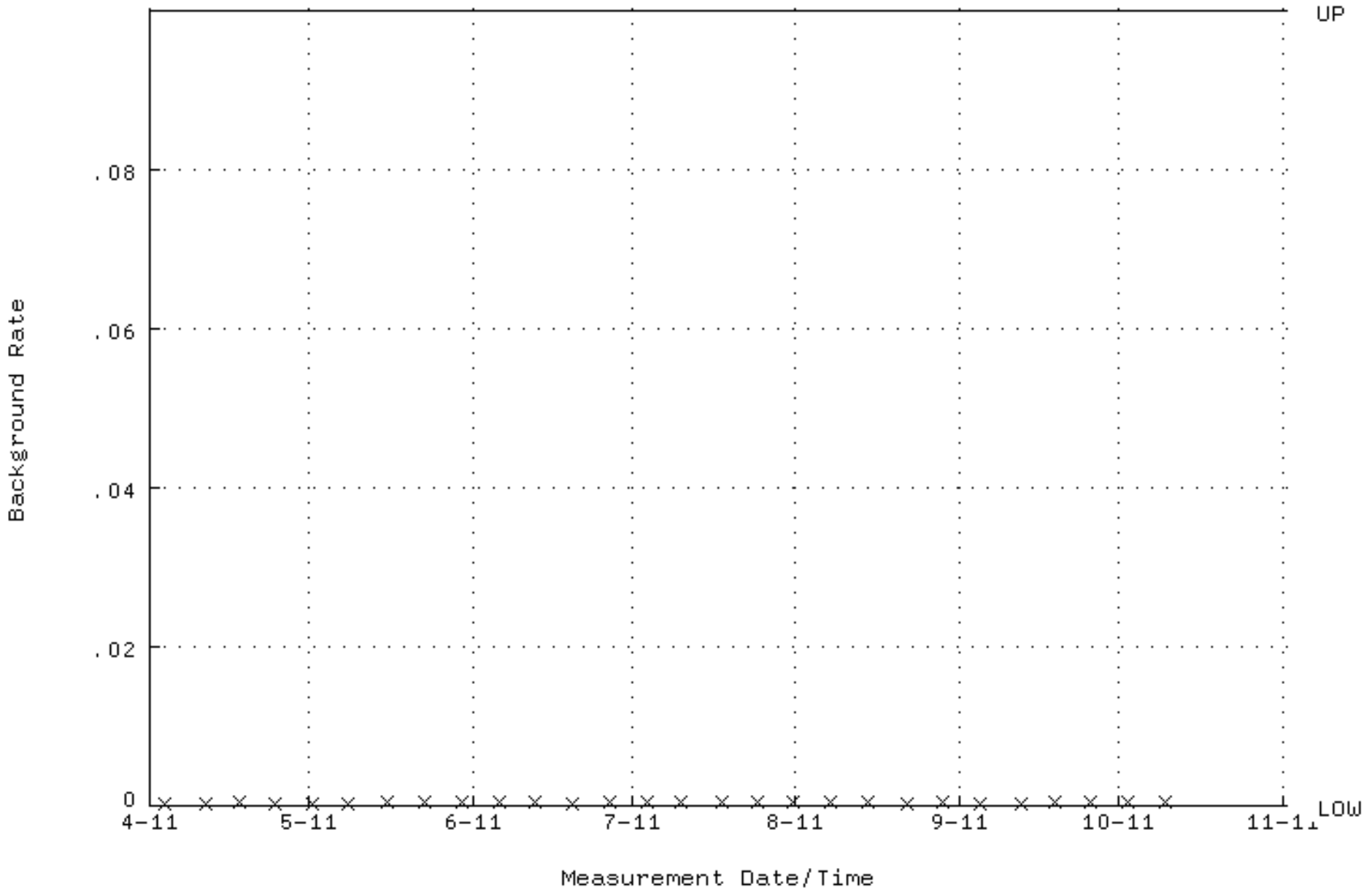
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



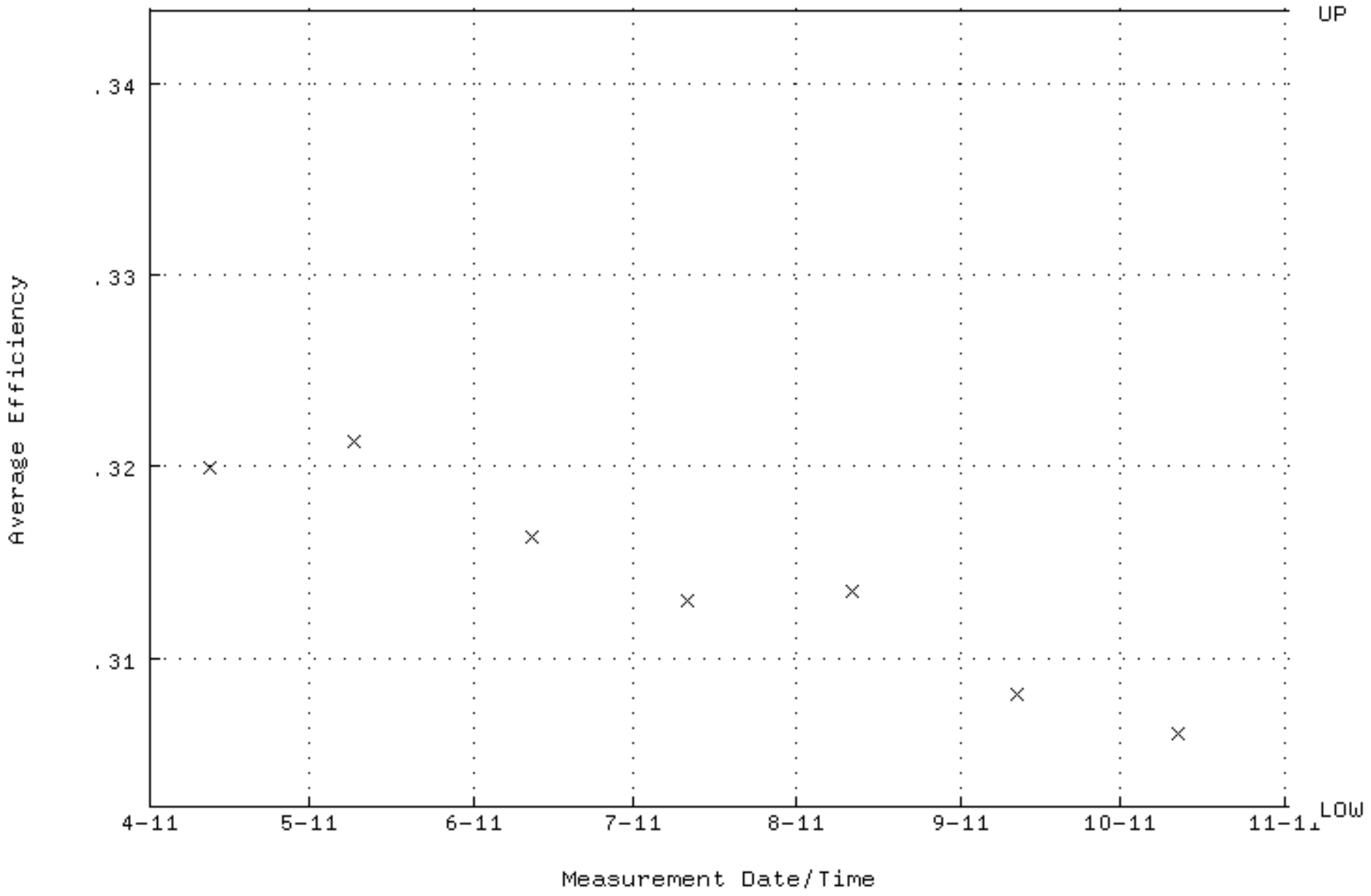
QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



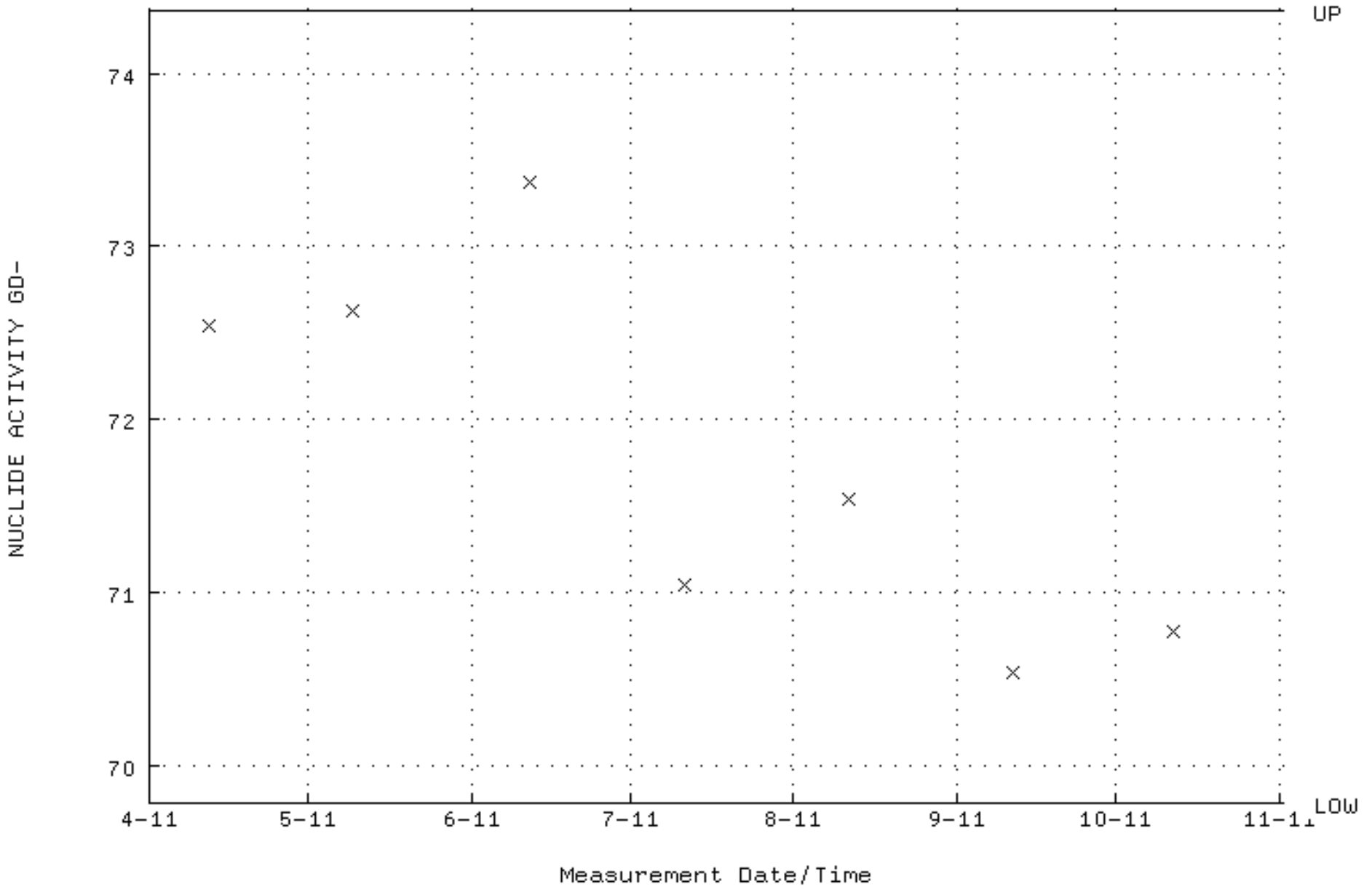
QA filename : DKA100:[ENV_ALPHA.QA.B]B109.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:57 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



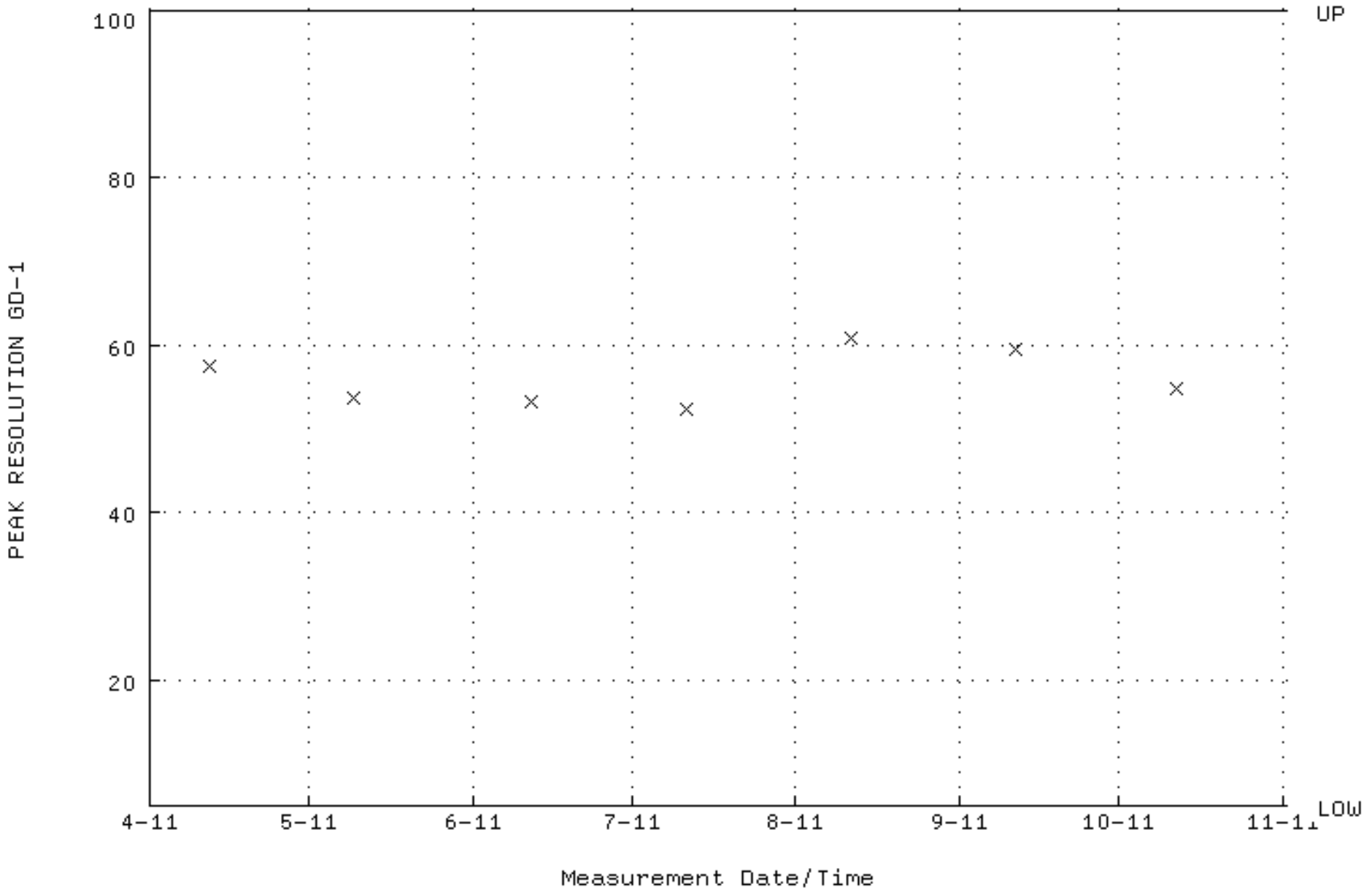
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.302221 through 0.343833



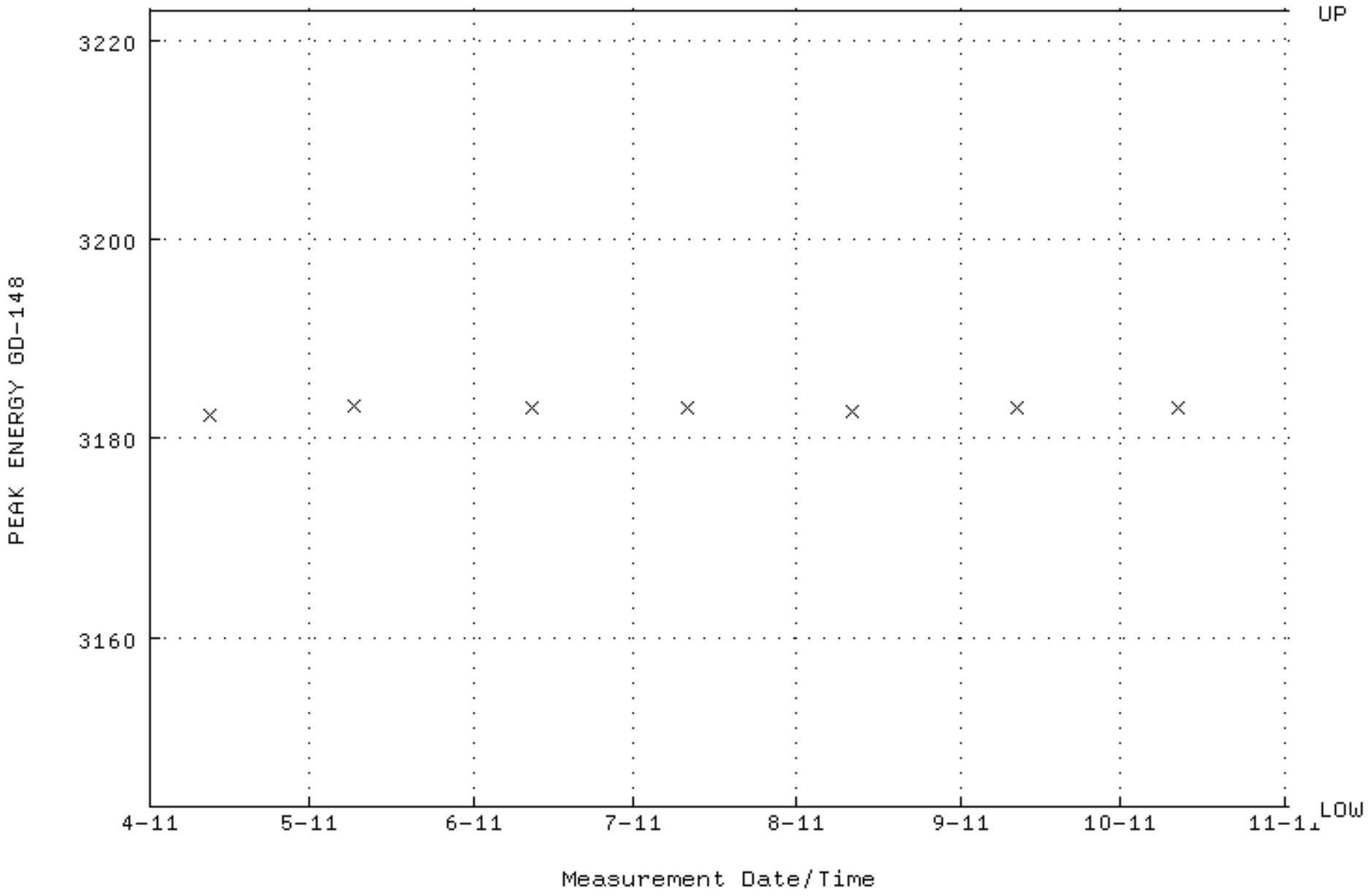
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 69.7881 through 74.3607



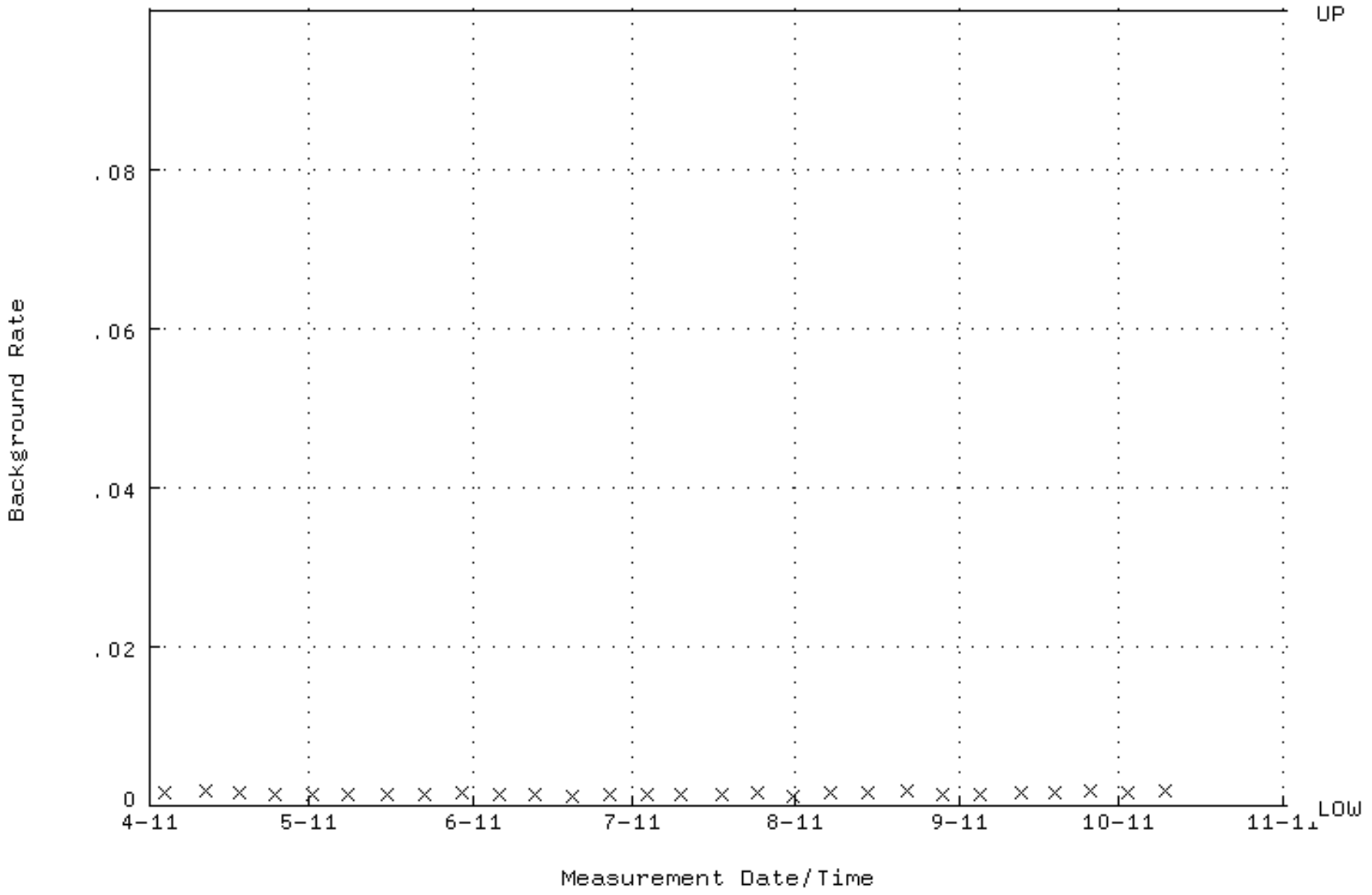
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



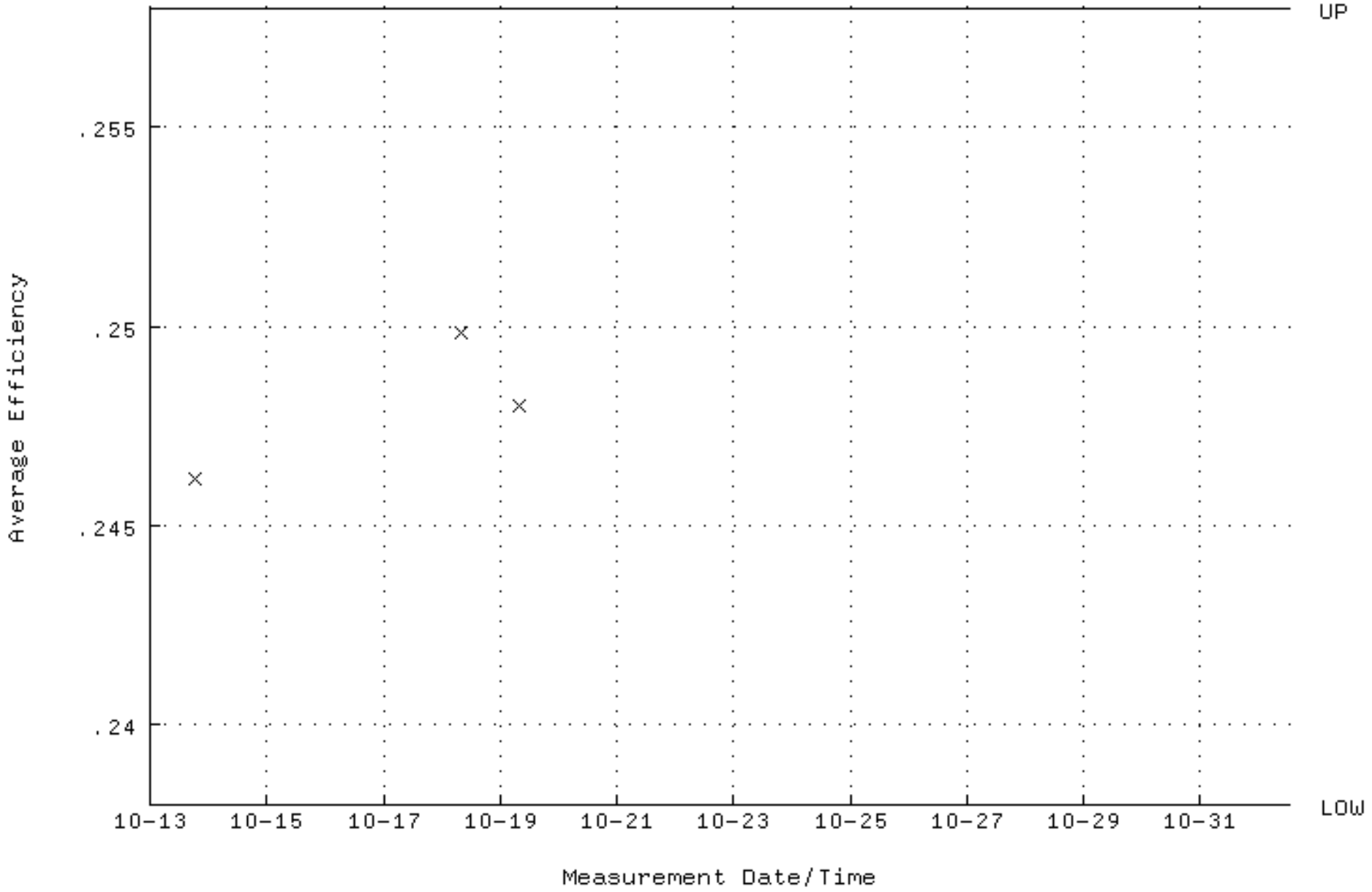
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 12-APR-2011 09:16:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



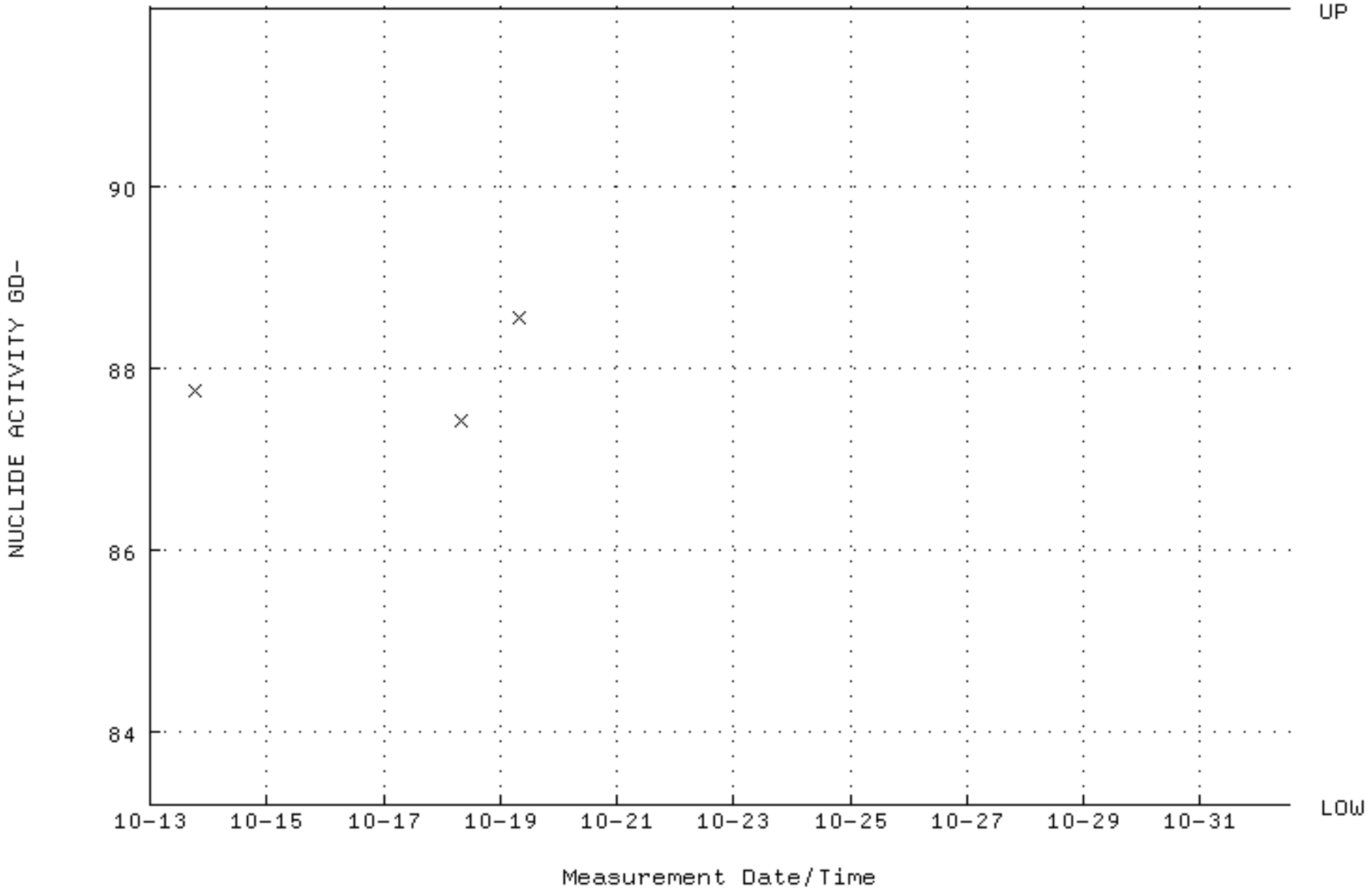
QA filename : DKA100:[ENV_ALPHA.QA.B]B110.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 20:59:57 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



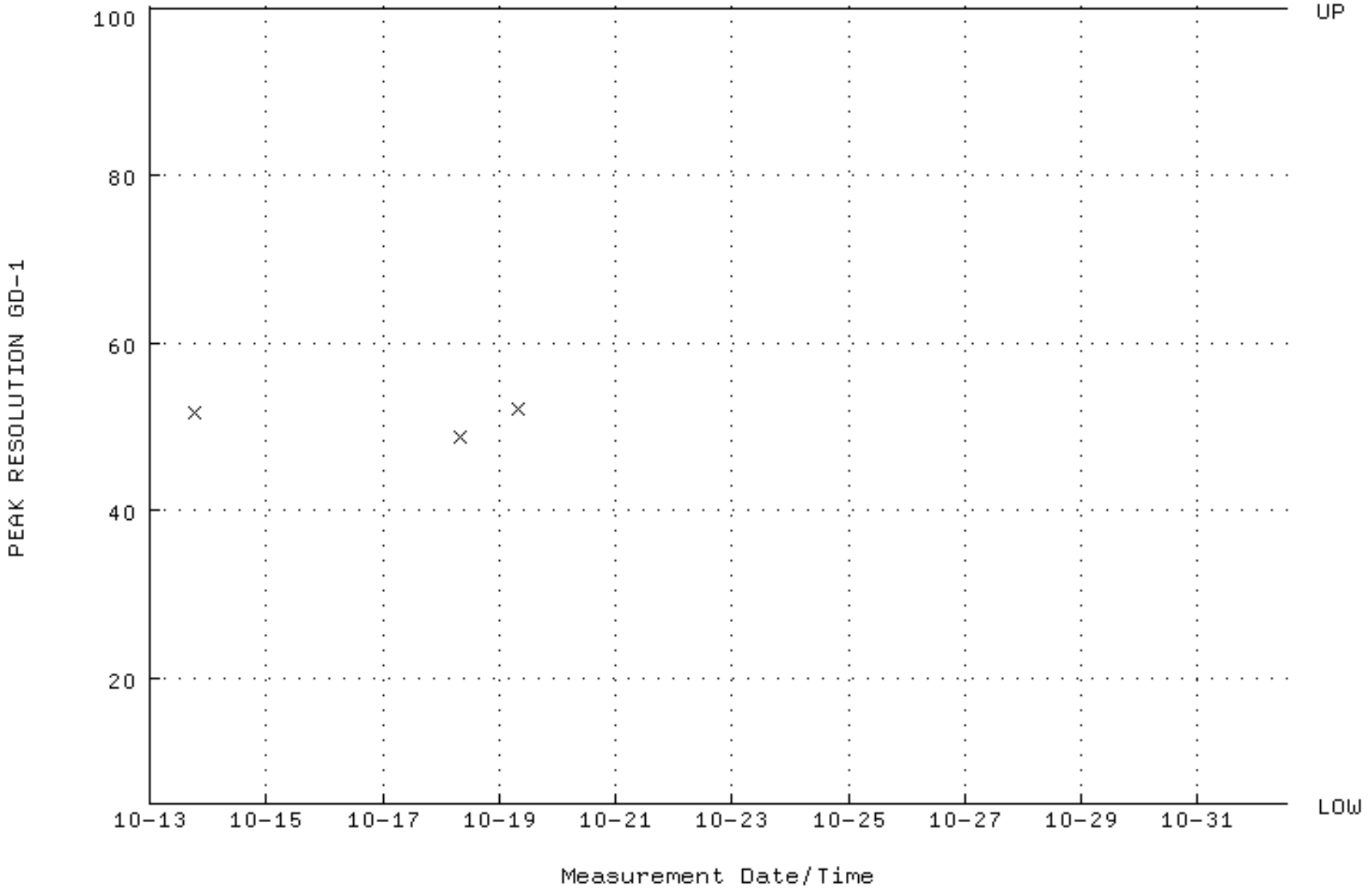
QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 13-OCT-2011 18:22:10 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.237980 through 0.257980



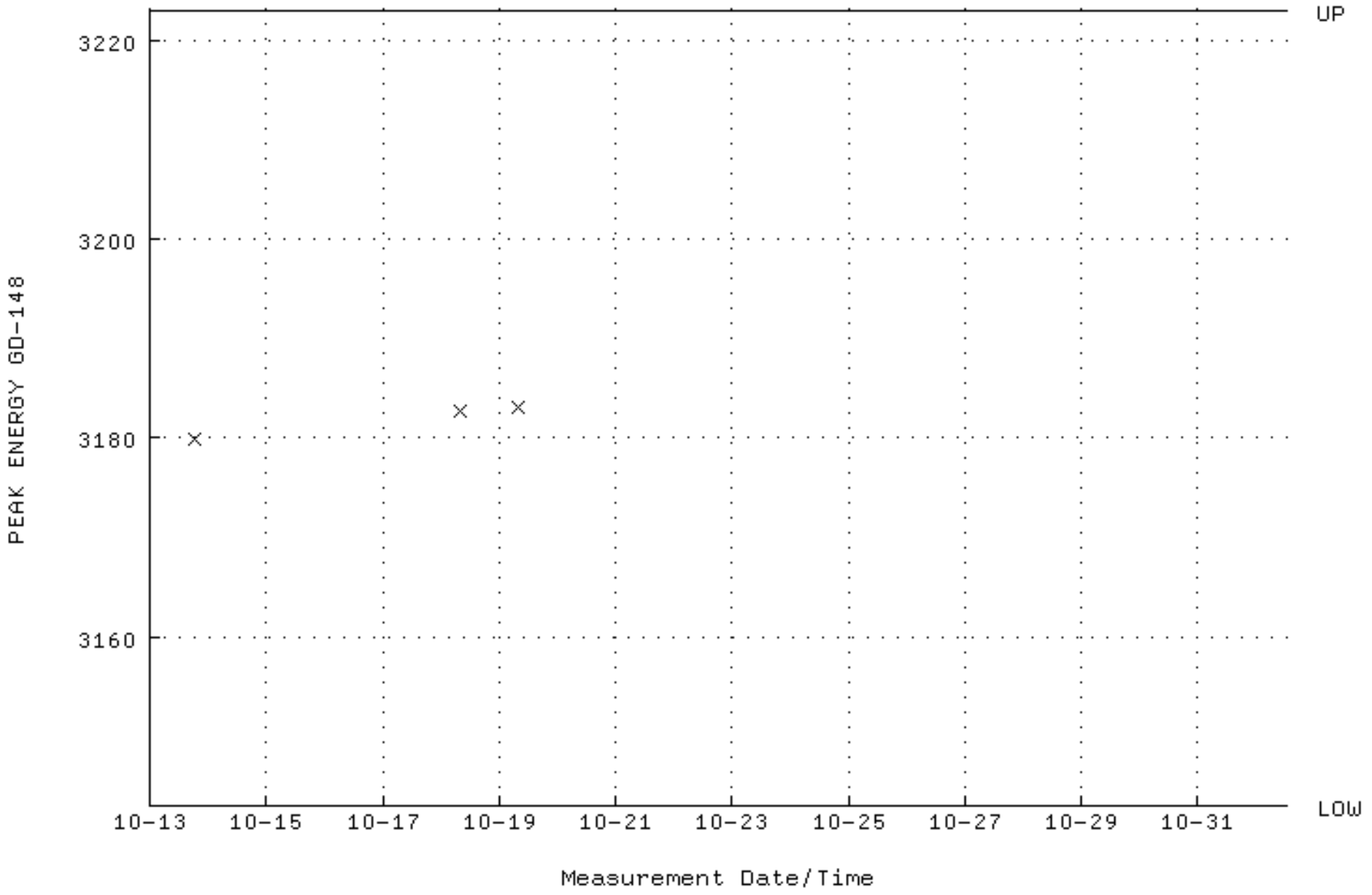
QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 13-OCT-2011 18:22:10 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 83.1943 through 91.9515



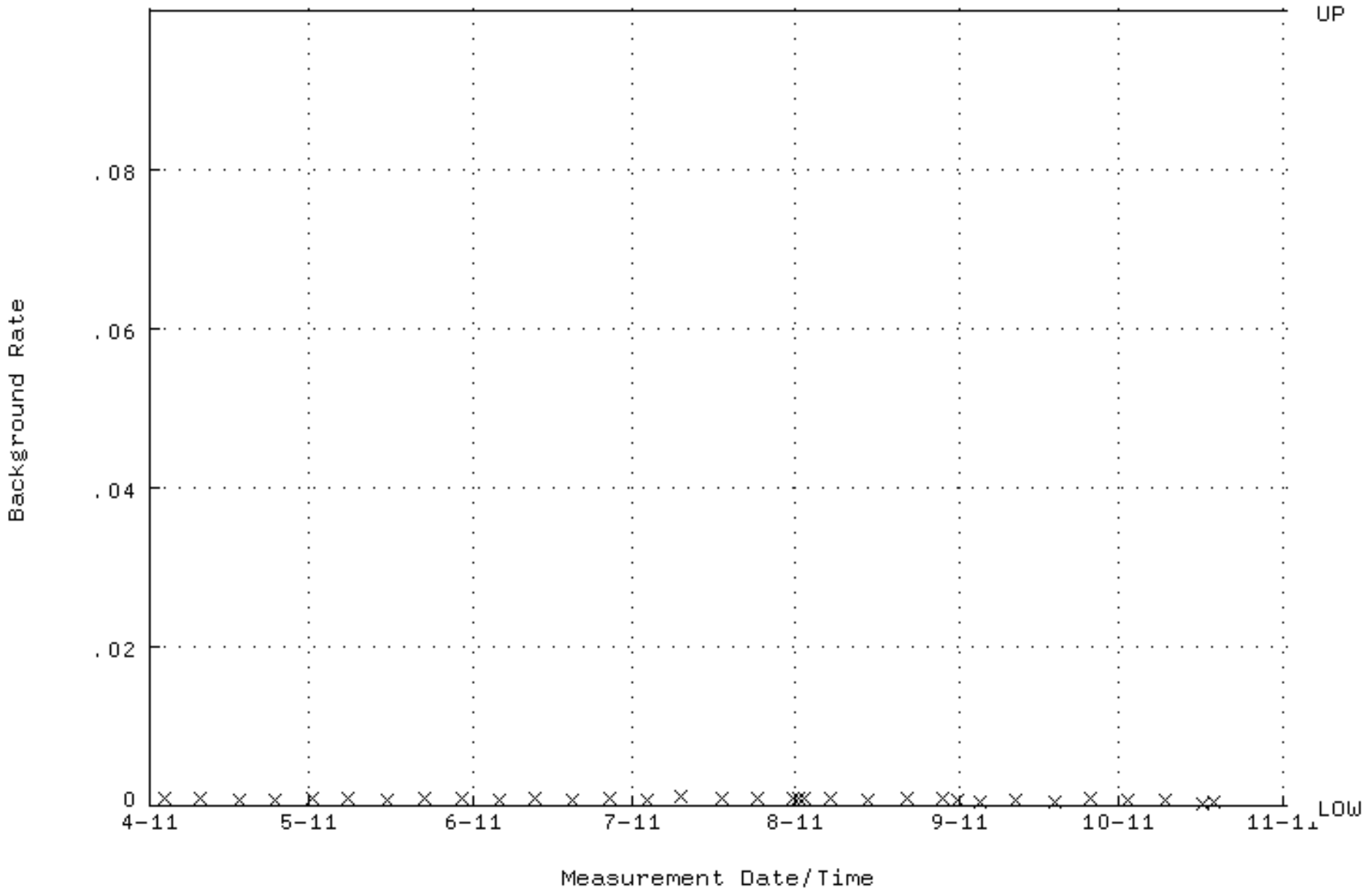
QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 13-OCT-2011 18:22:10 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



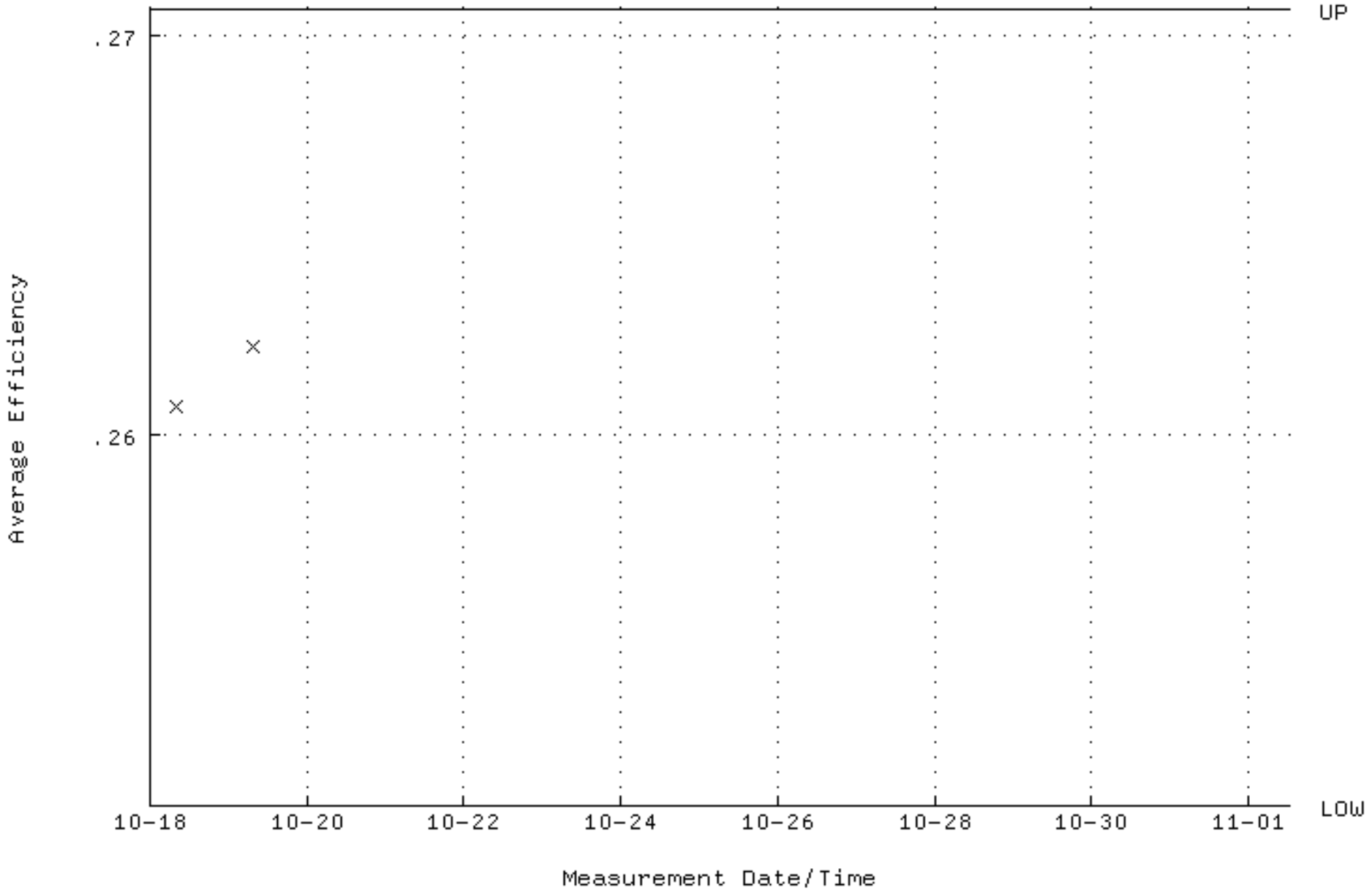
QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 13-OCT-2011 18:22:10 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



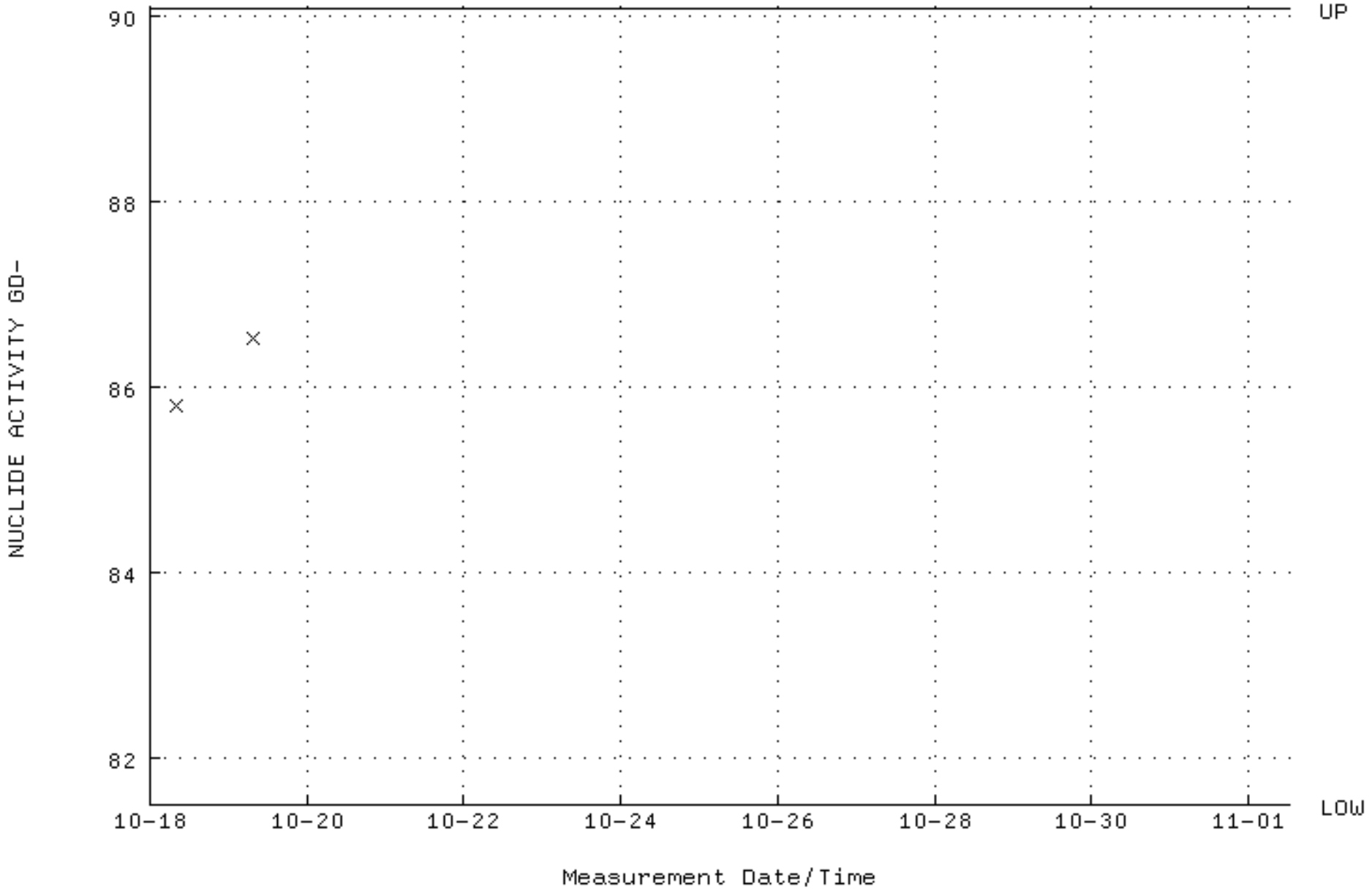
QA filename : DKA100:[ENV_ALPHA.QA.B]B114.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 18:50:33 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



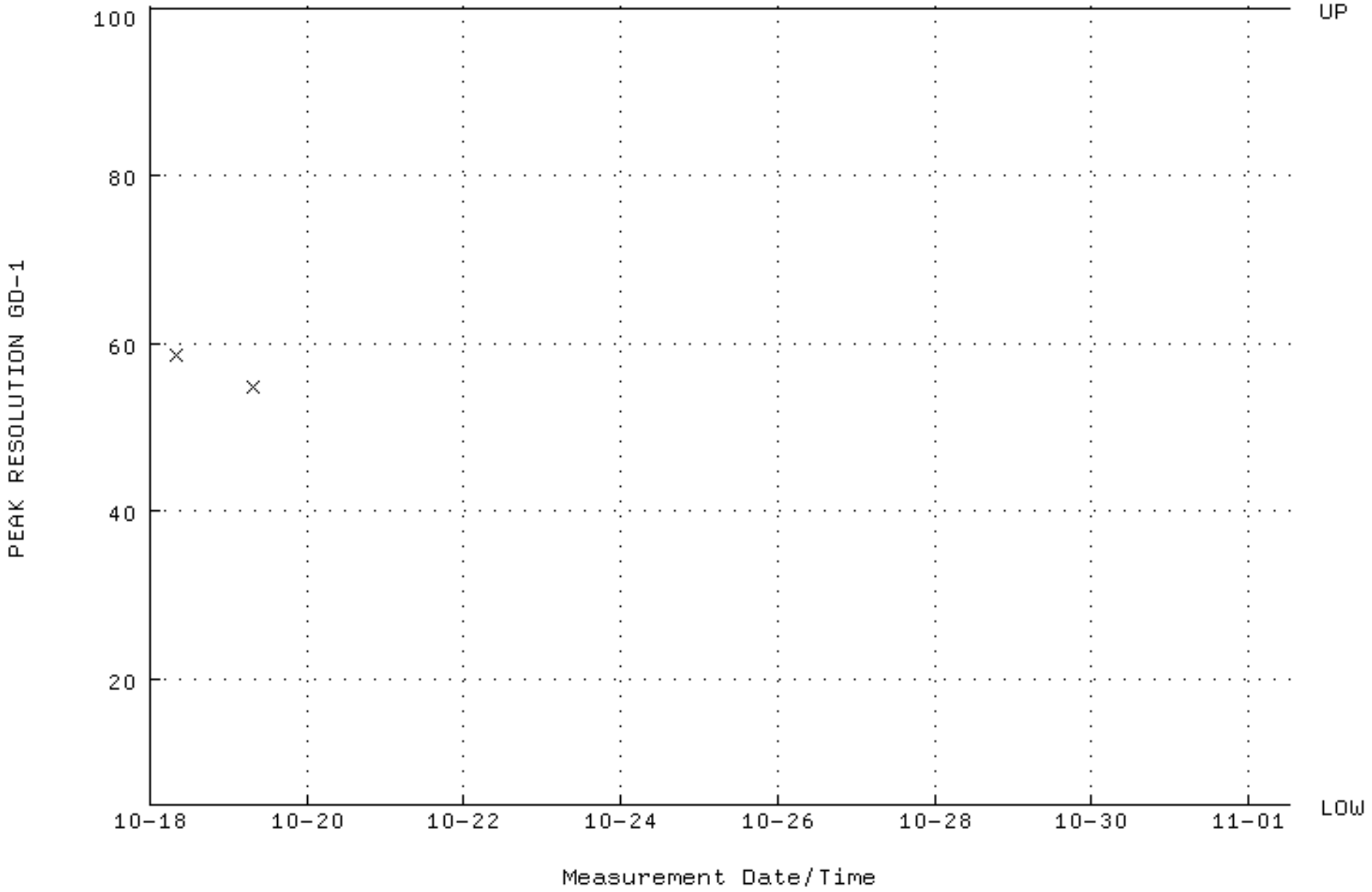
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:44:48 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.250670 through 0.270670



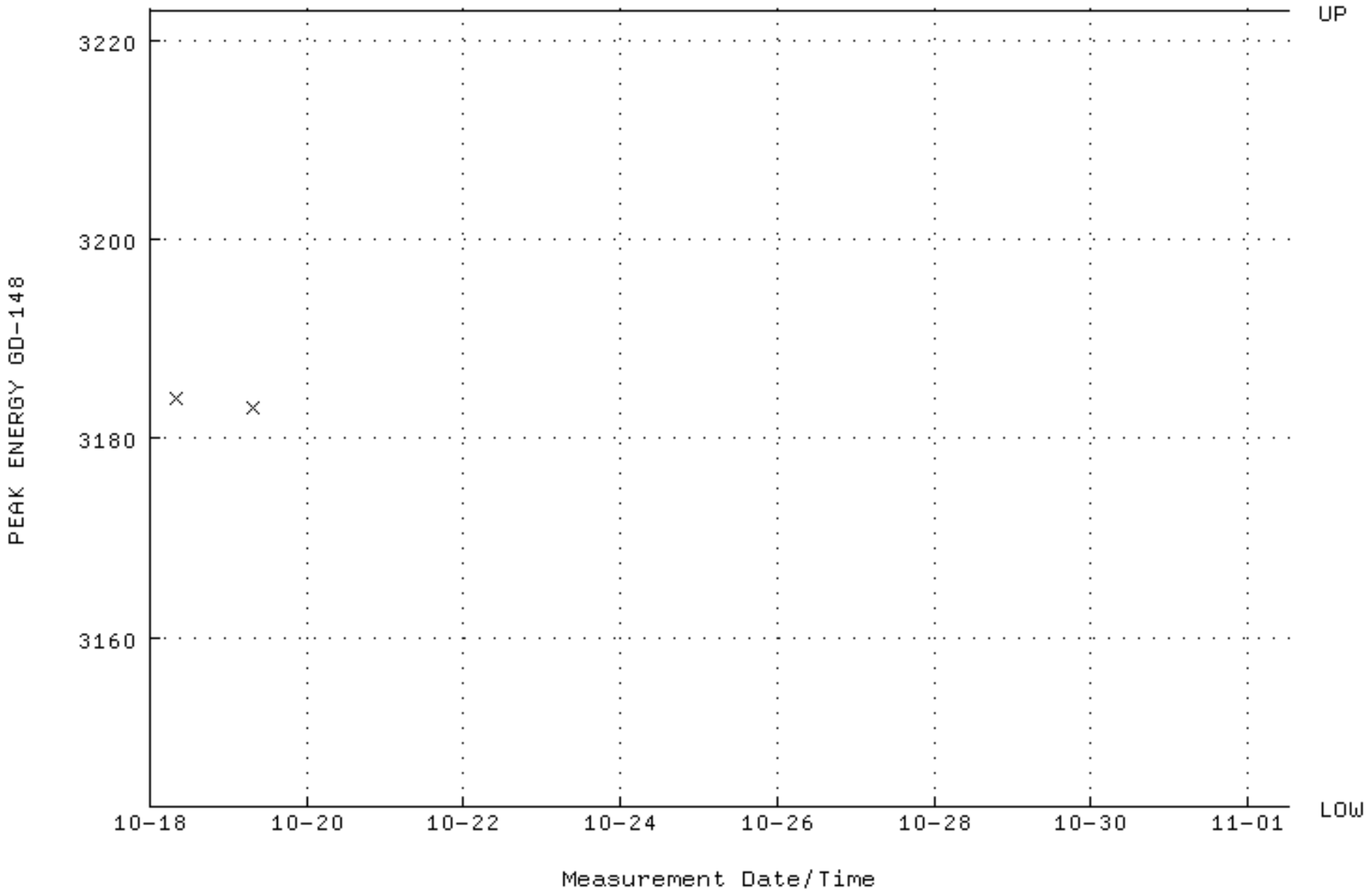
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:44:48 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 81.4968 through 90.0754



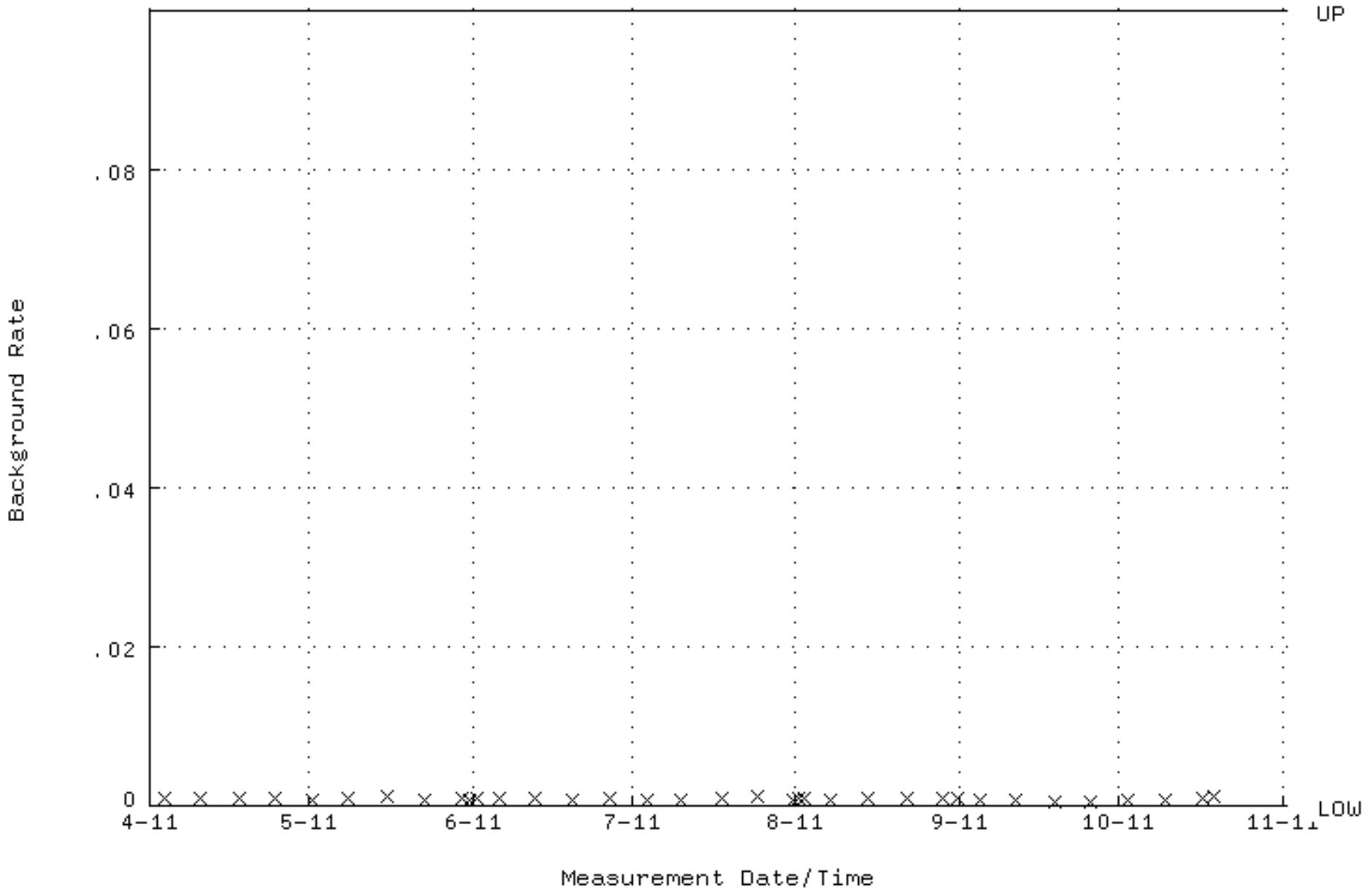
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:44:48 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



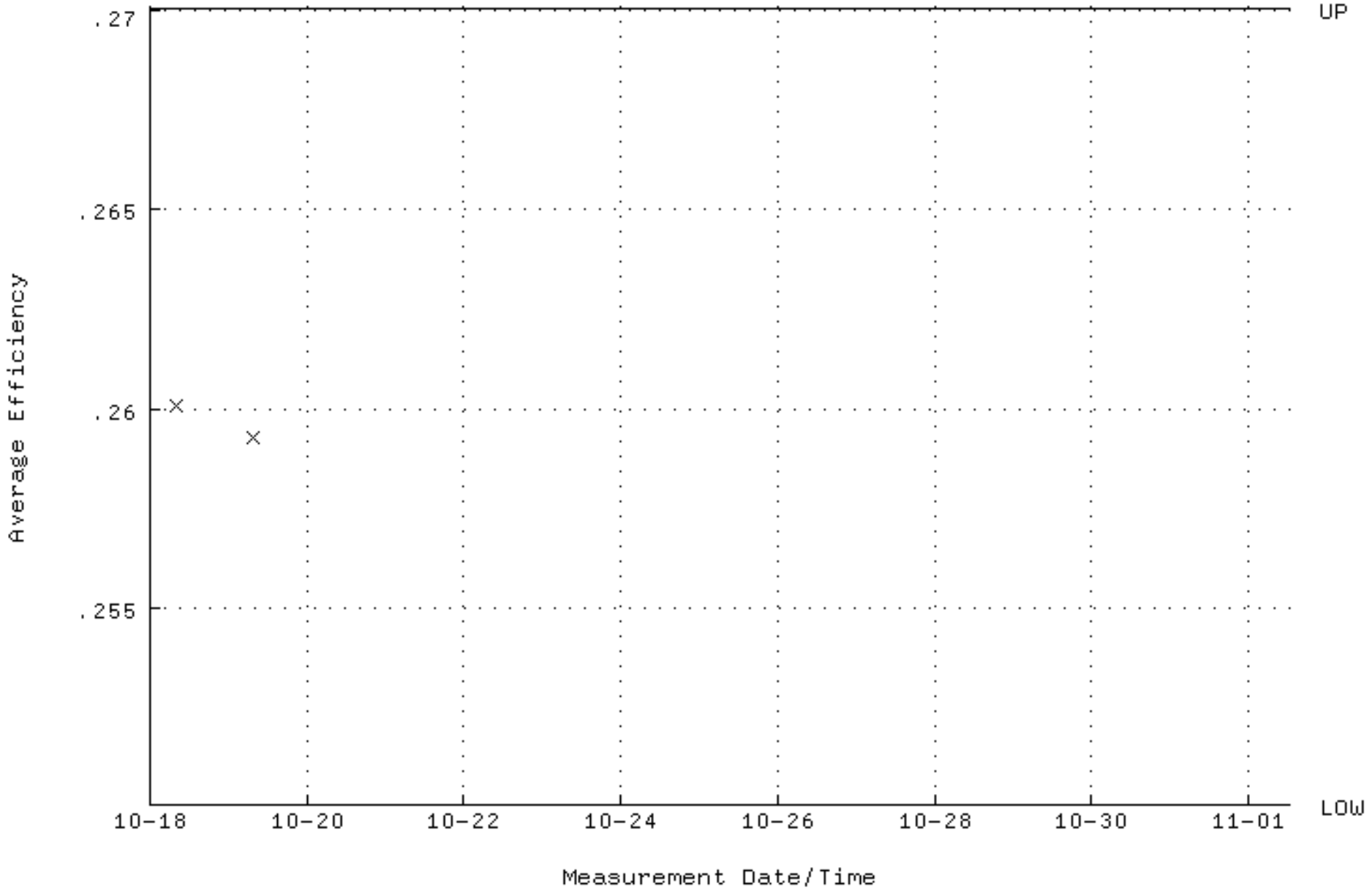
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:44:48 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



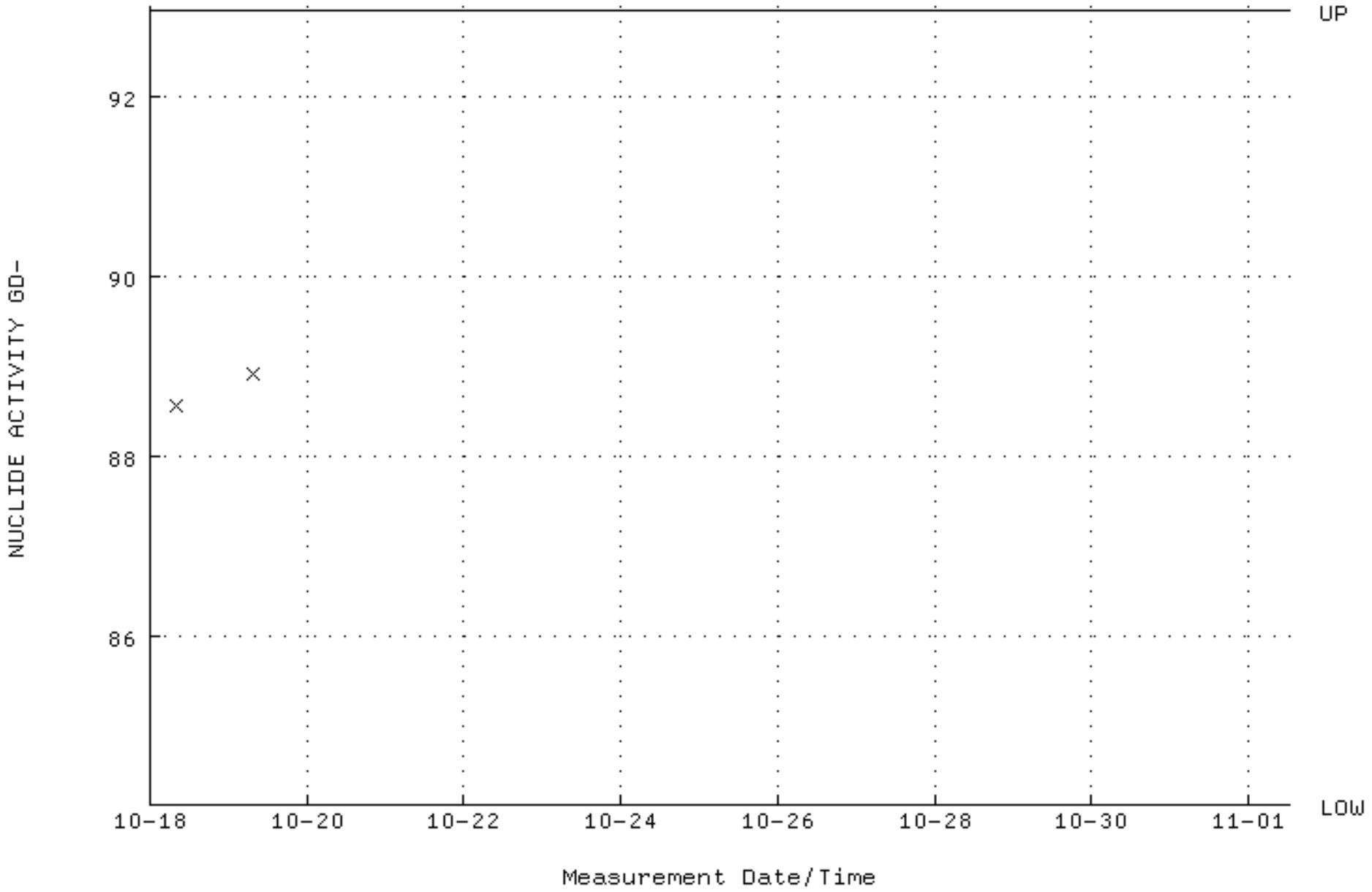
QA filename : DKA100:[ENV_ALPHA.QA.B]B115.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 18:50:37 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



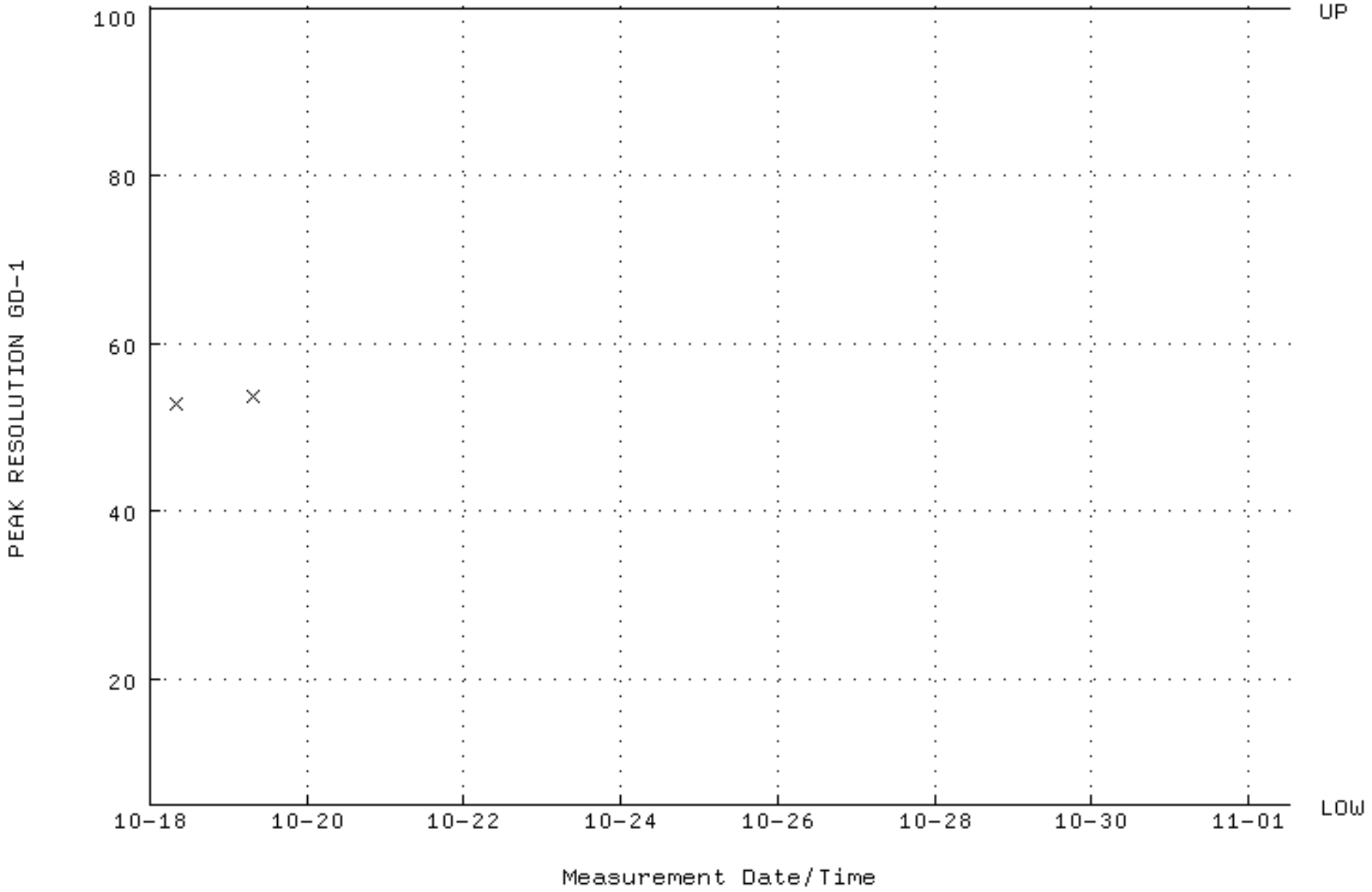
QA filename : DKA100:[ENV_ALPHA.QA.W]W116.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:44:52 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.250057 through 0.270057



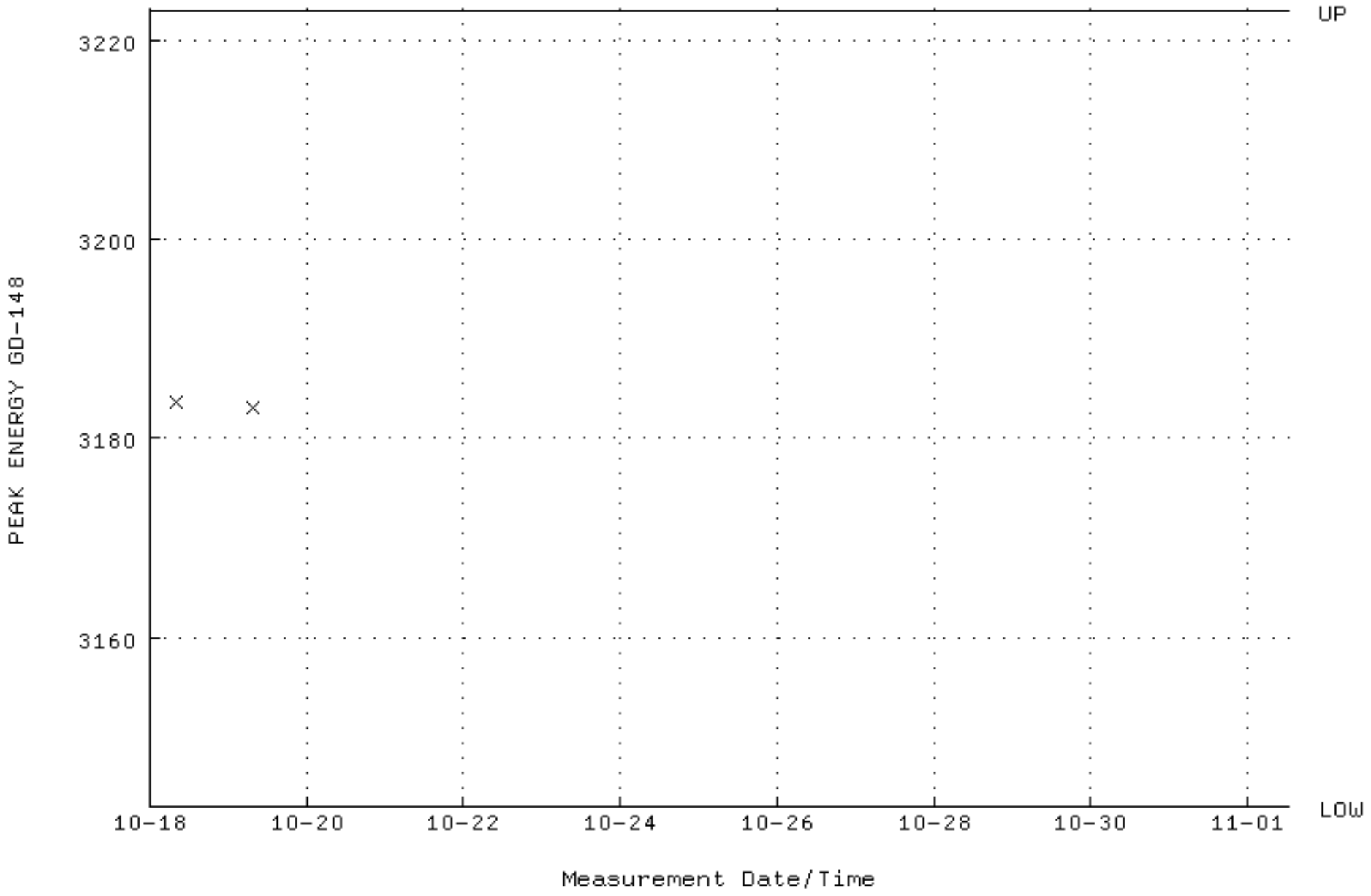
QA filename : DKA100:[ENV_ALPHA.QA.W]W116.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:44:52 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 84.1159 through 92.9703



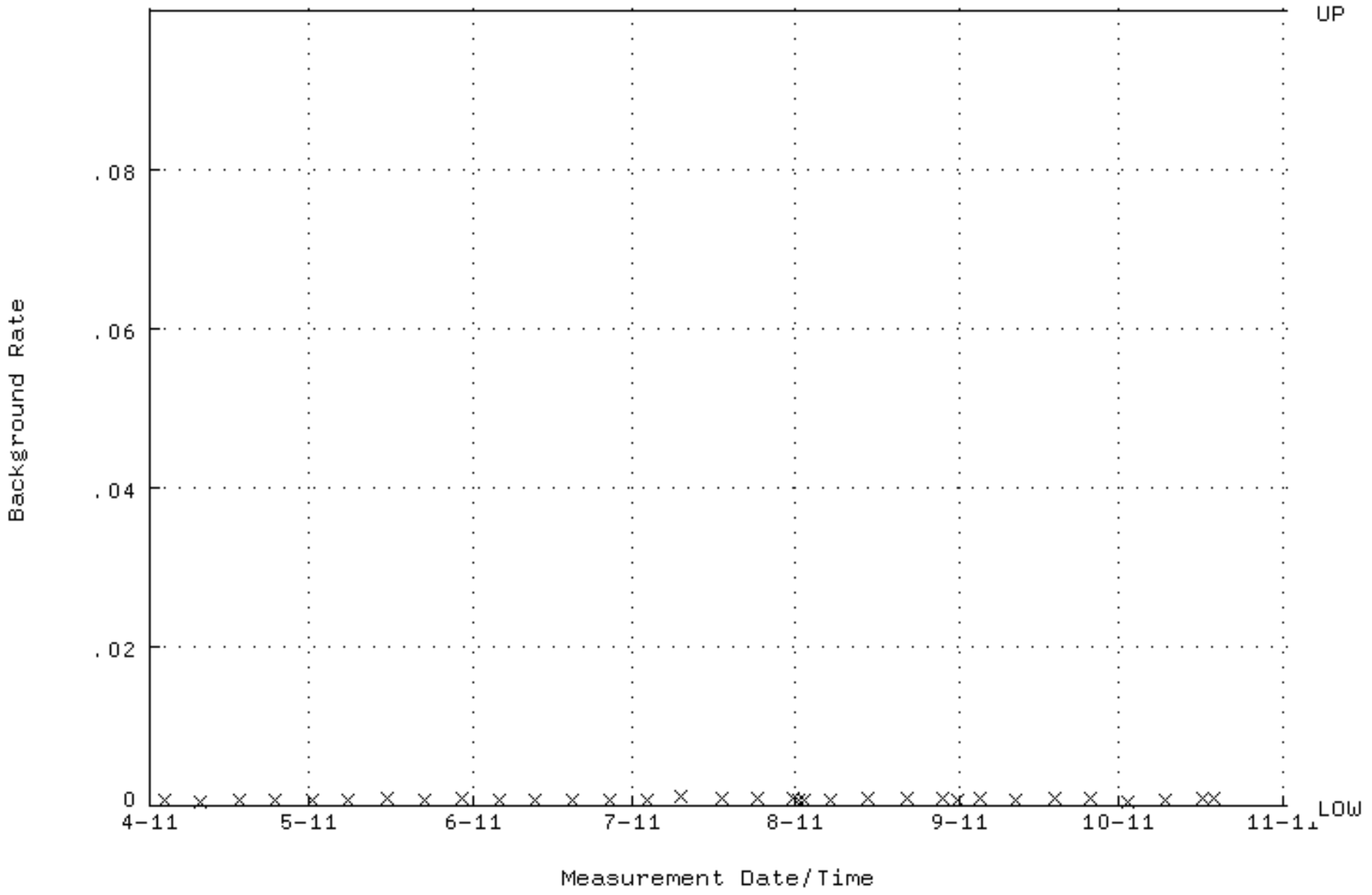
QA filename : DKA100:[ENV_ALPHA.QA.W]W116.QAF;5
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:44:52 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



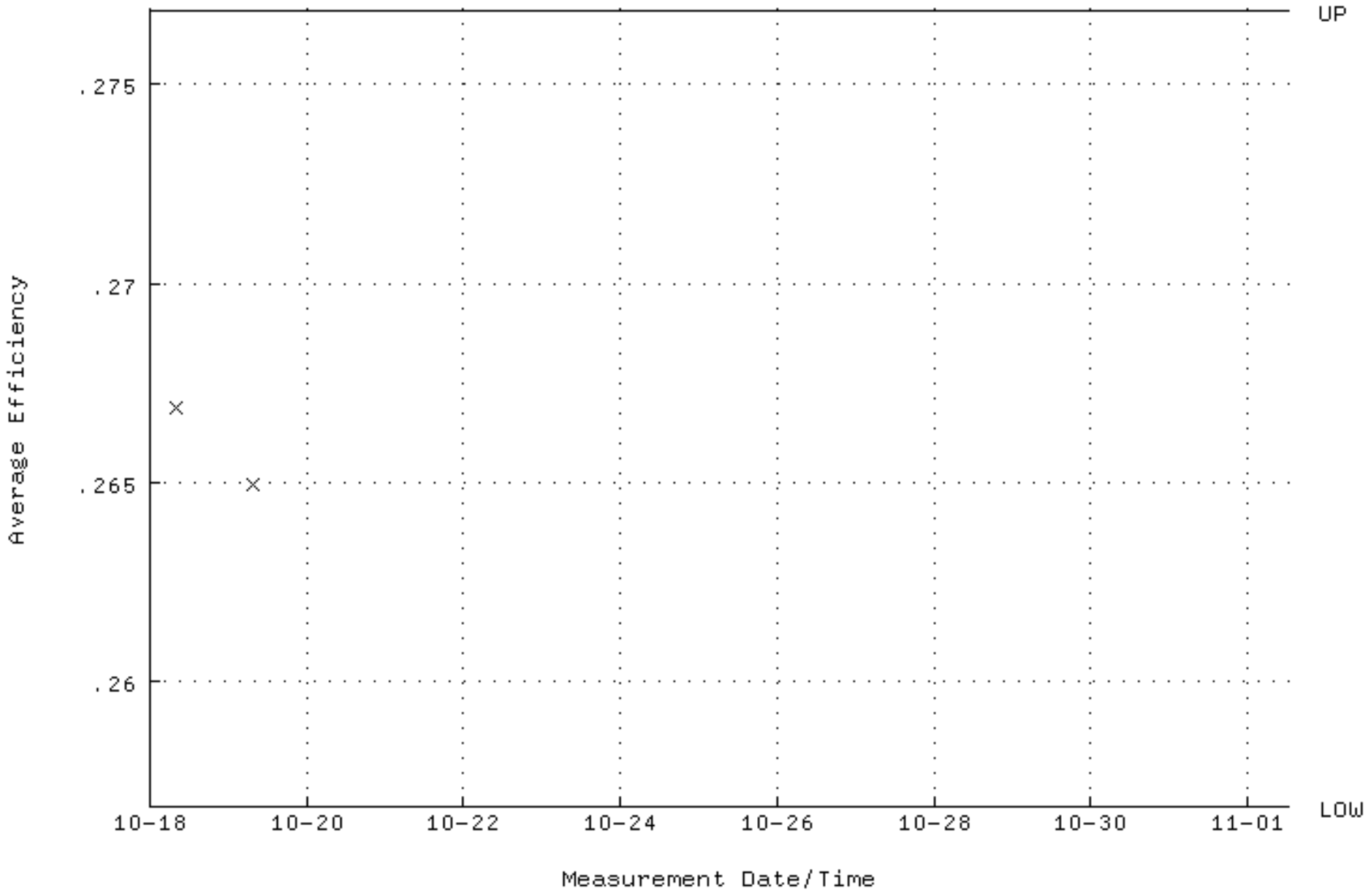
QA filename : DKA100:[ENV_ALPHA.QA.W]W116.QAF;5
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:44:52 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



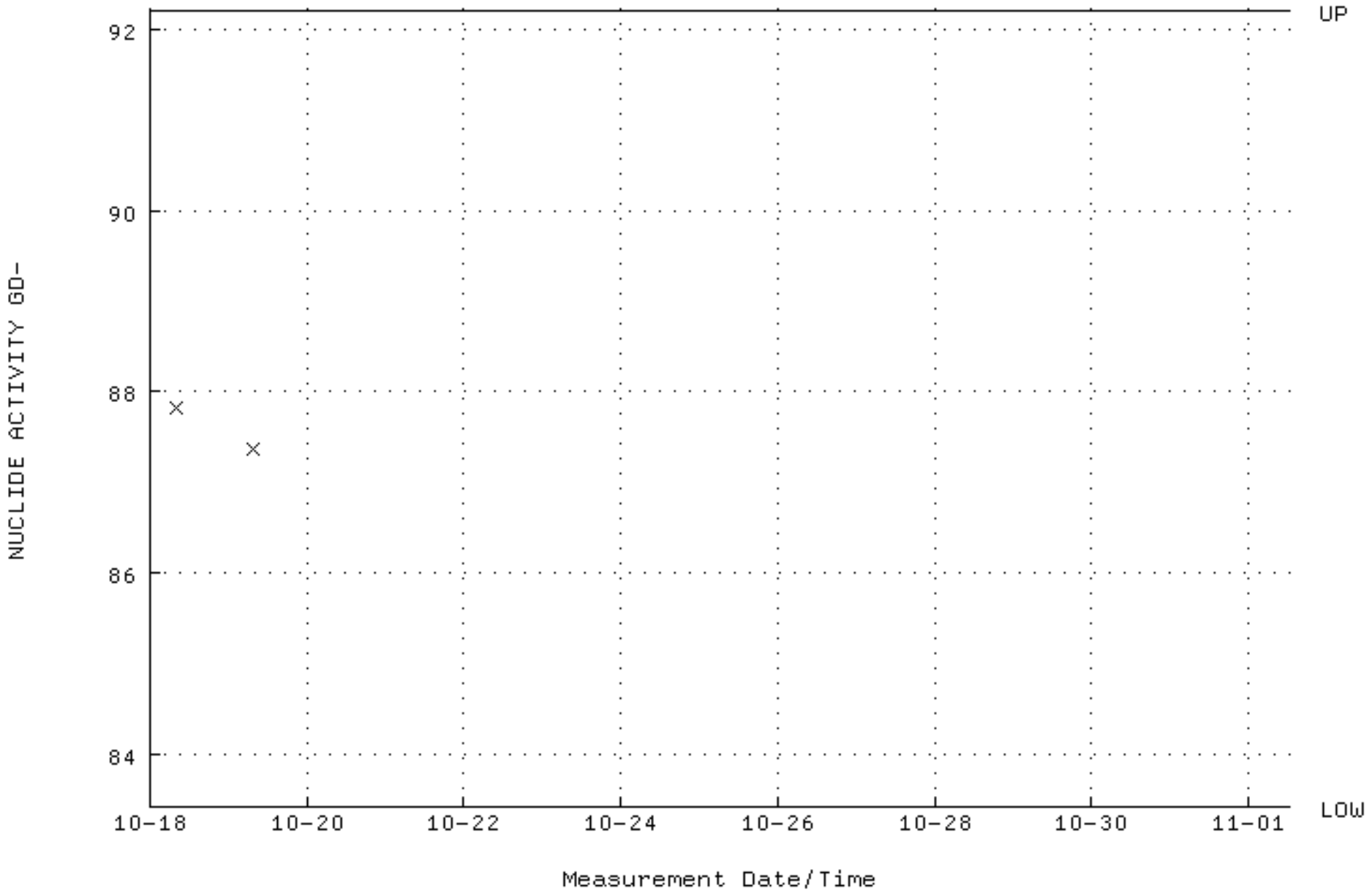
QA filename : DKA100:[ENV_ALPHA.QA.B]B116.QAF;3
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 18:50:40 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



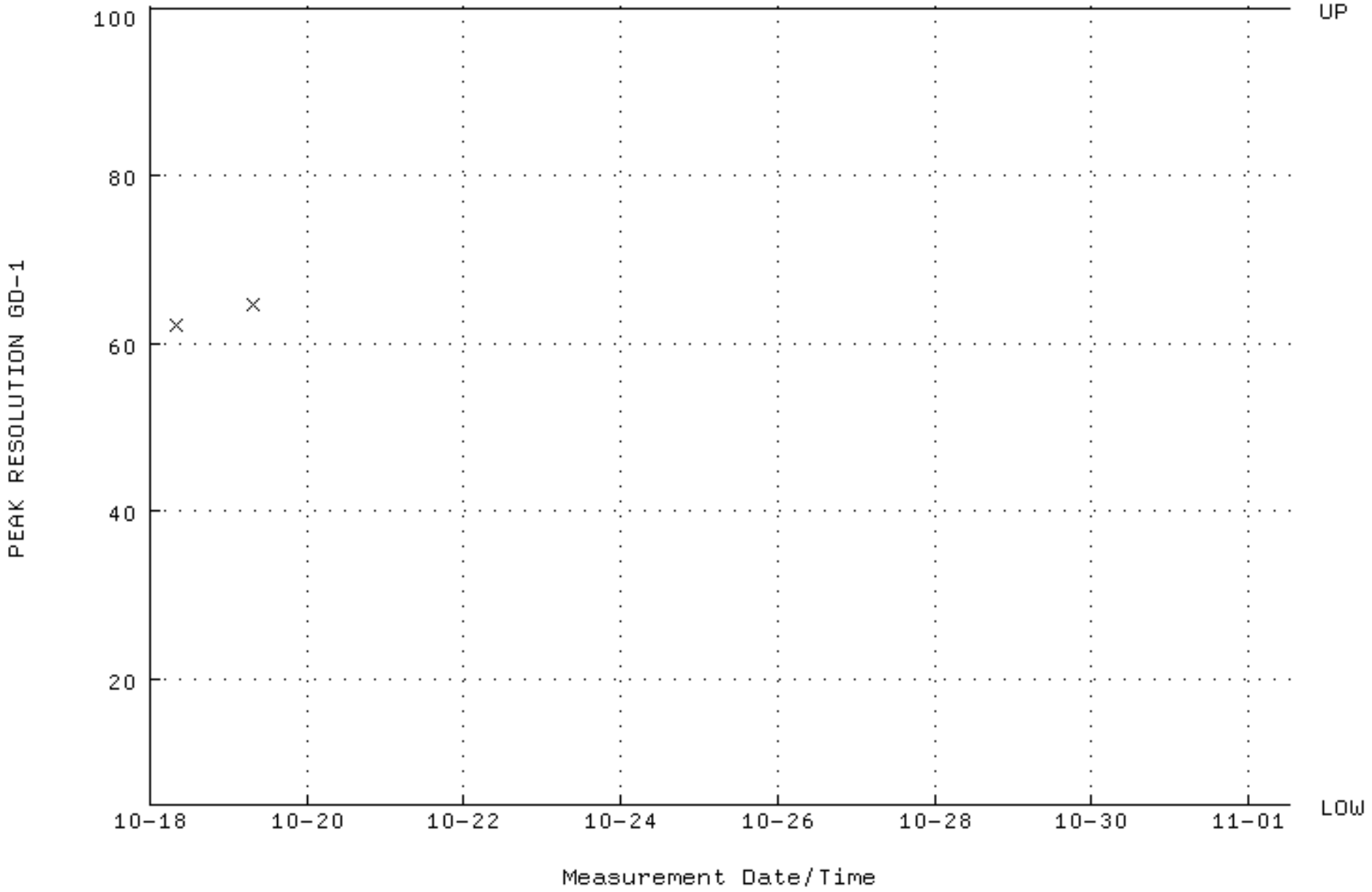
QA filename : DKA100:[ENV_ALPHA.QA.W]W117.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:44:56 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.256855 through 0.276855



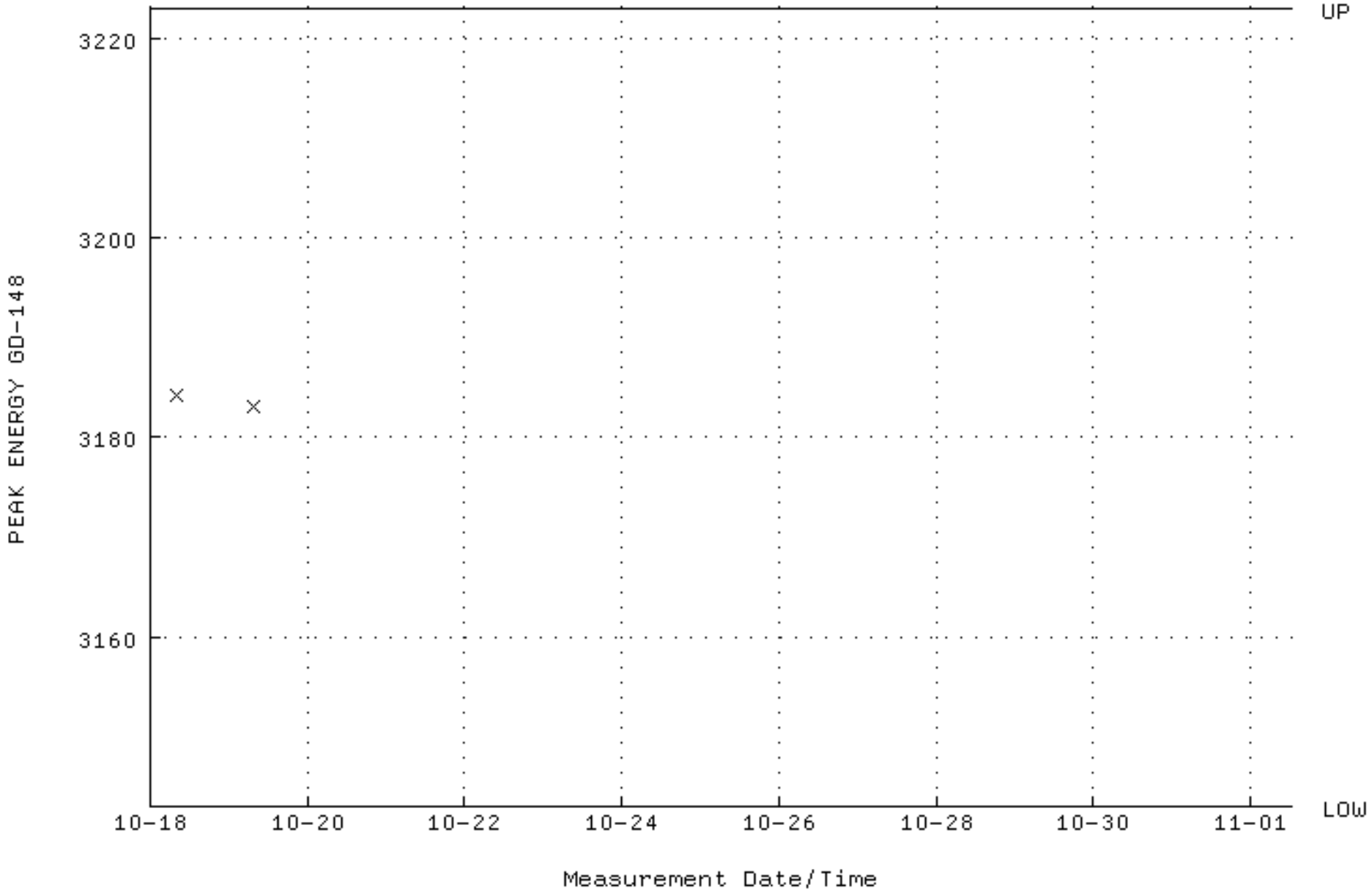
QA filename : DKA100:[ENV_ALPHA.QA.W]W117.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:44:56 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 83.4229 through 92.2043



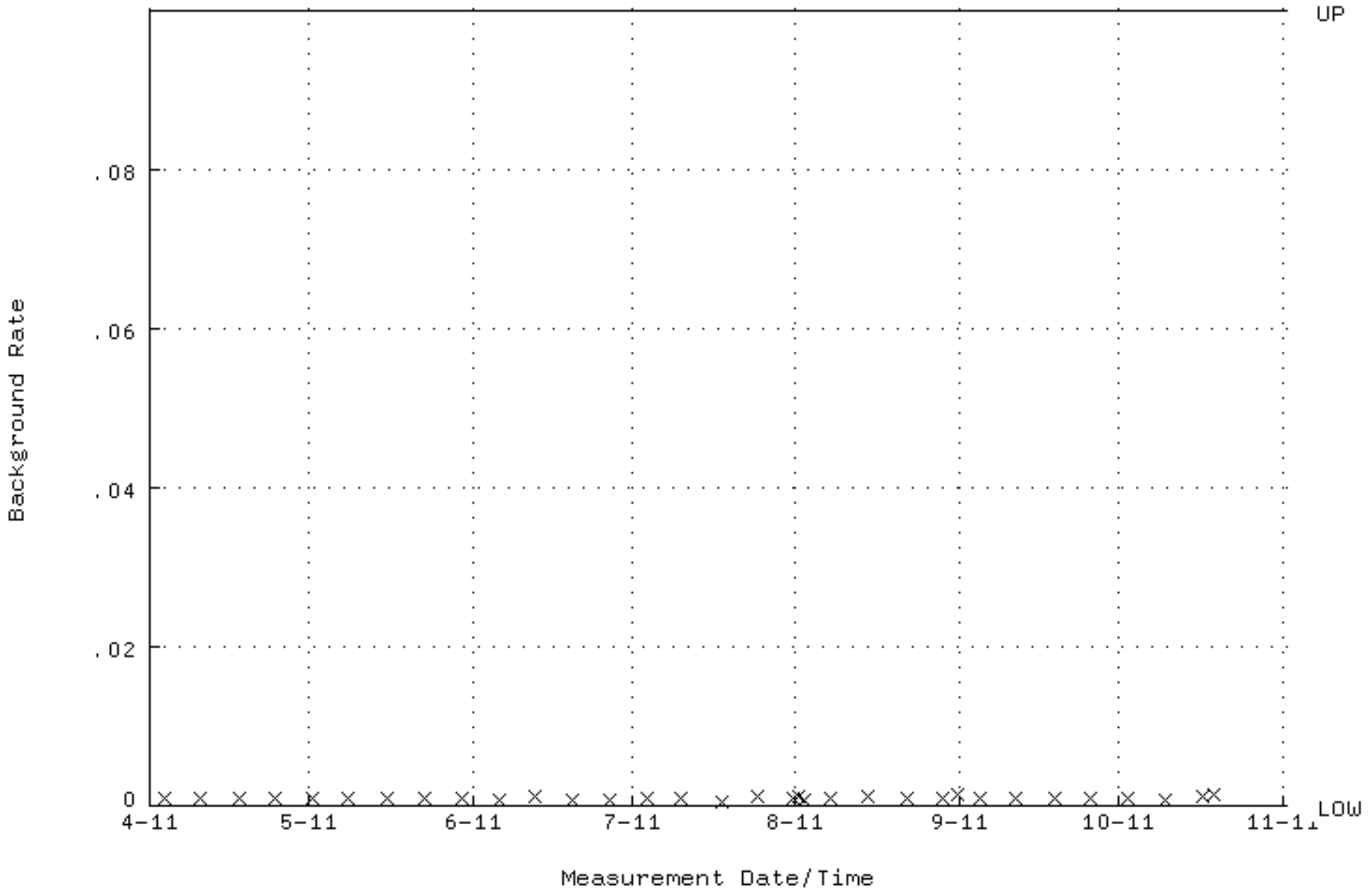
QA filename : DKA100:[ENV_ALPHA.QA.W]W117.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:44:56 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



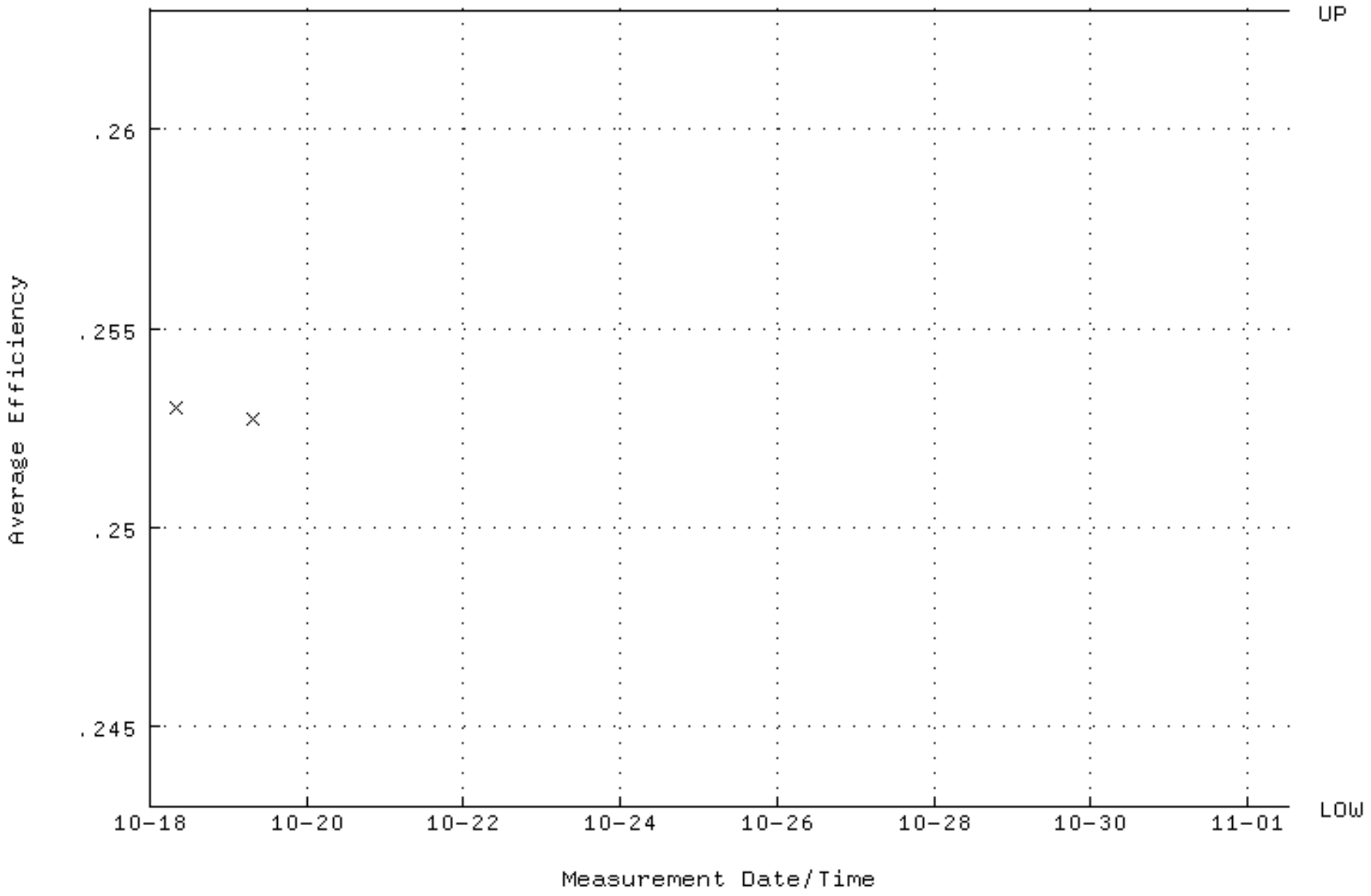
QA filename : DKA100:[ENV_ALPHA.QA.W]W117.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:44:56 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



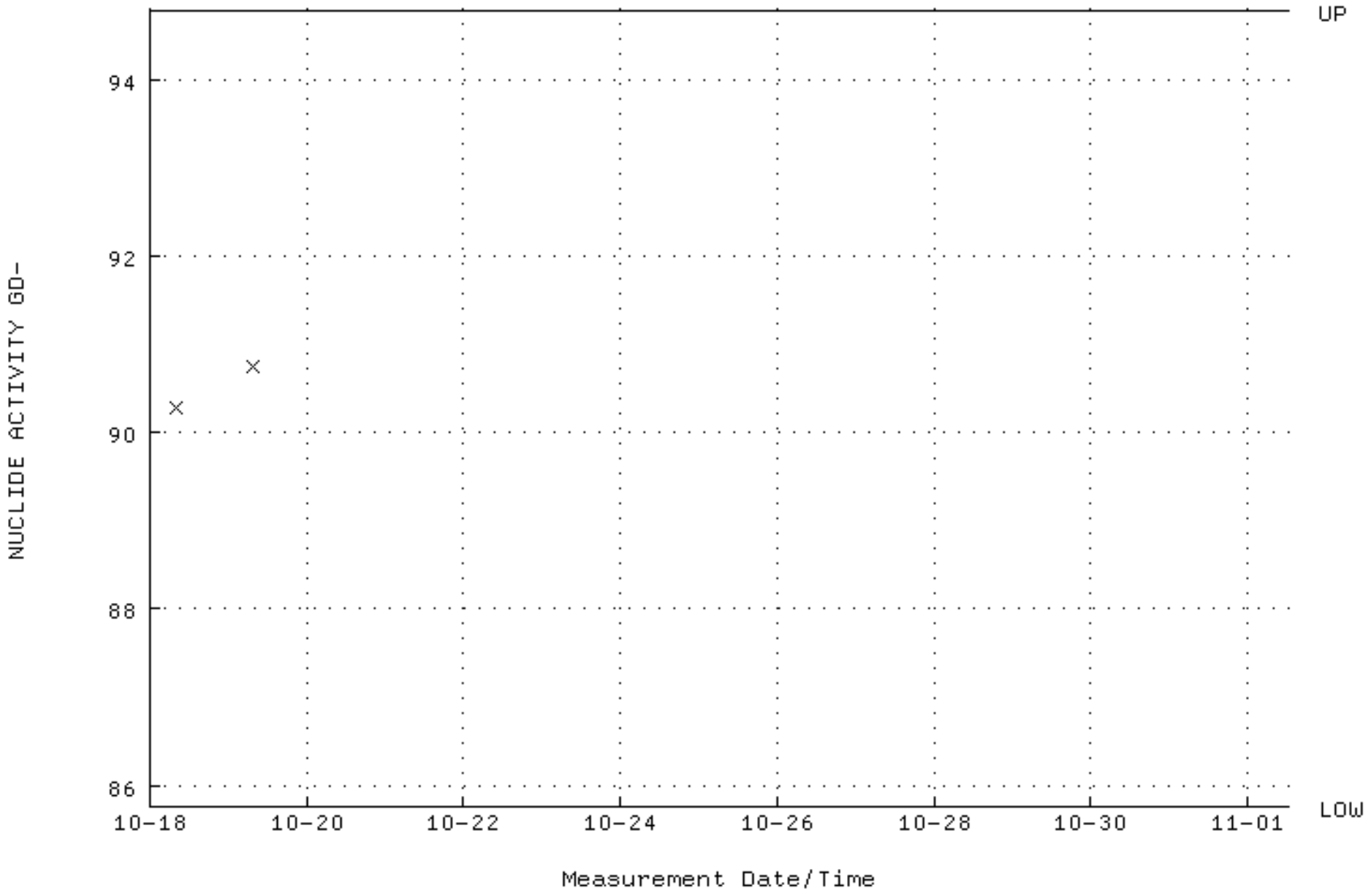
QA filename : DKA100:[ENV_ALPHA.QA.B]B117.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:28:43 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



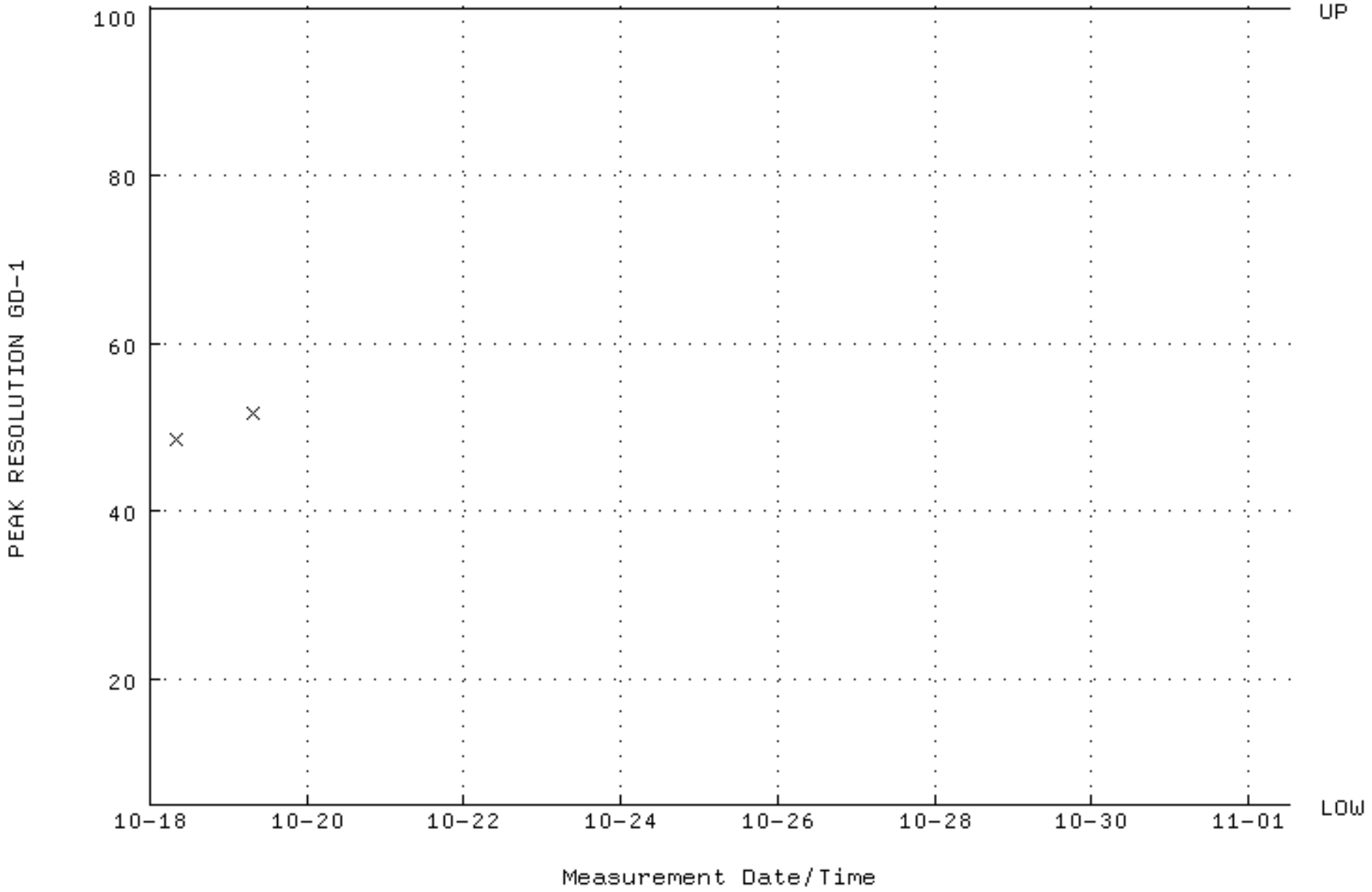
QA filename : DKA100:[ENV_ALPHA.QA.W]W118.QAF;7
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.242987 through 0.262987



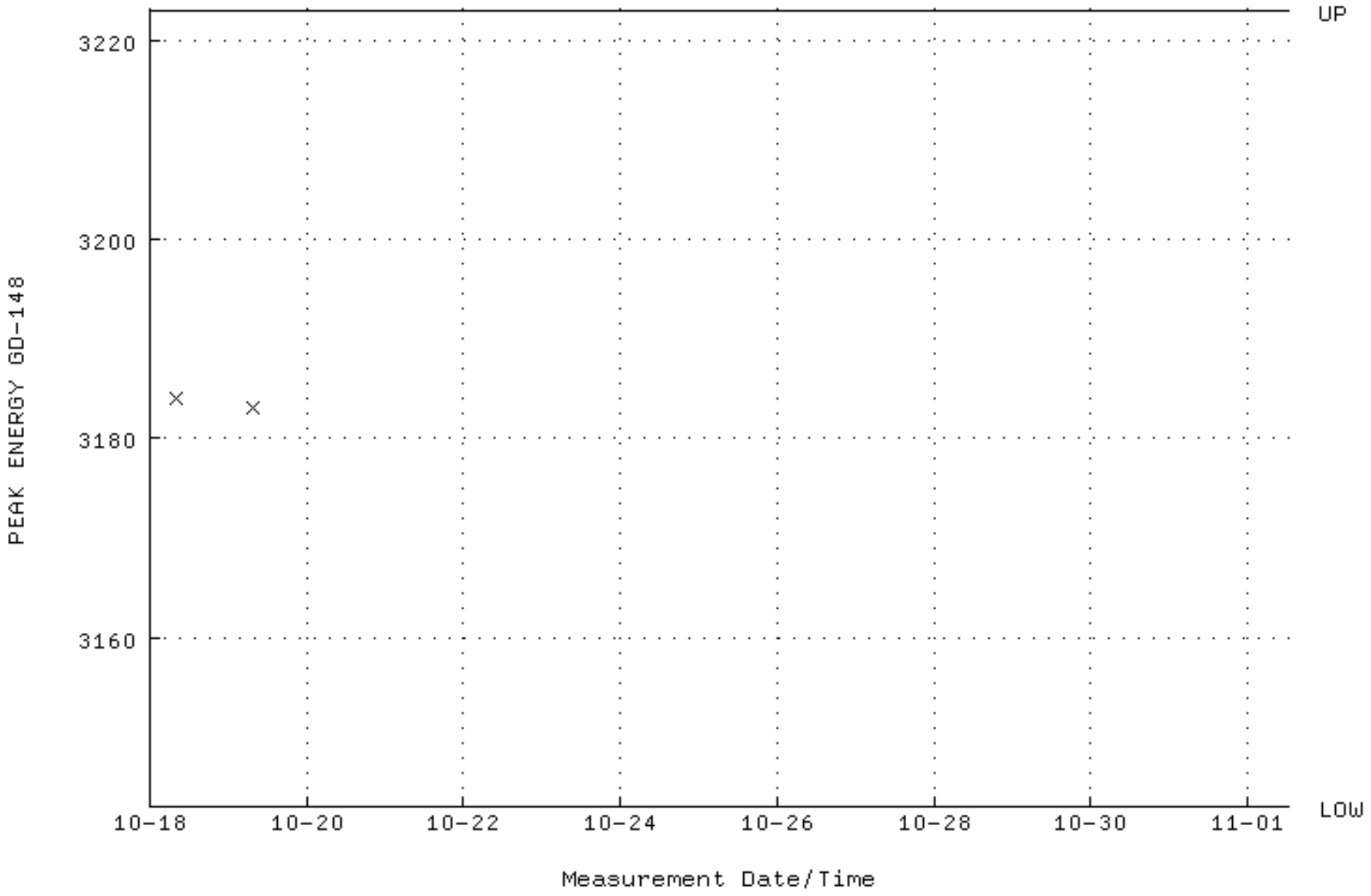
QA filename : DKA100:[ENV_ALPHA.QA.W]W118.QAF;7
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.7560 through 94.7830



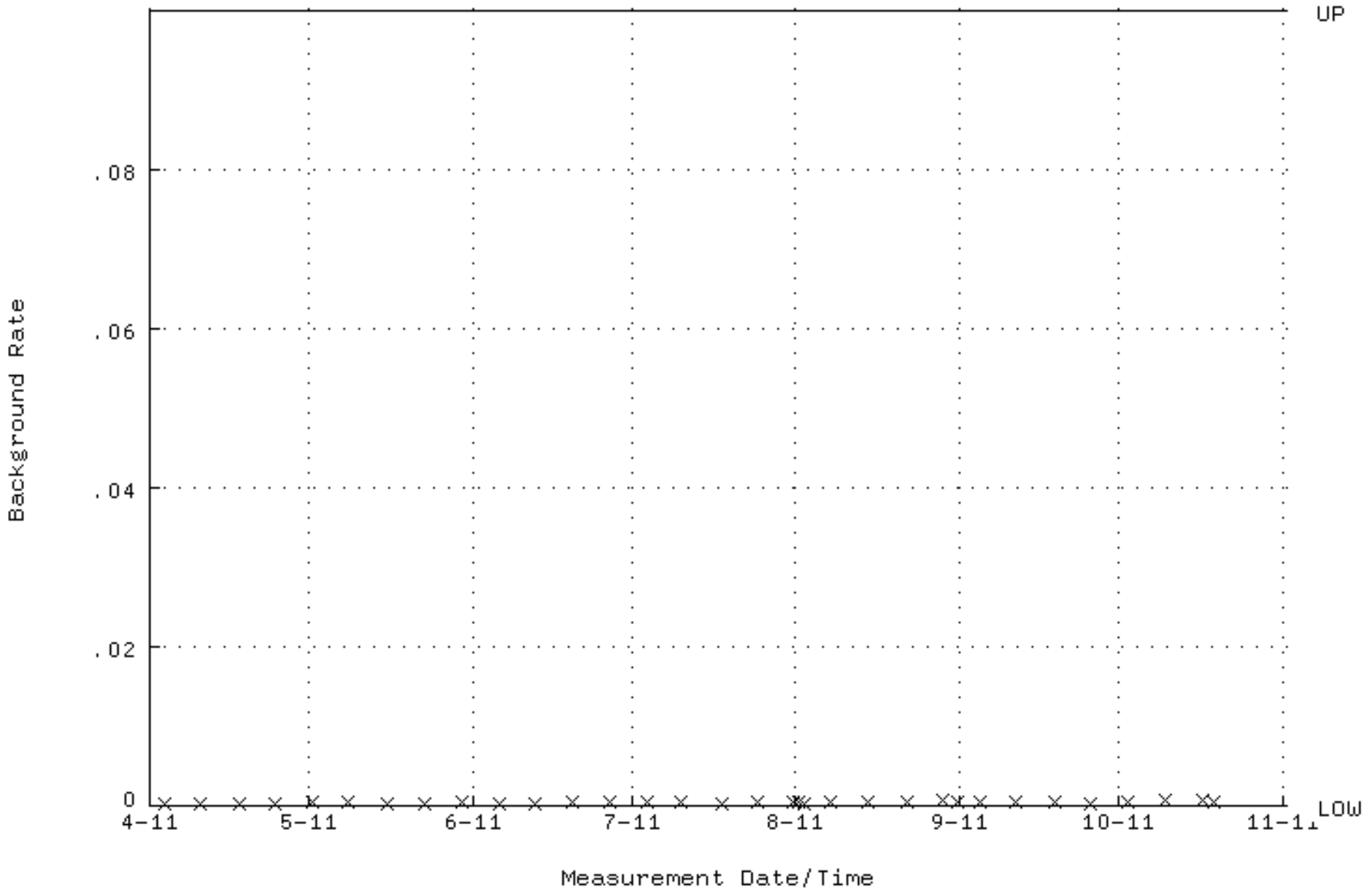
QA filename : DKA100:[ENV_ALPHA.QA.W]W118.QAF;7
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



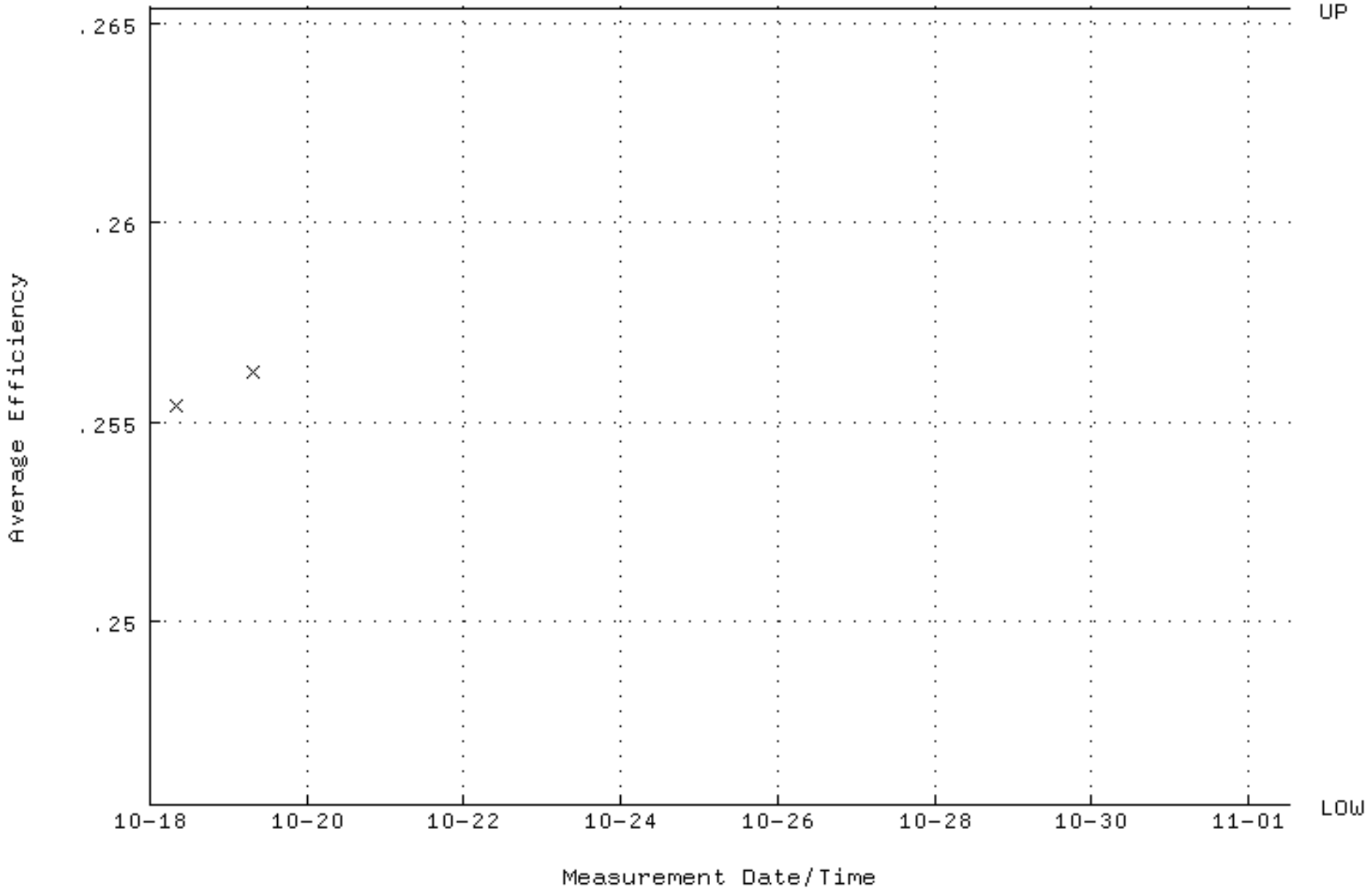
QA filename : DKA100:[ENV_ALPHA.QA.W]W118.QAF;7
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



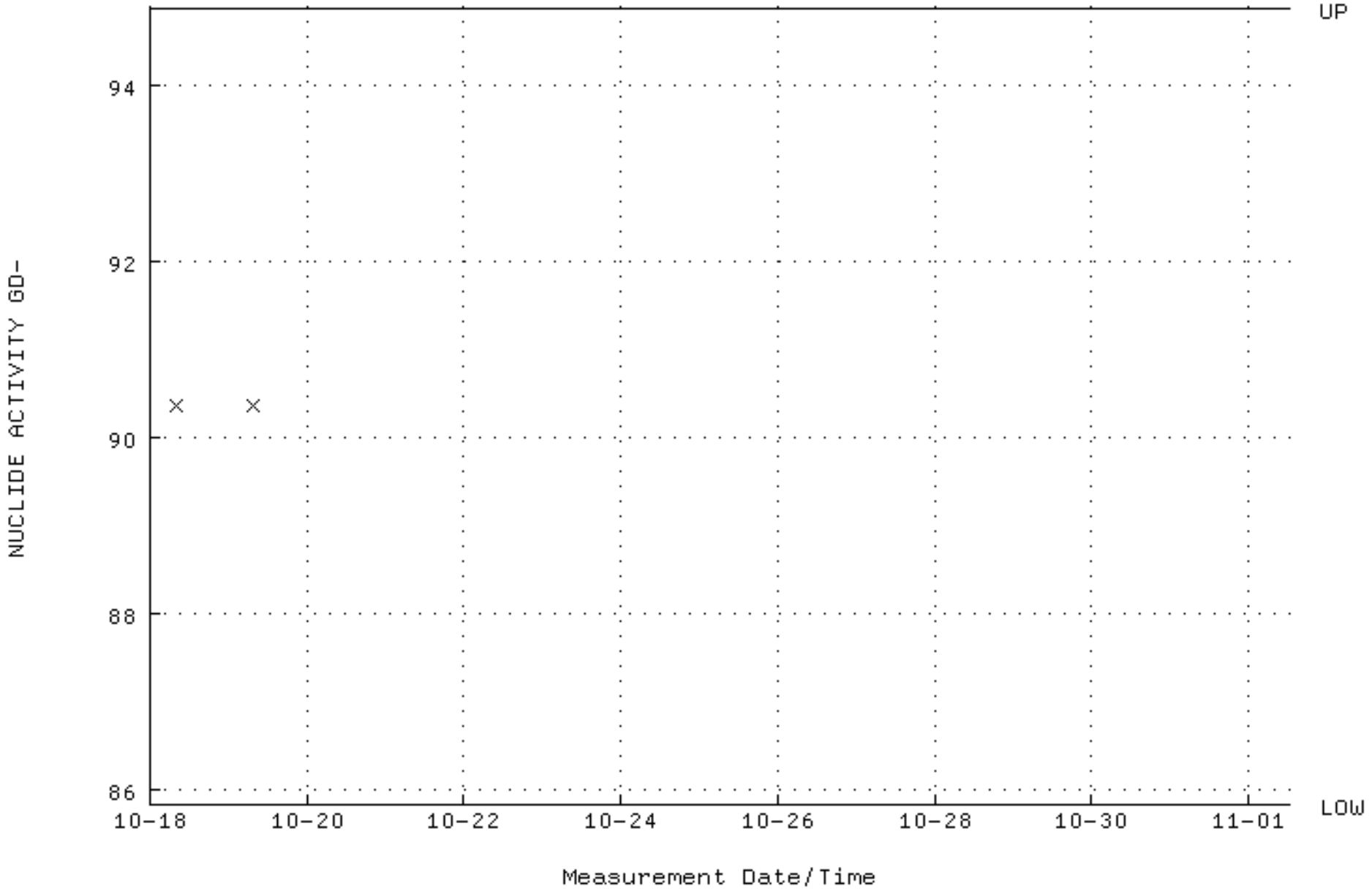
QA filename : DKA100:[ENV_ALPHA.QA.B]B118.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:28:47 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



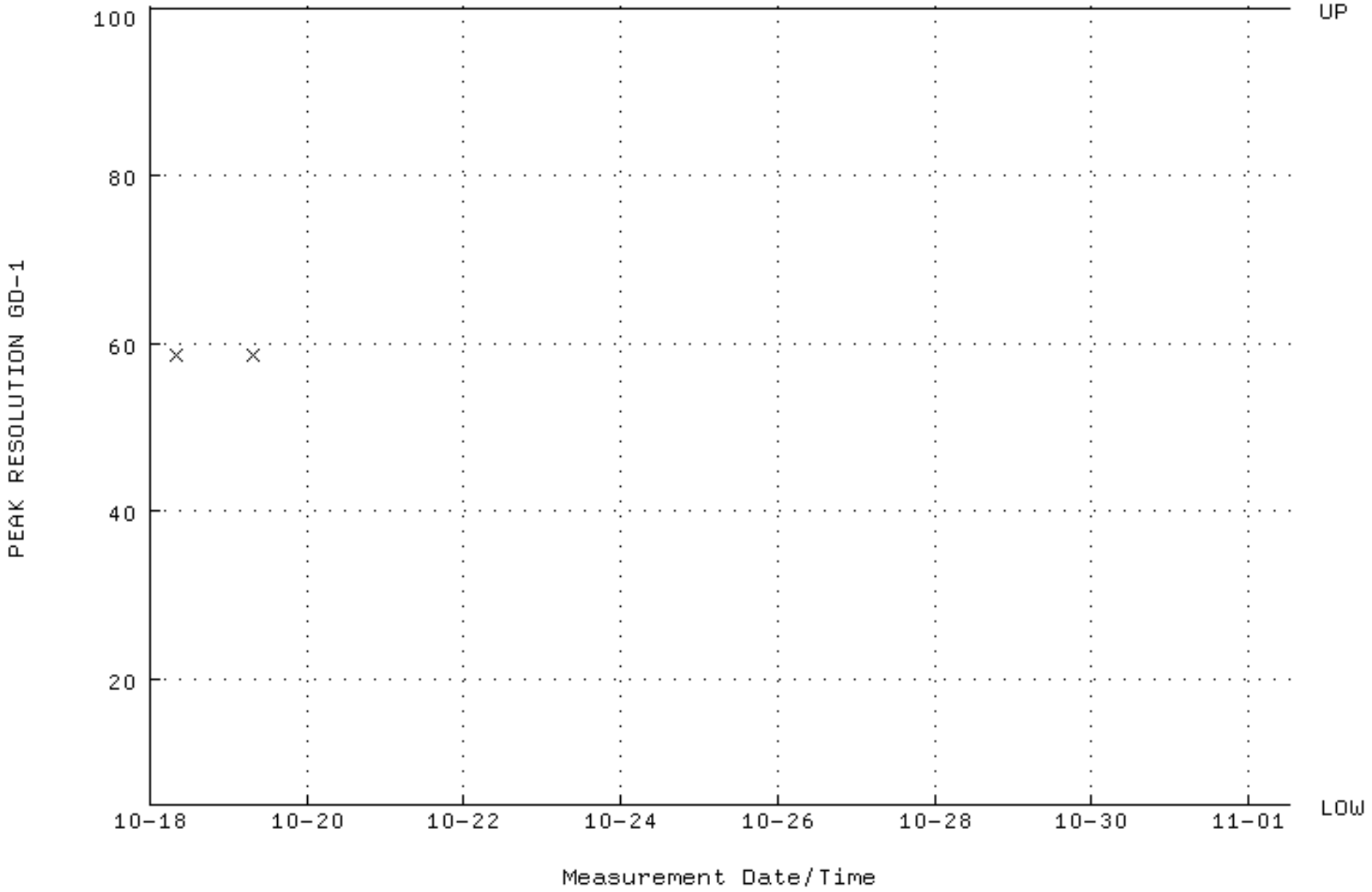
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:04 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.245387 through 0.265387



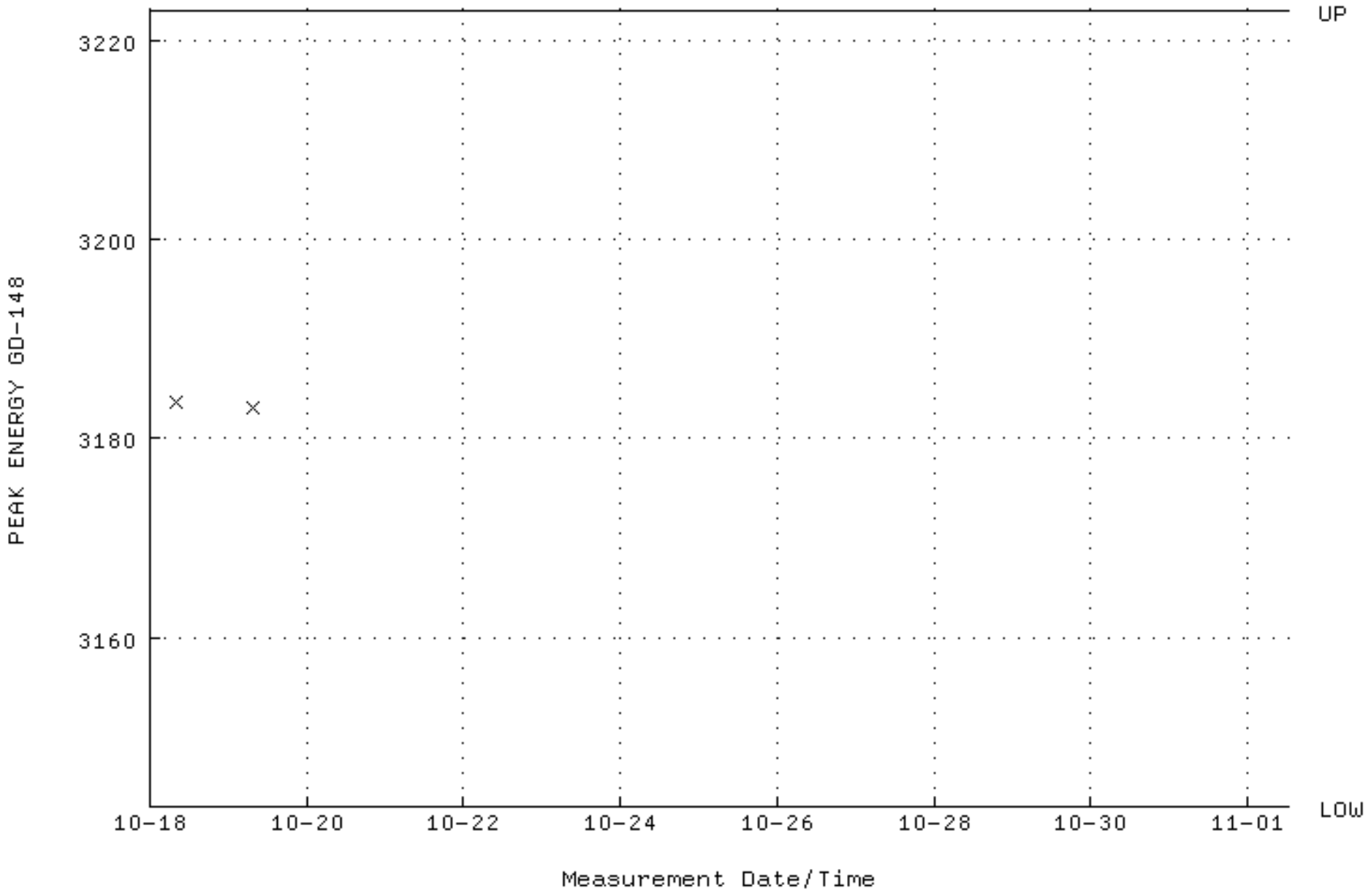
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:04 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.8375 through 94.8731



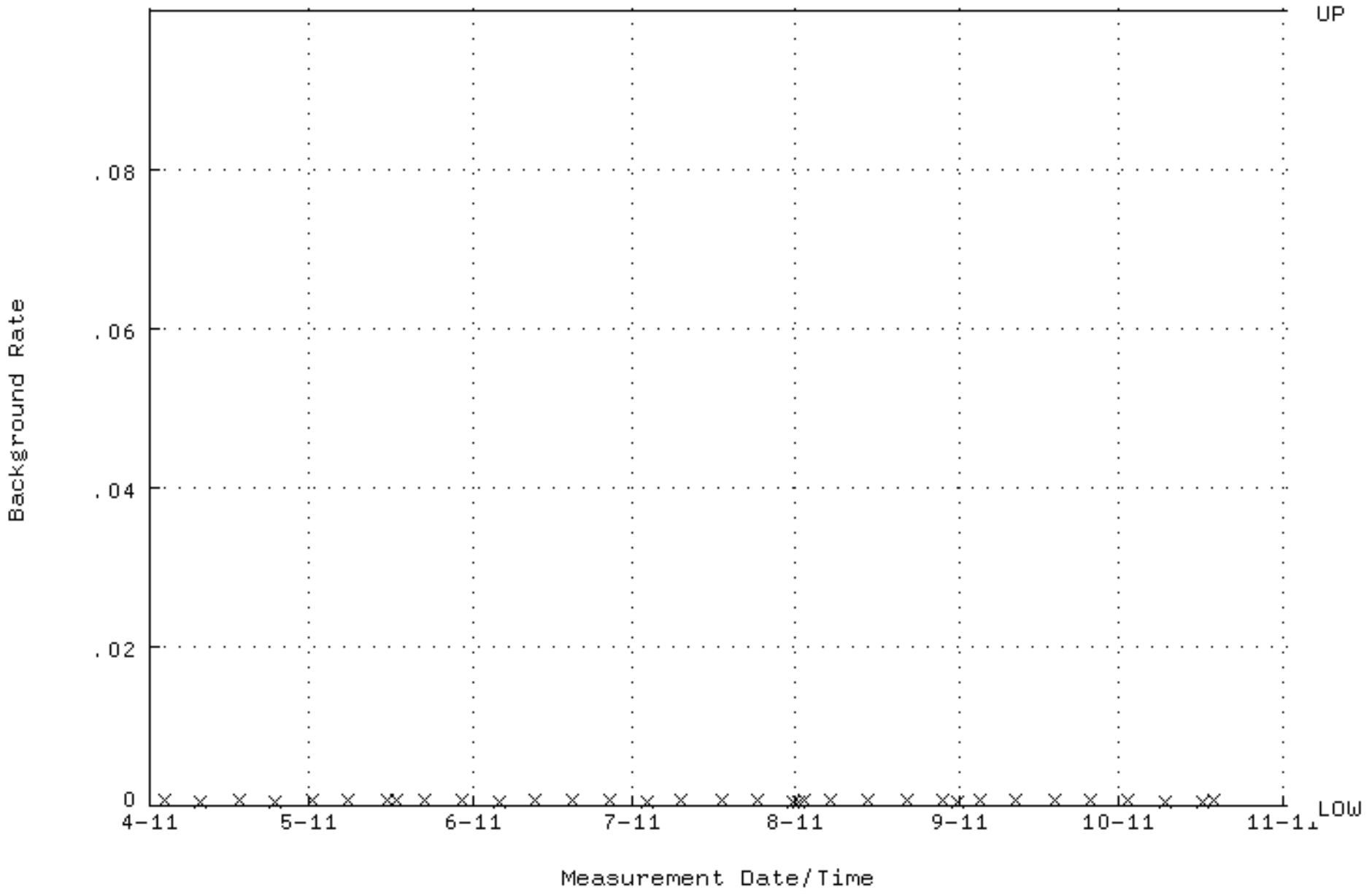
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:04 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



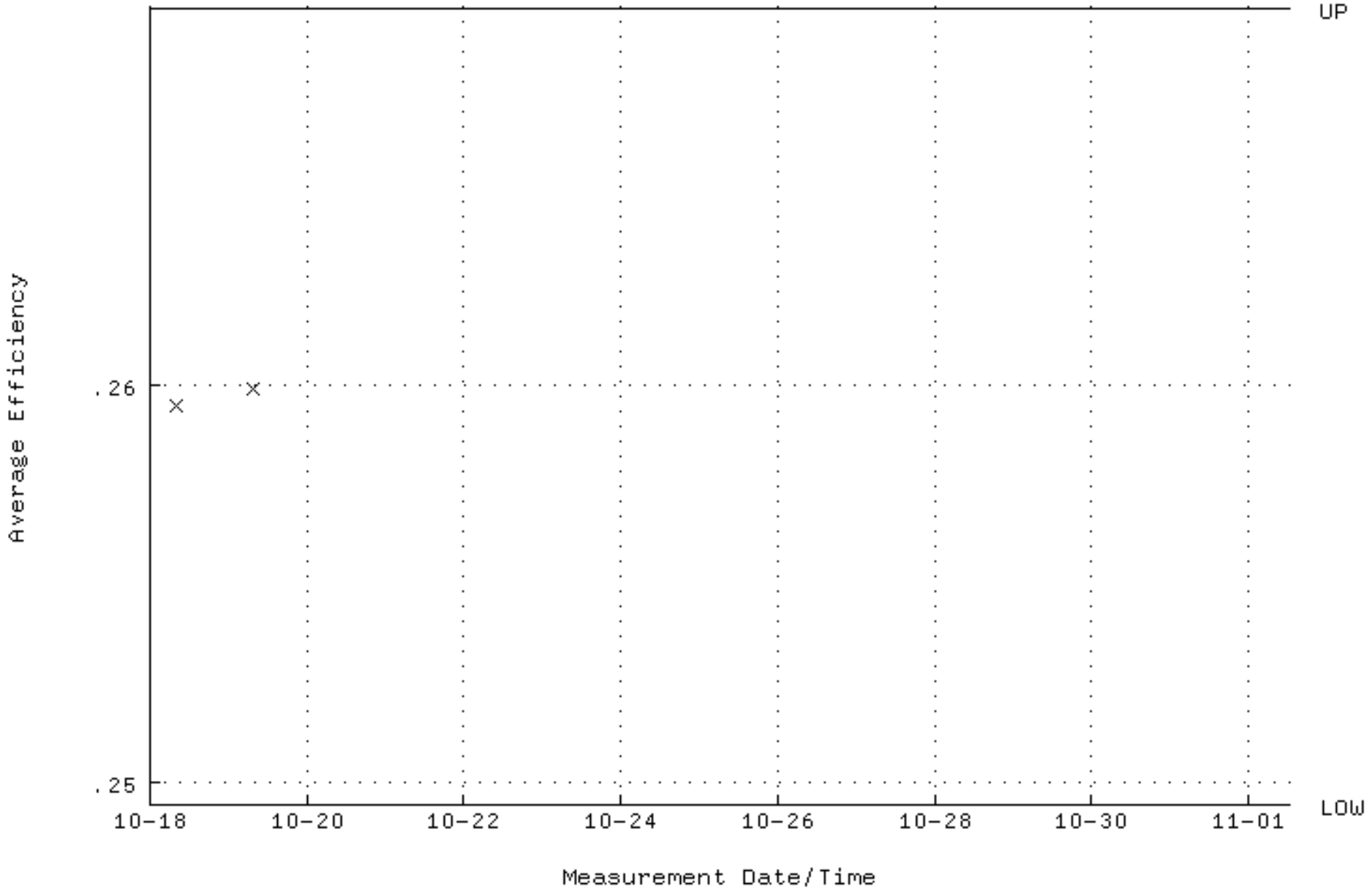
QA filename : DKA100:[ENV_ALPHA.QA.W]W119.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:04 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



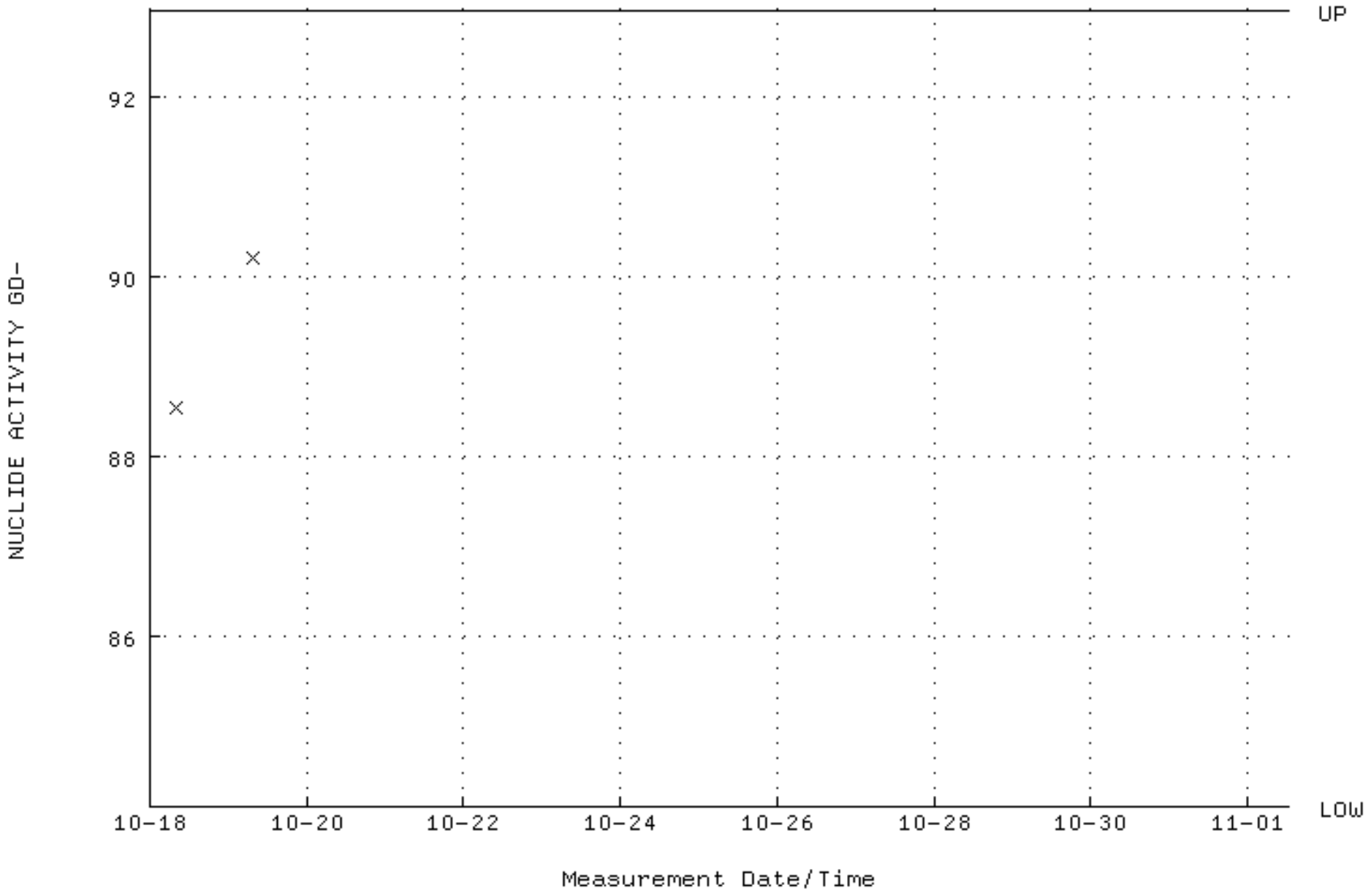
QA filename : DKA100:[ENV_ALPHA.QA.B]B119.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:28:50 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



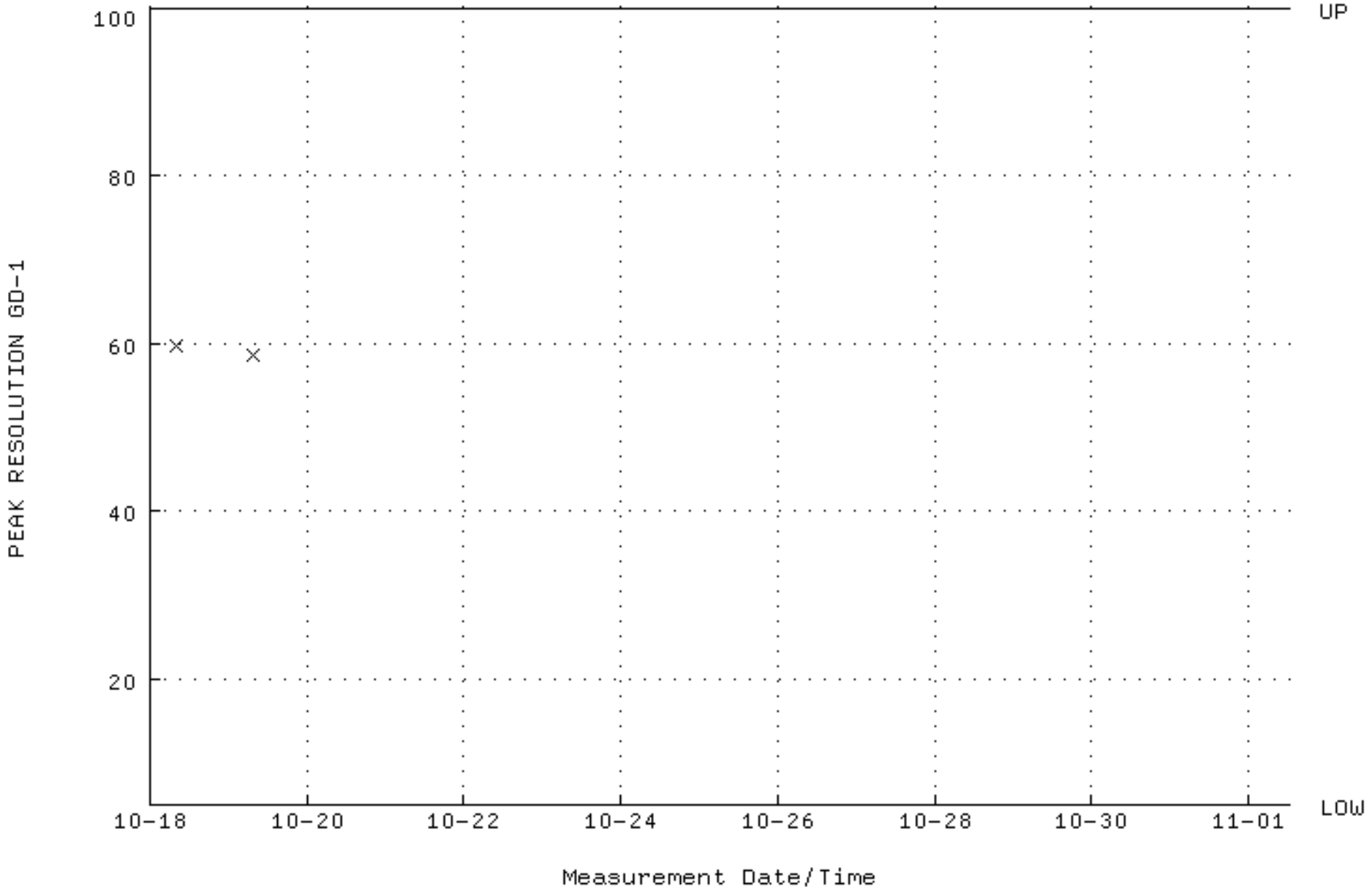
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:08 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.249441 through 0.269441



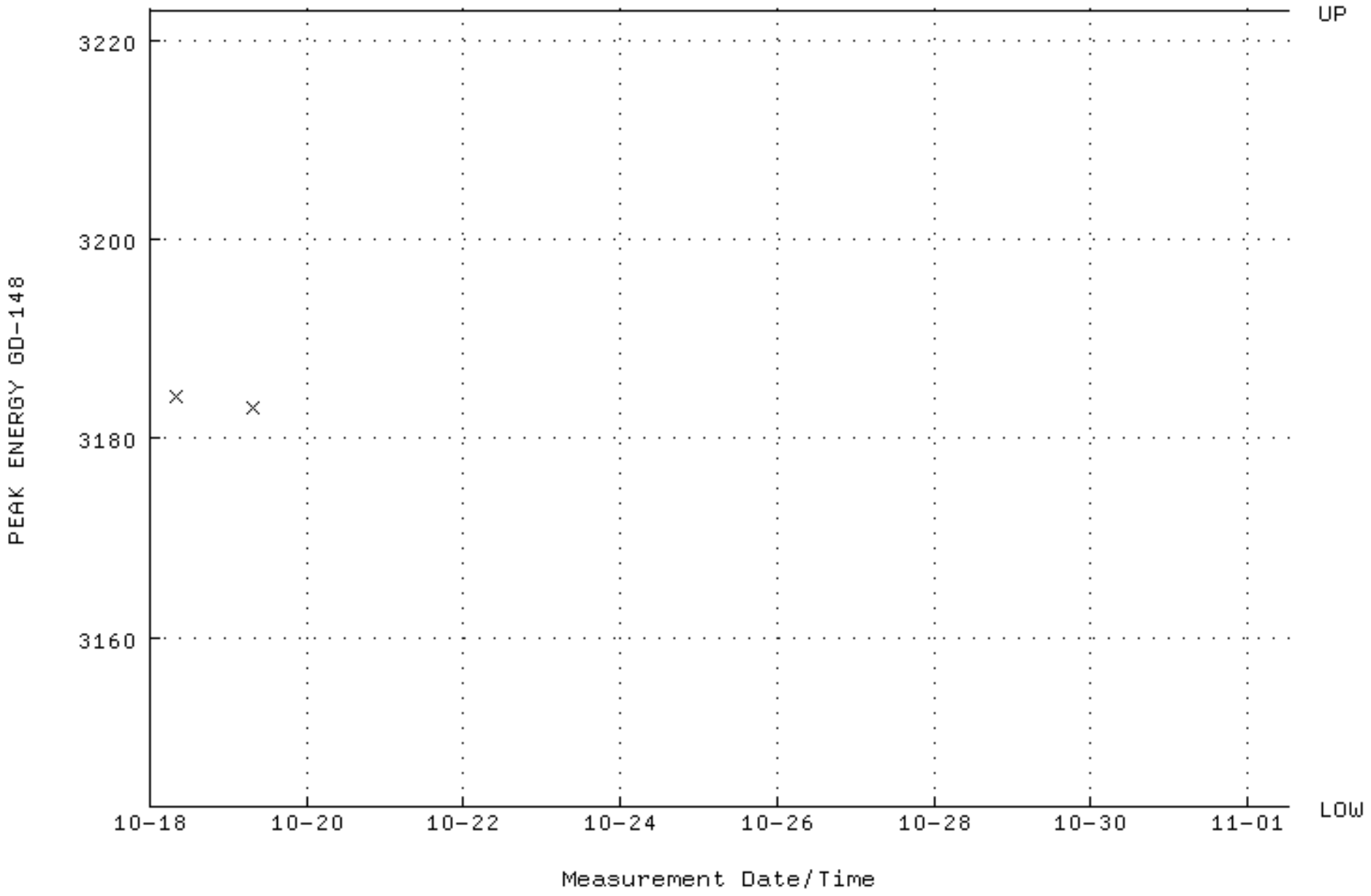
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:08 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 84.0976 through 92.9500



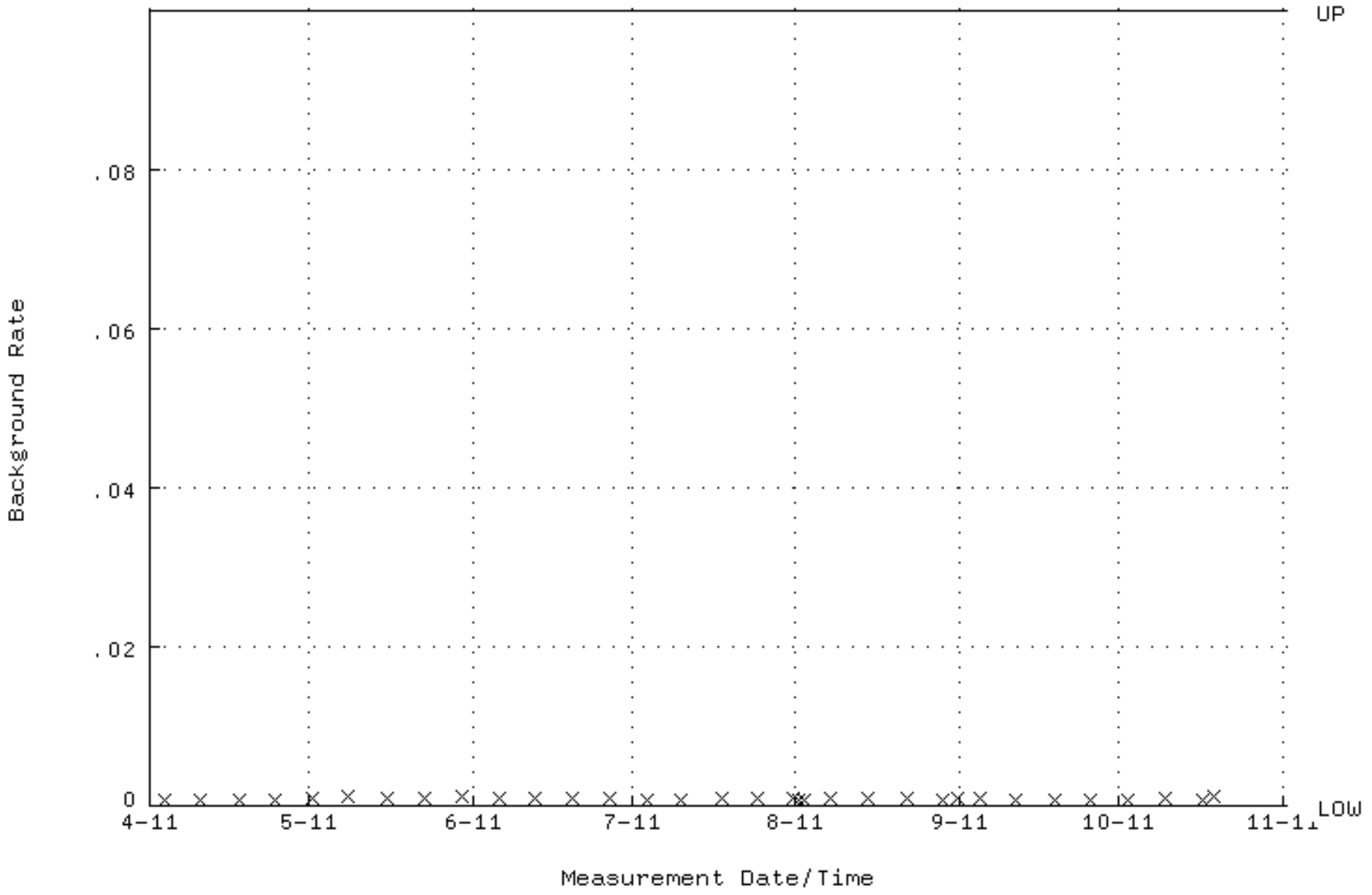
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:08 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



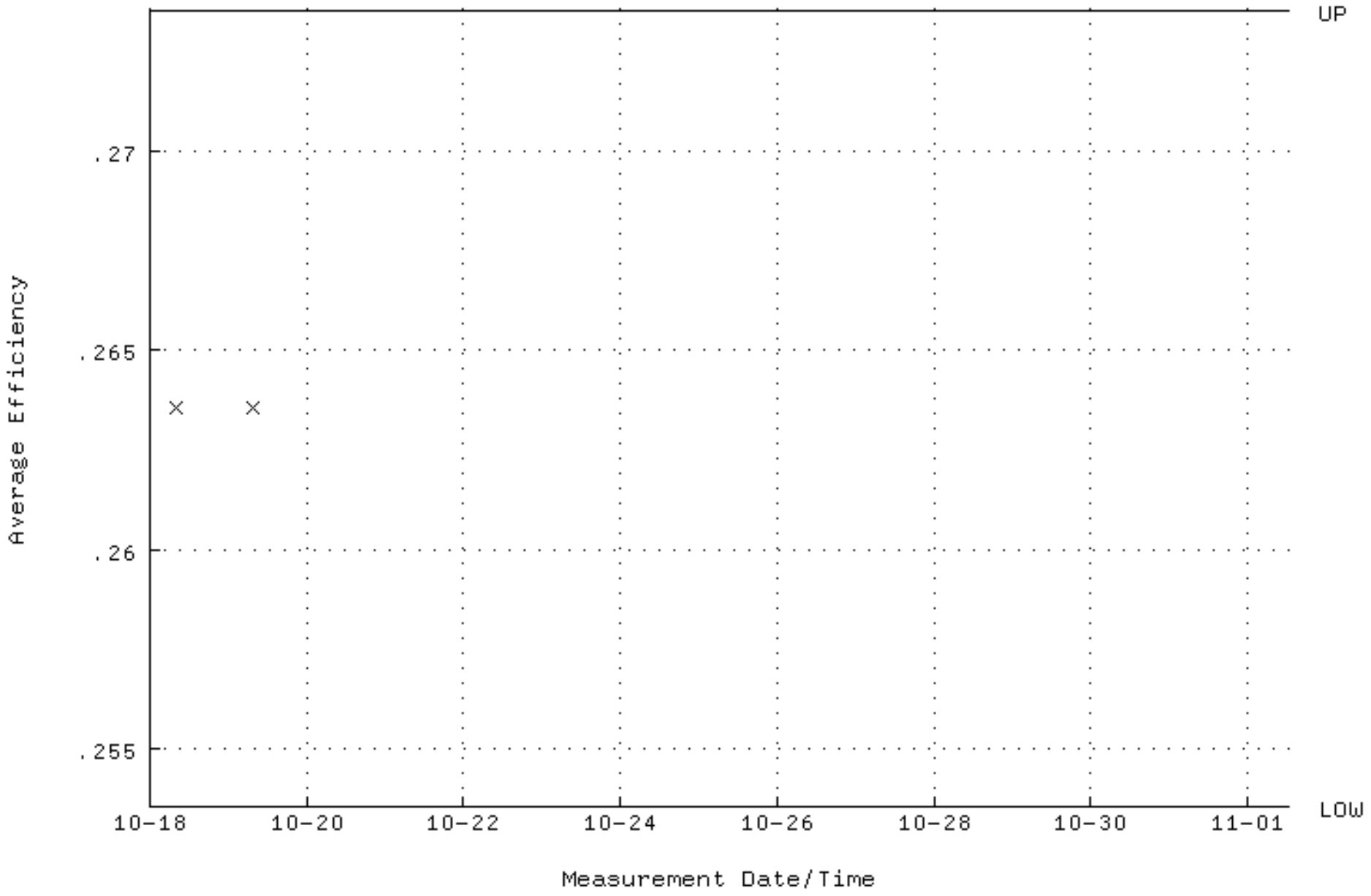
QA filename : DKA100:[ENV_ALPHA.QA.W]W120.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:08 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



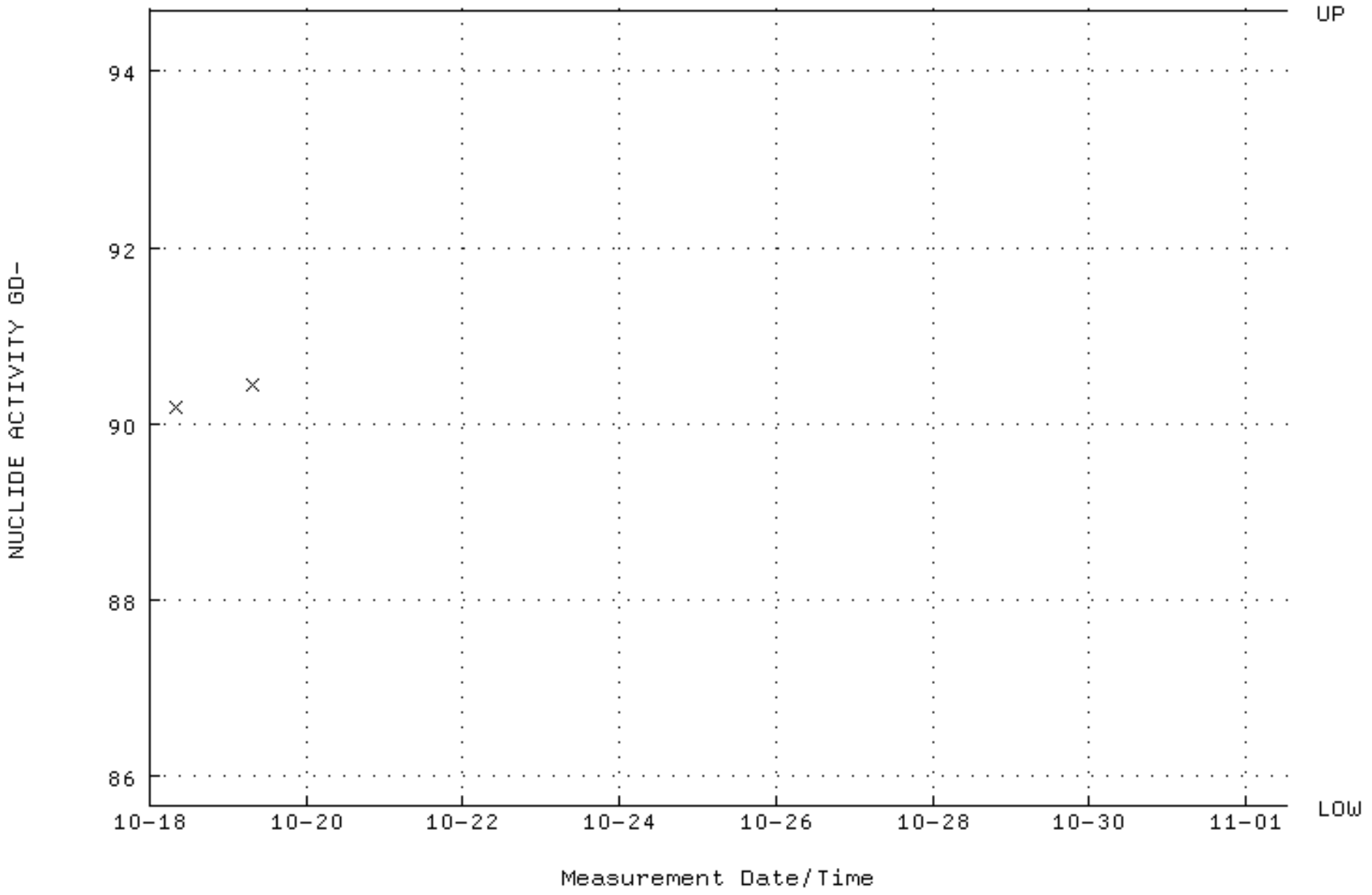
QA filename : DKA100:[ENV_ALPHA.QA.B]B120.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:28:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



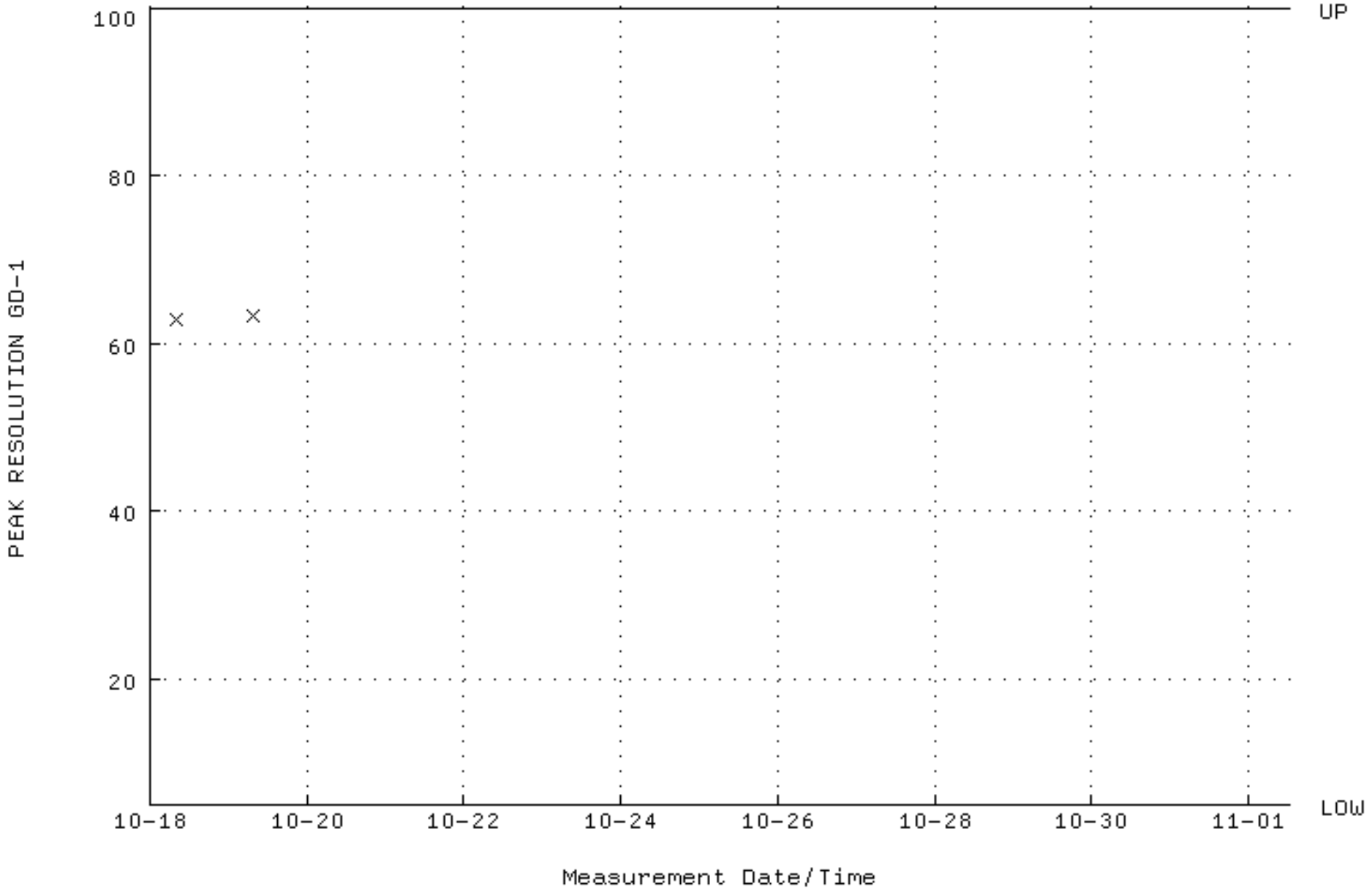
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:15 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.253531 through 0.273531



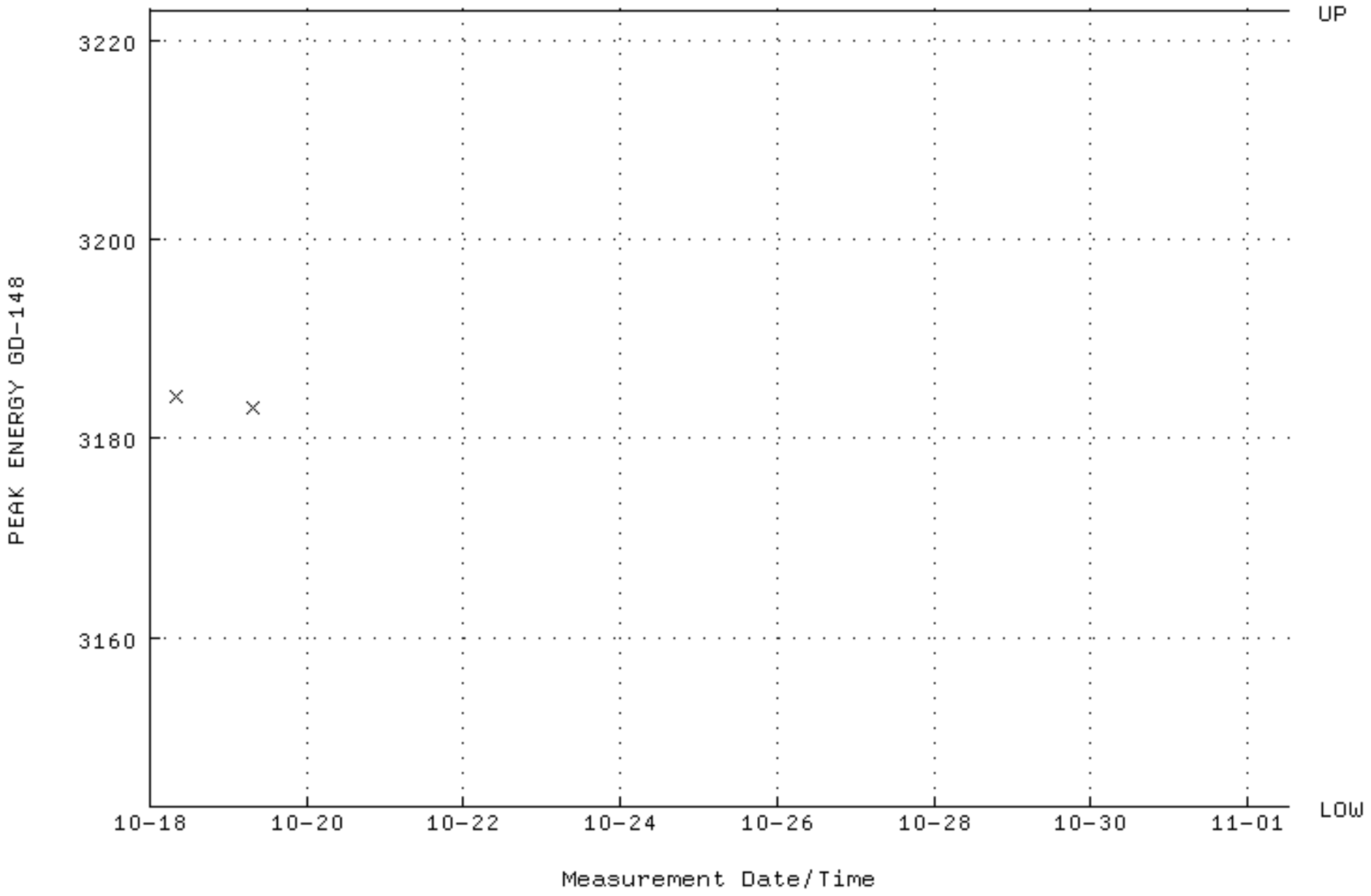
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:15 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.6675 through 94.6851



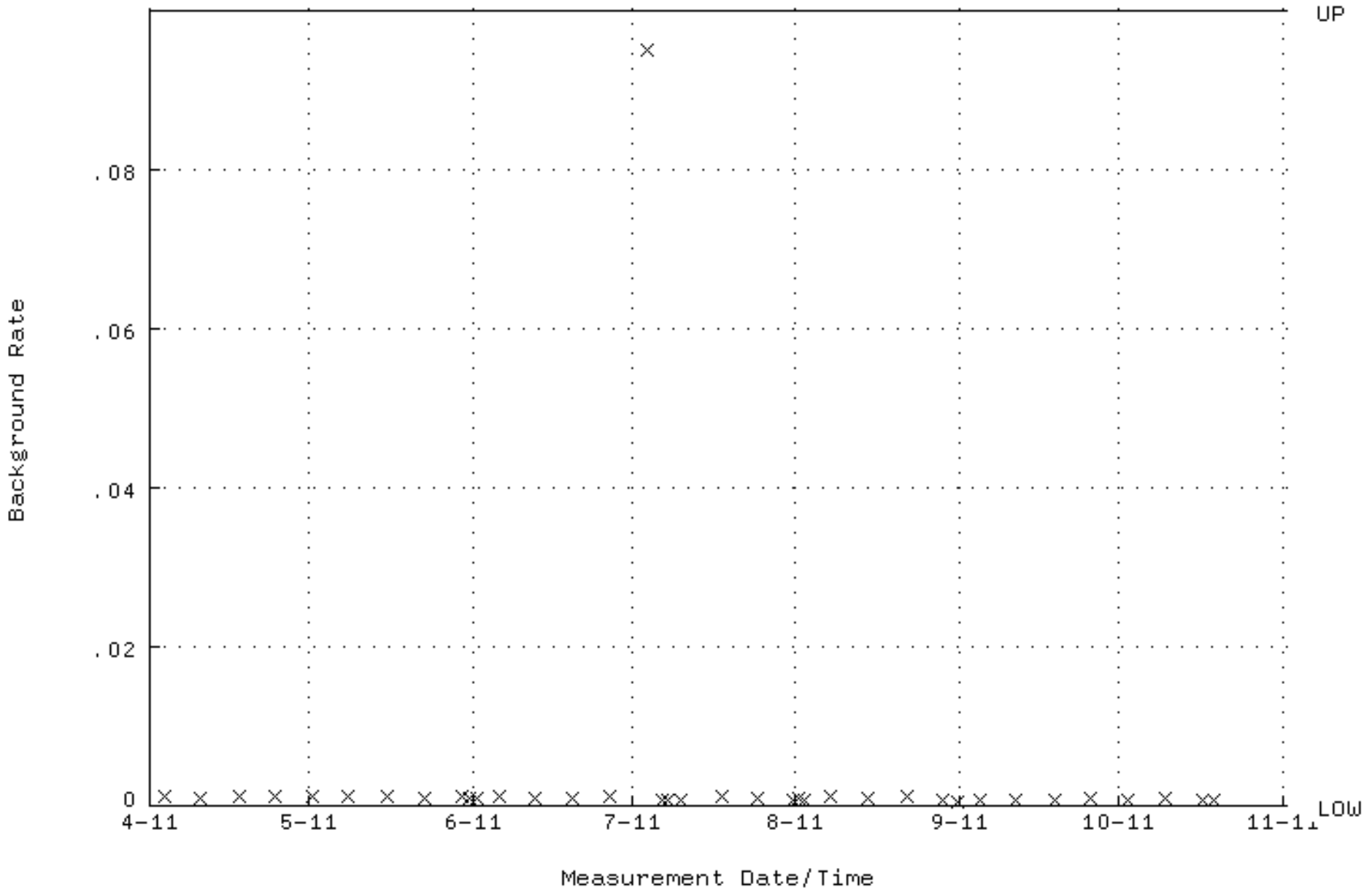
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:15 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



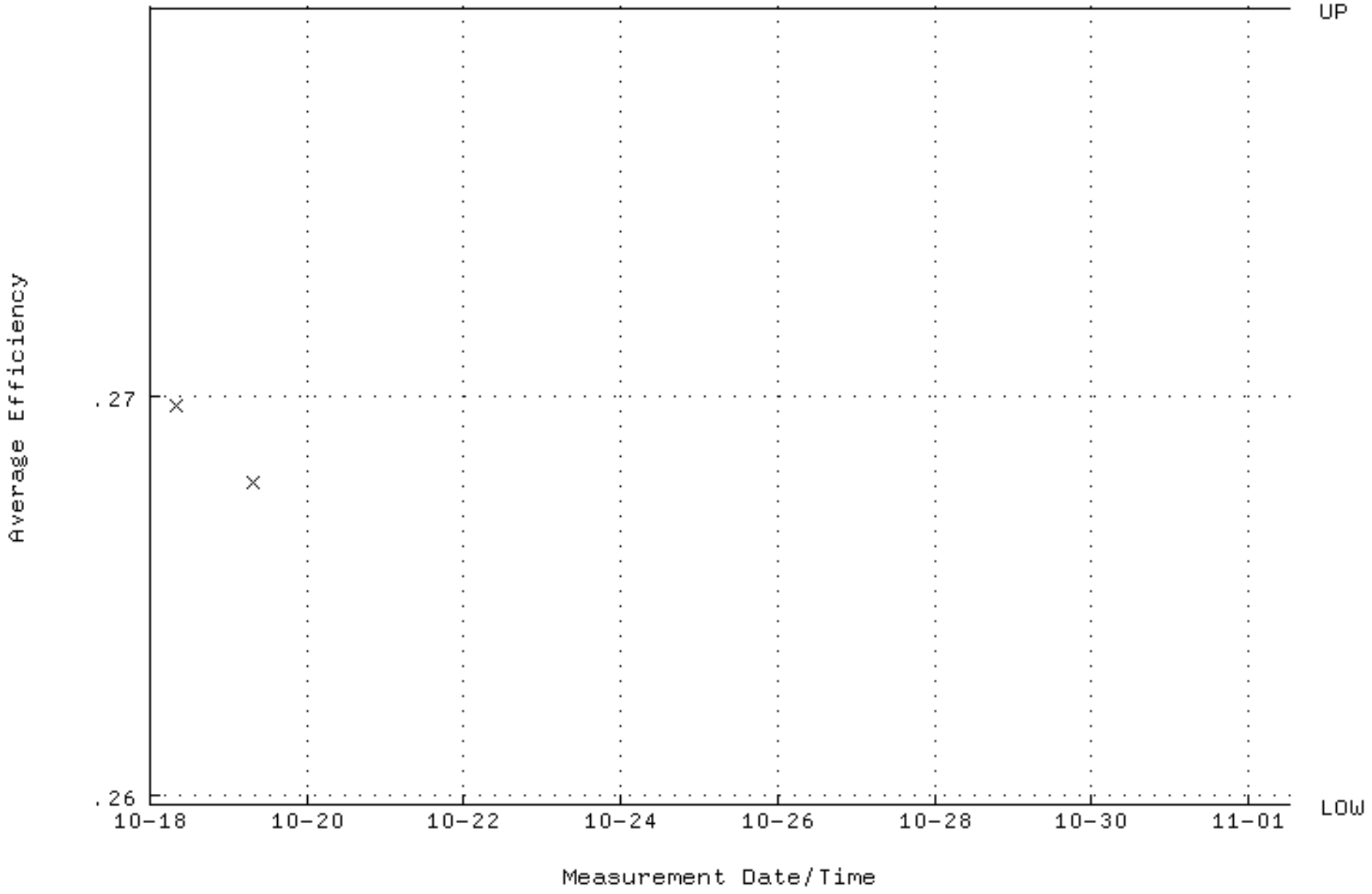
QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:15 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



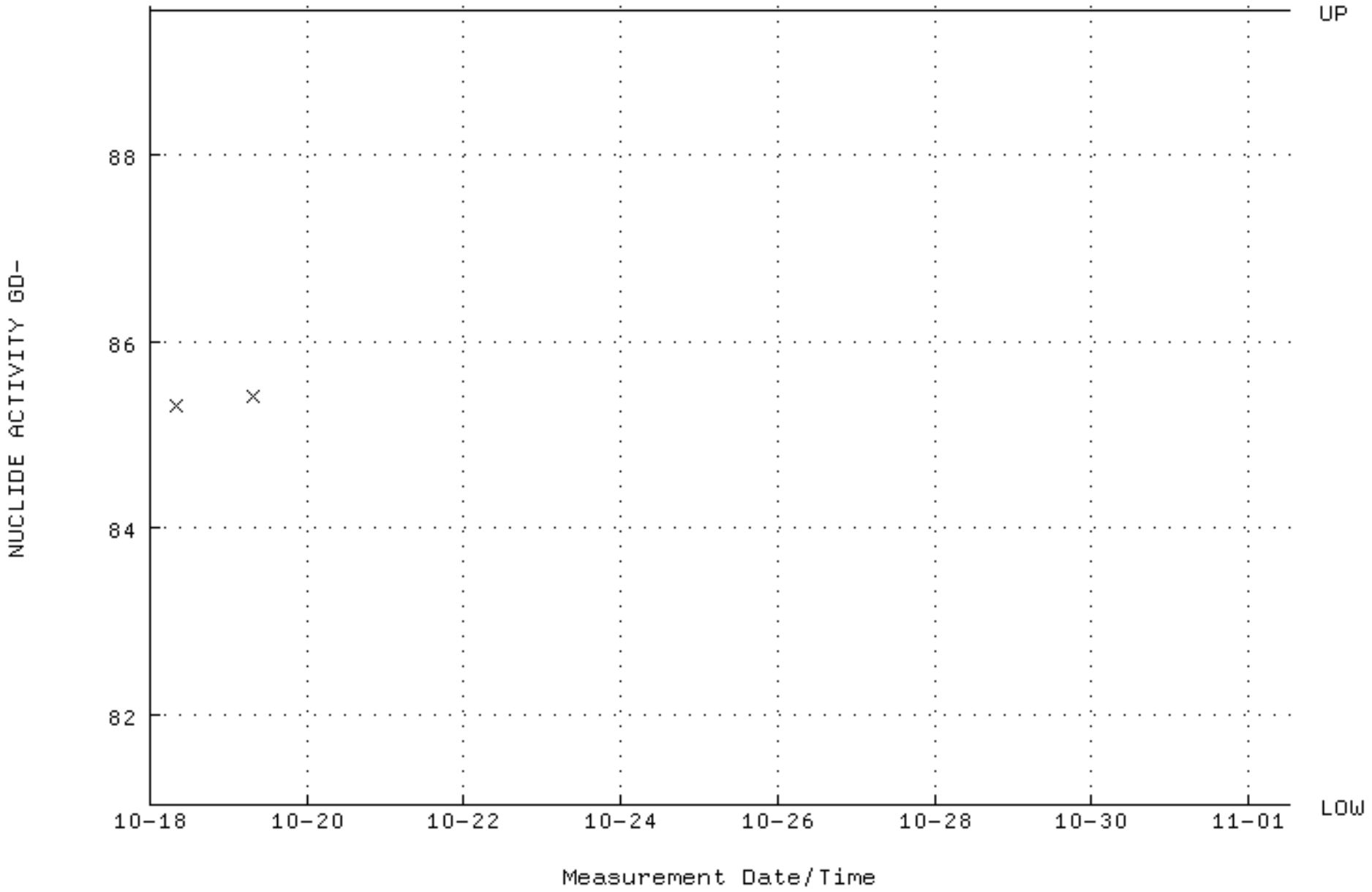
QA filename : DKA100:[ENV_ALPHA.QA.B]B122.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:02 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



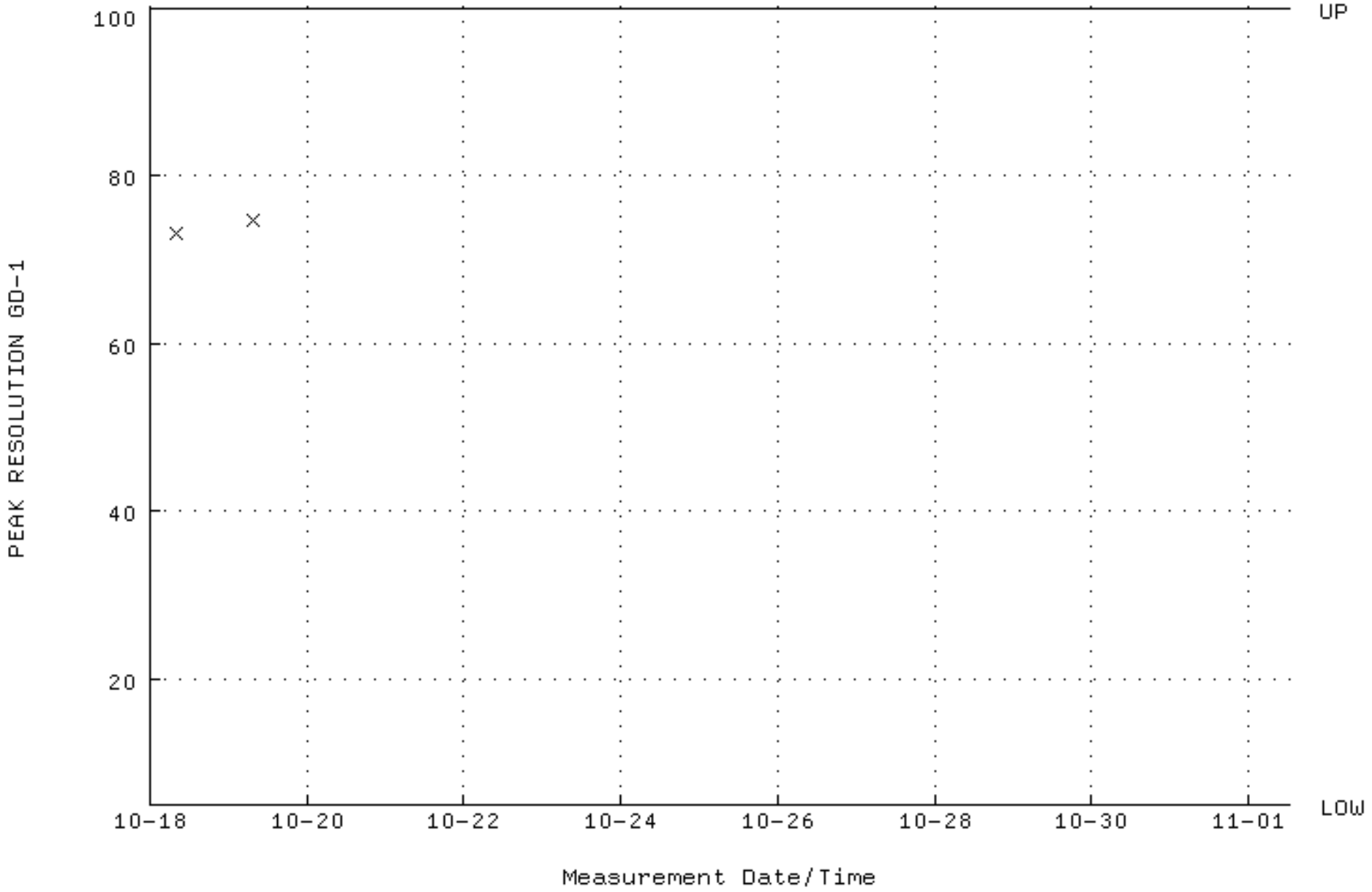
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:19 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.259754 through 0.279754



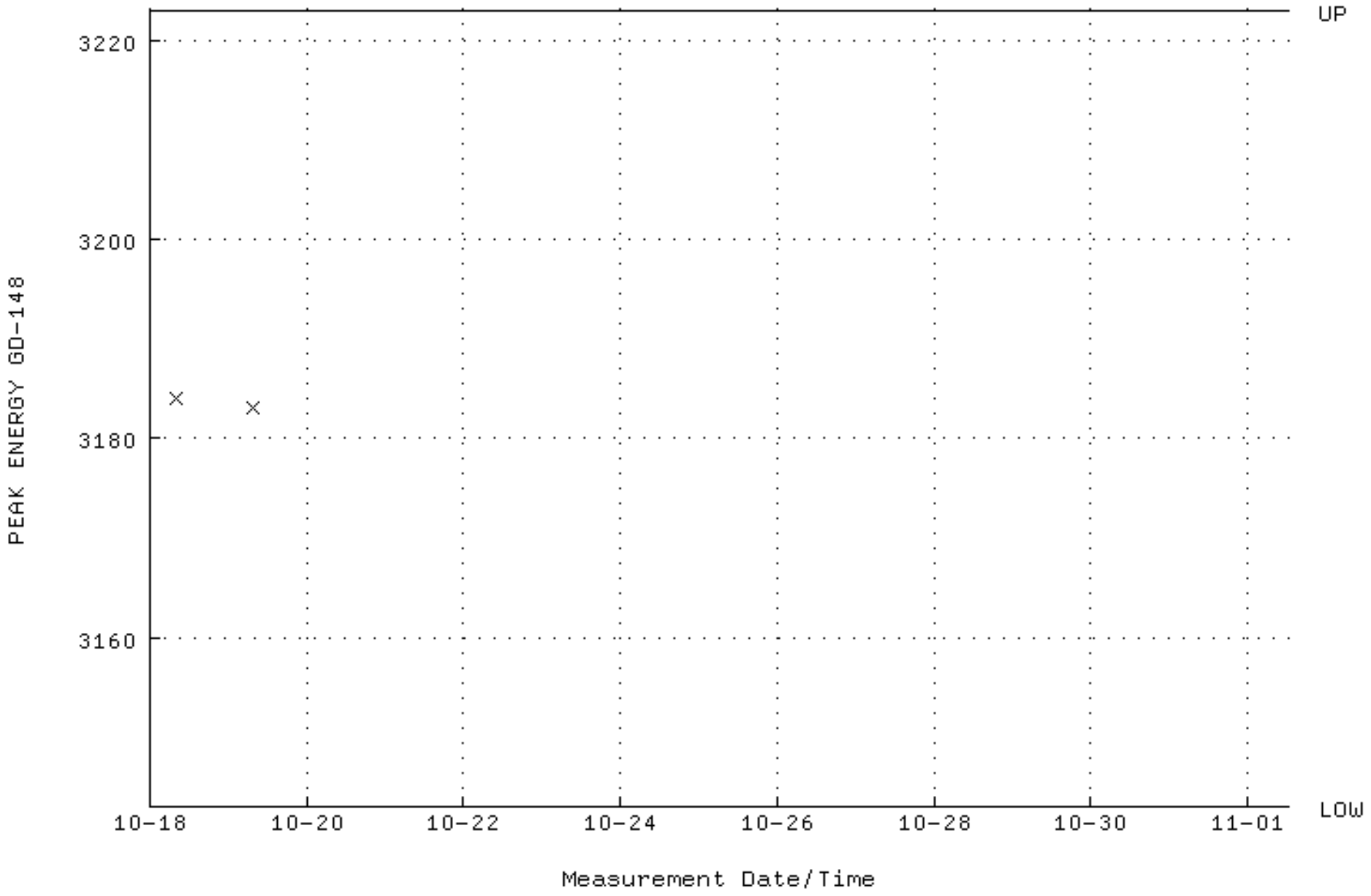
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:19 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 81.0332 through 89.5630



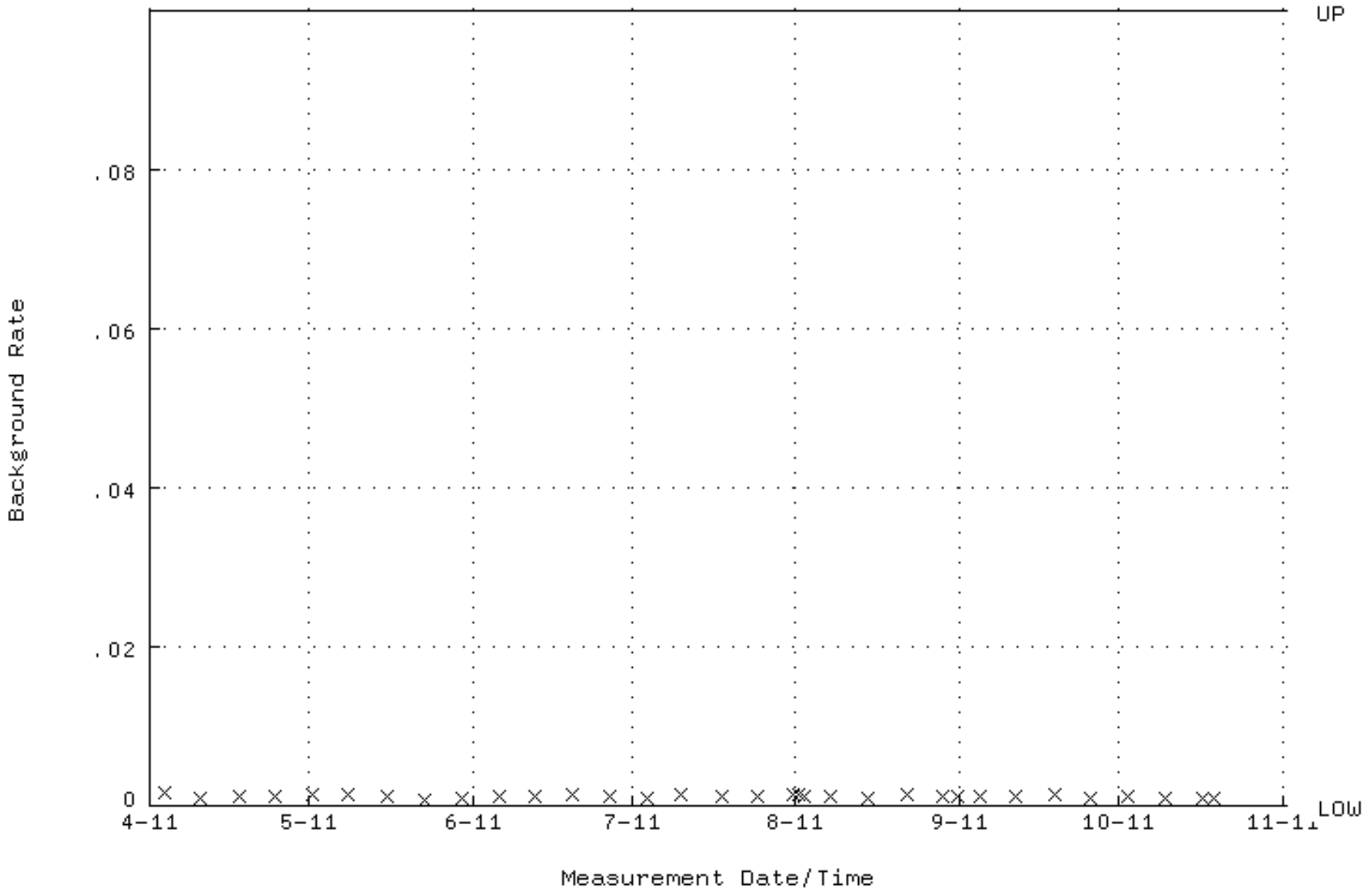
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:19 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



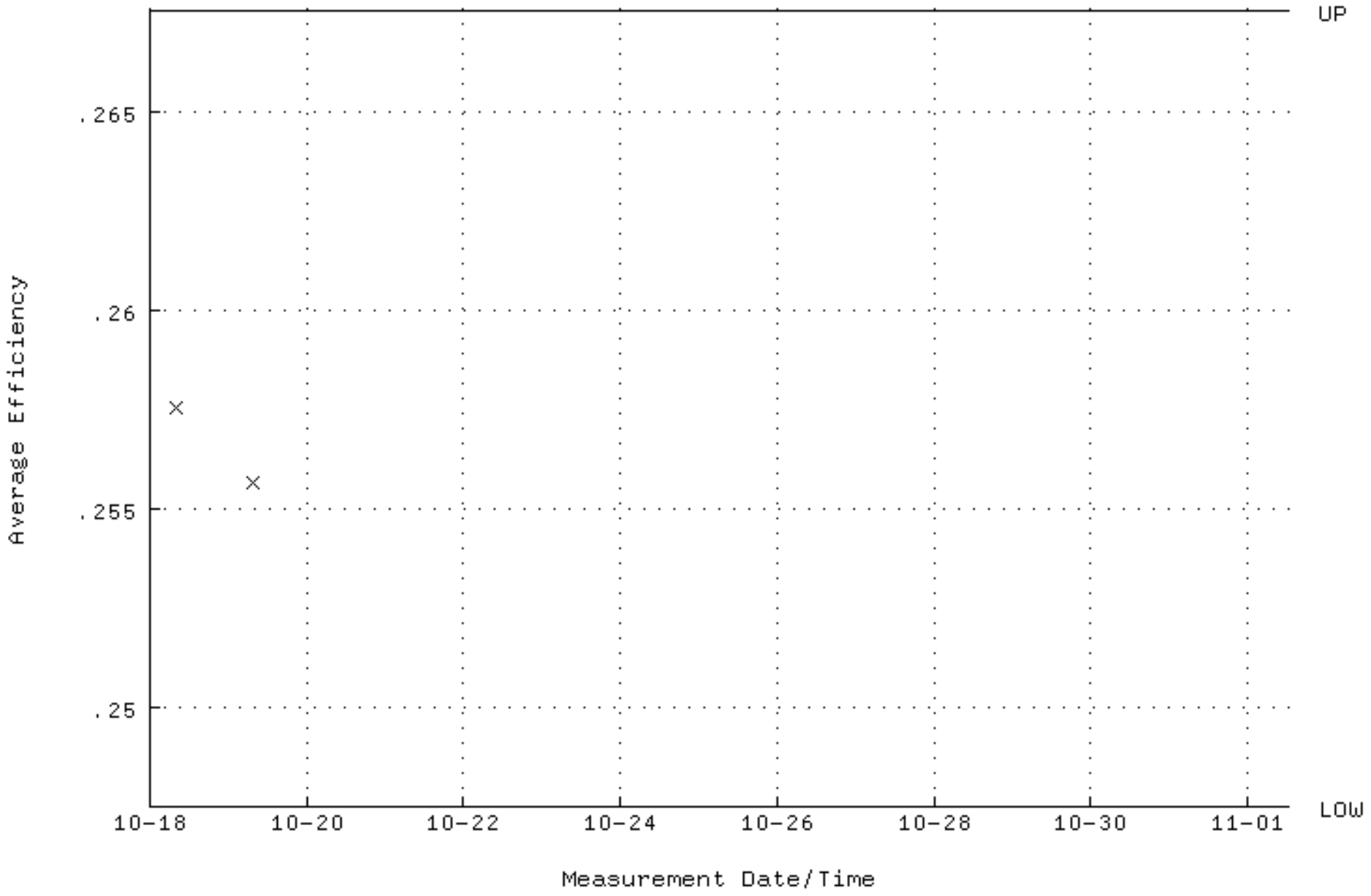
QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:19 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



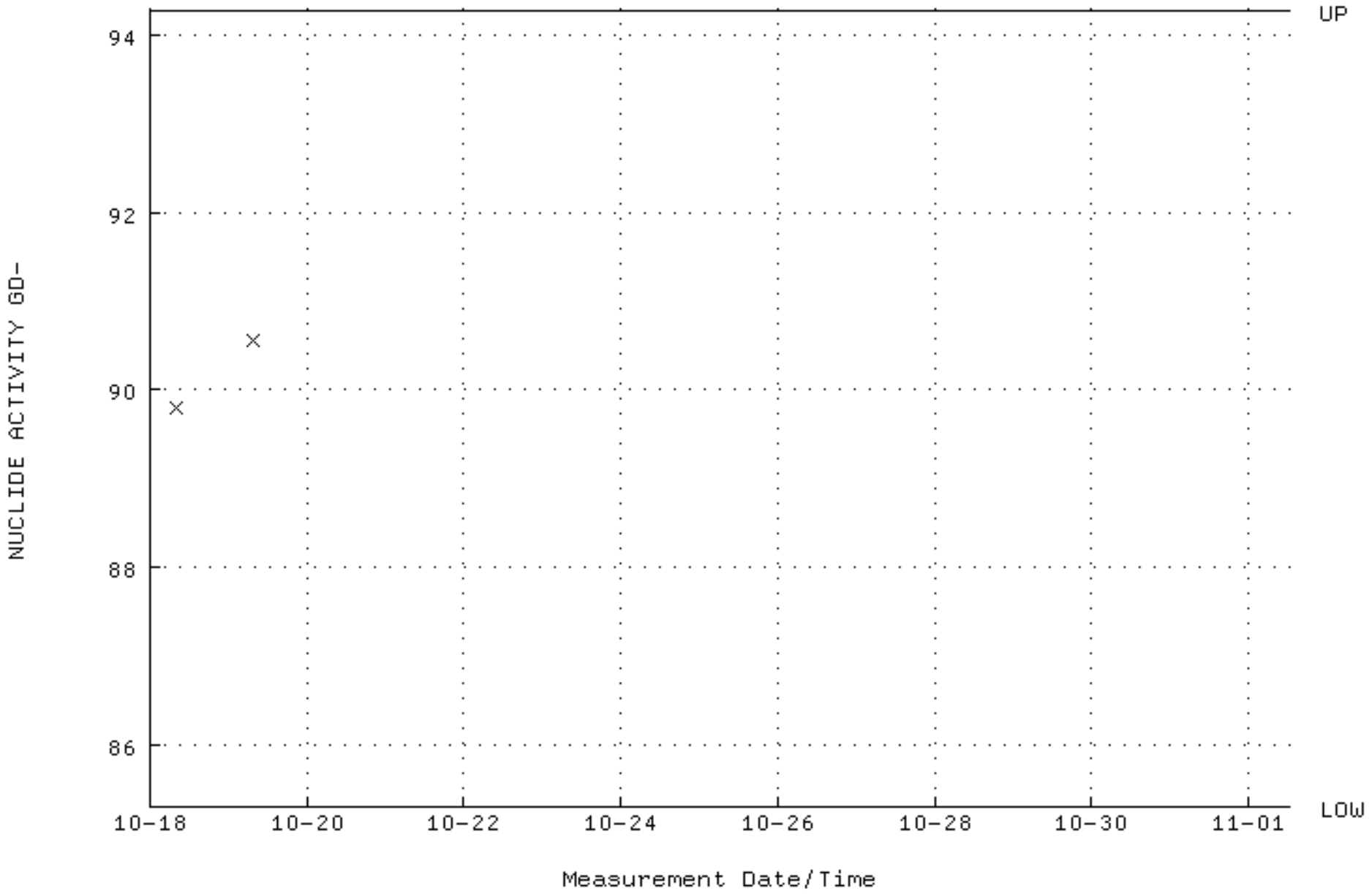
QA filename : DKA100:[ENV_ALPHA.QA.B]B123.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:06 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



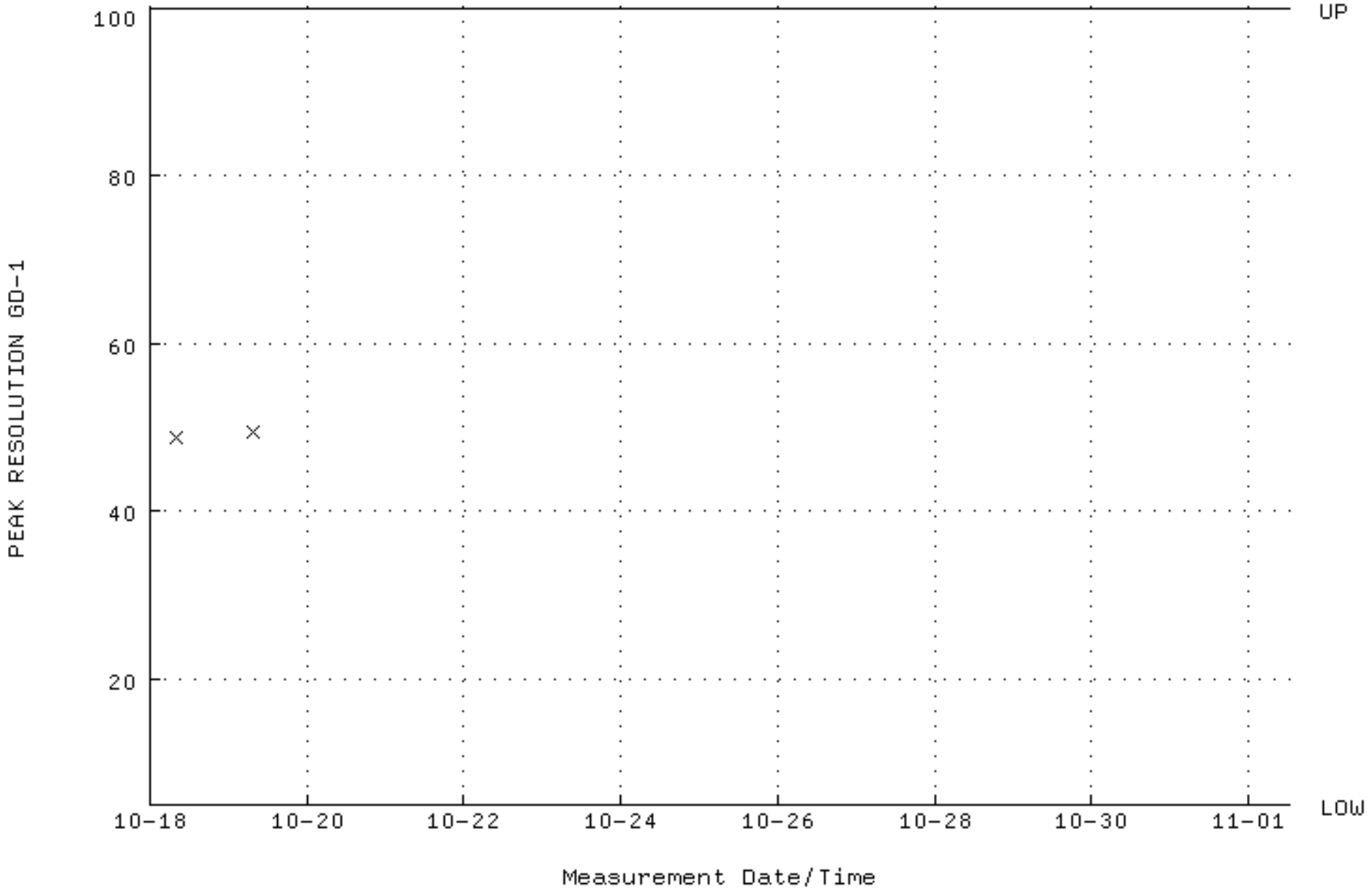
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:23 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.247519 through 0.267519



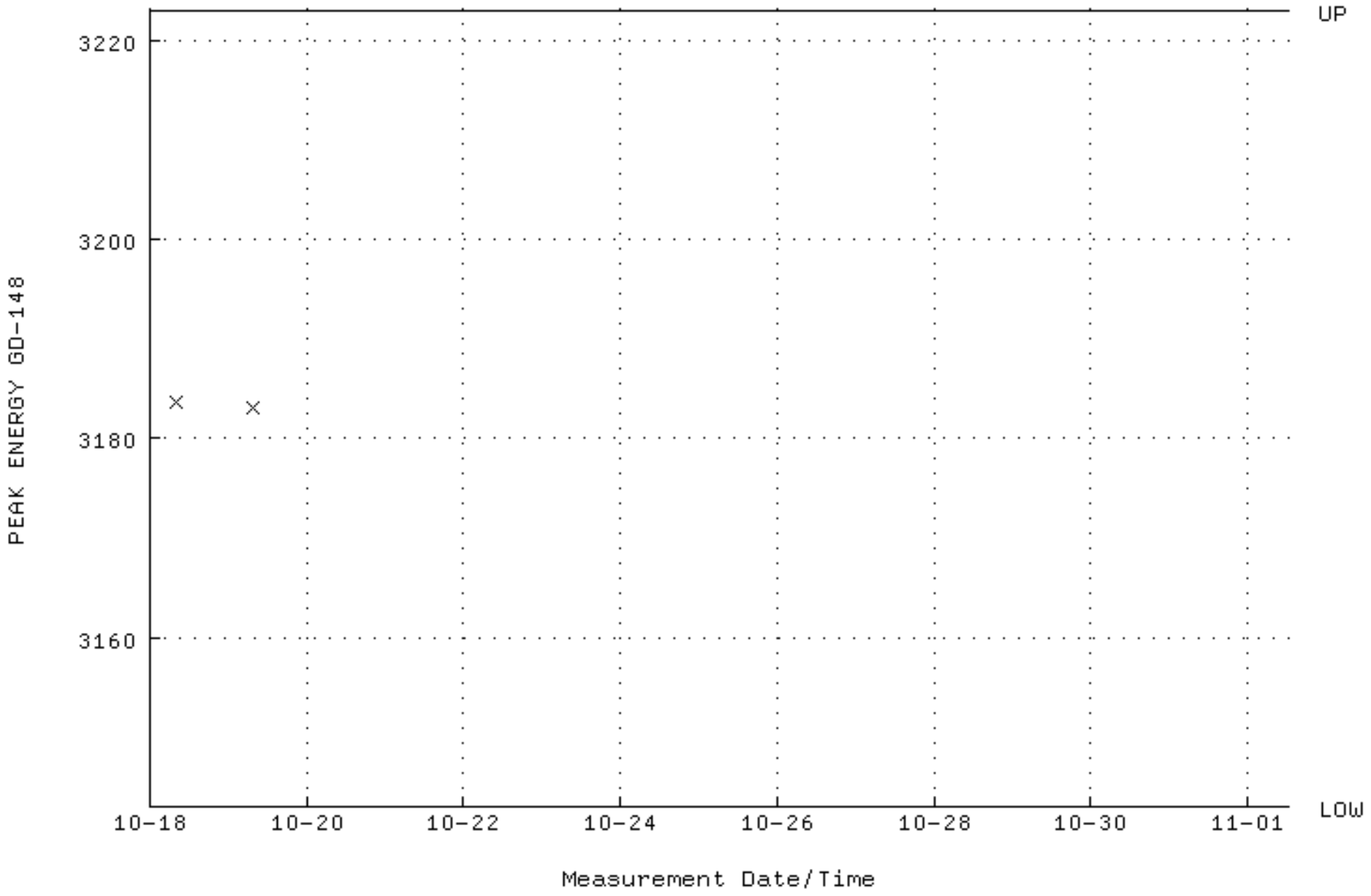
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:23 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.2937 through 94.2719



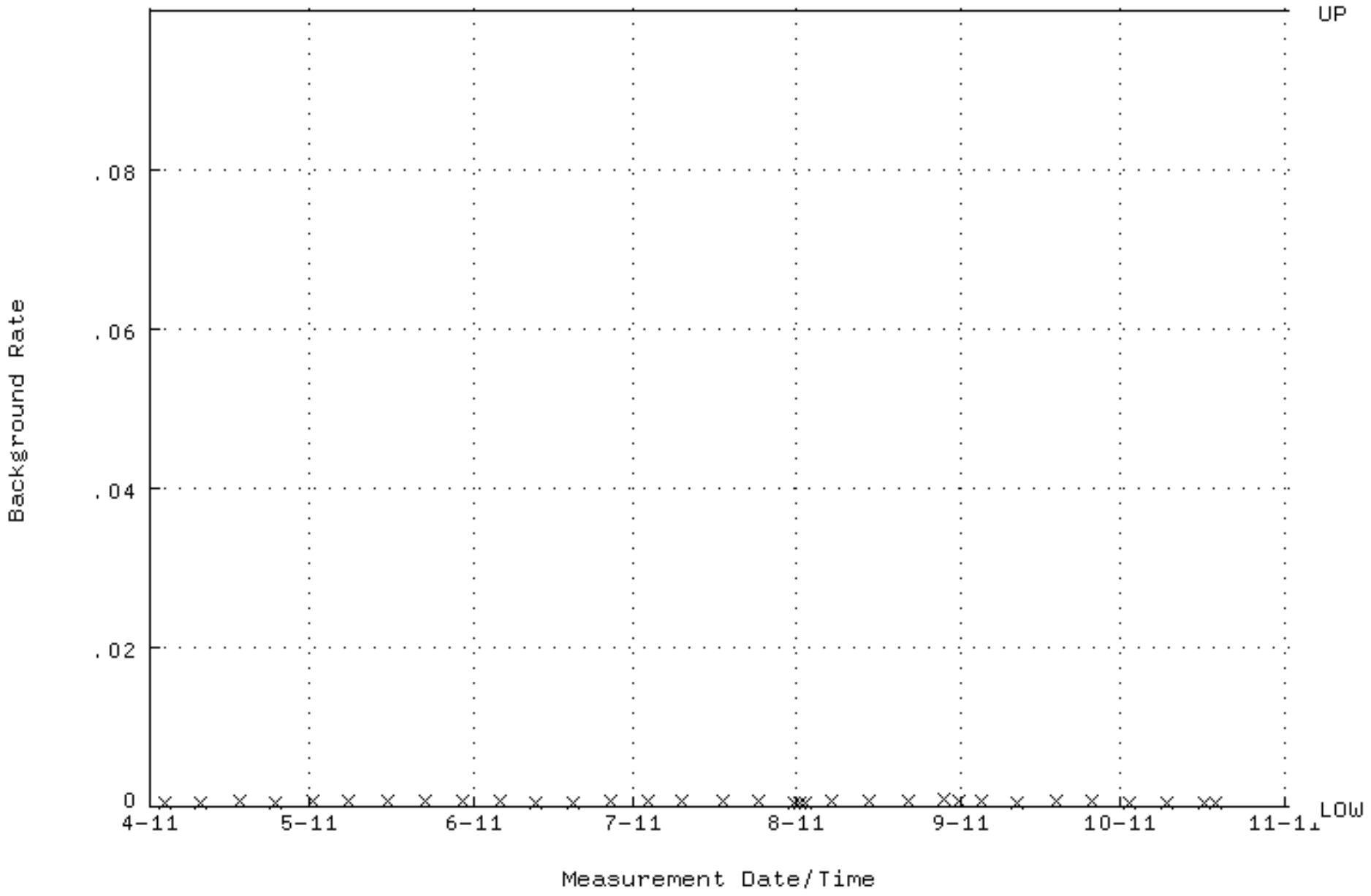
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:23 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



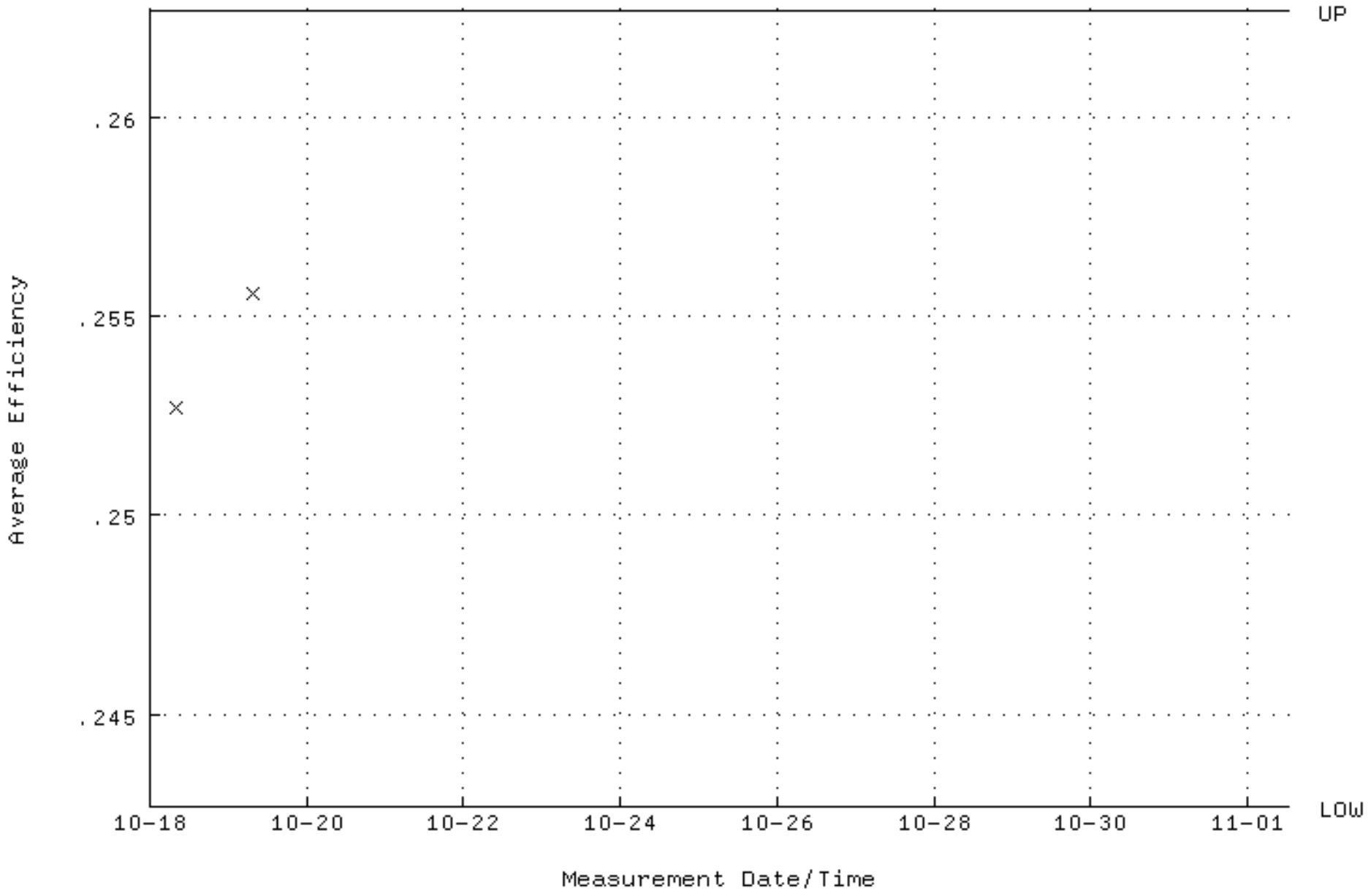
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:23 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



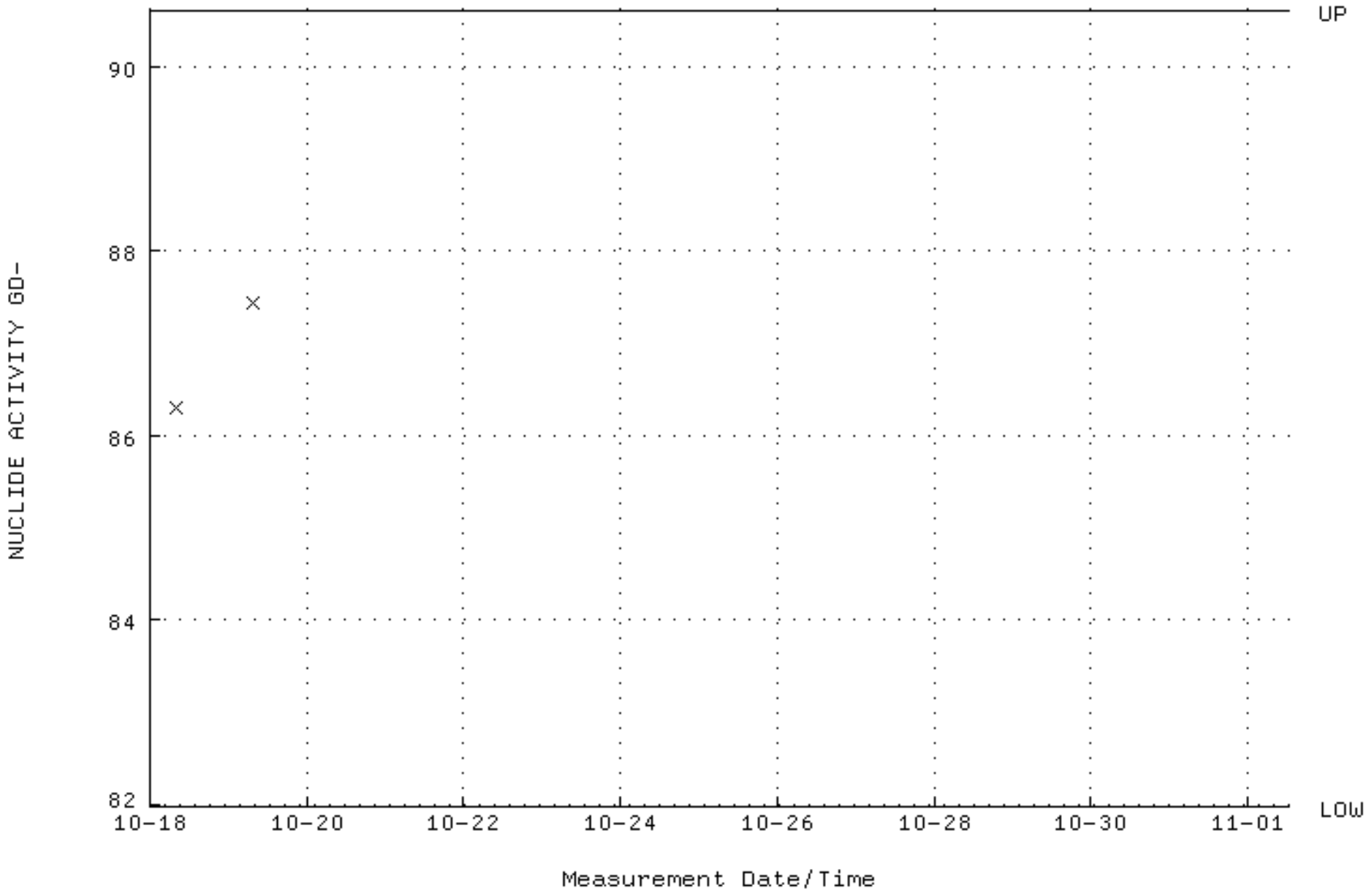
QA filename : DKA100:[ENV_ALPHA.QA.B]B124.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:10 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



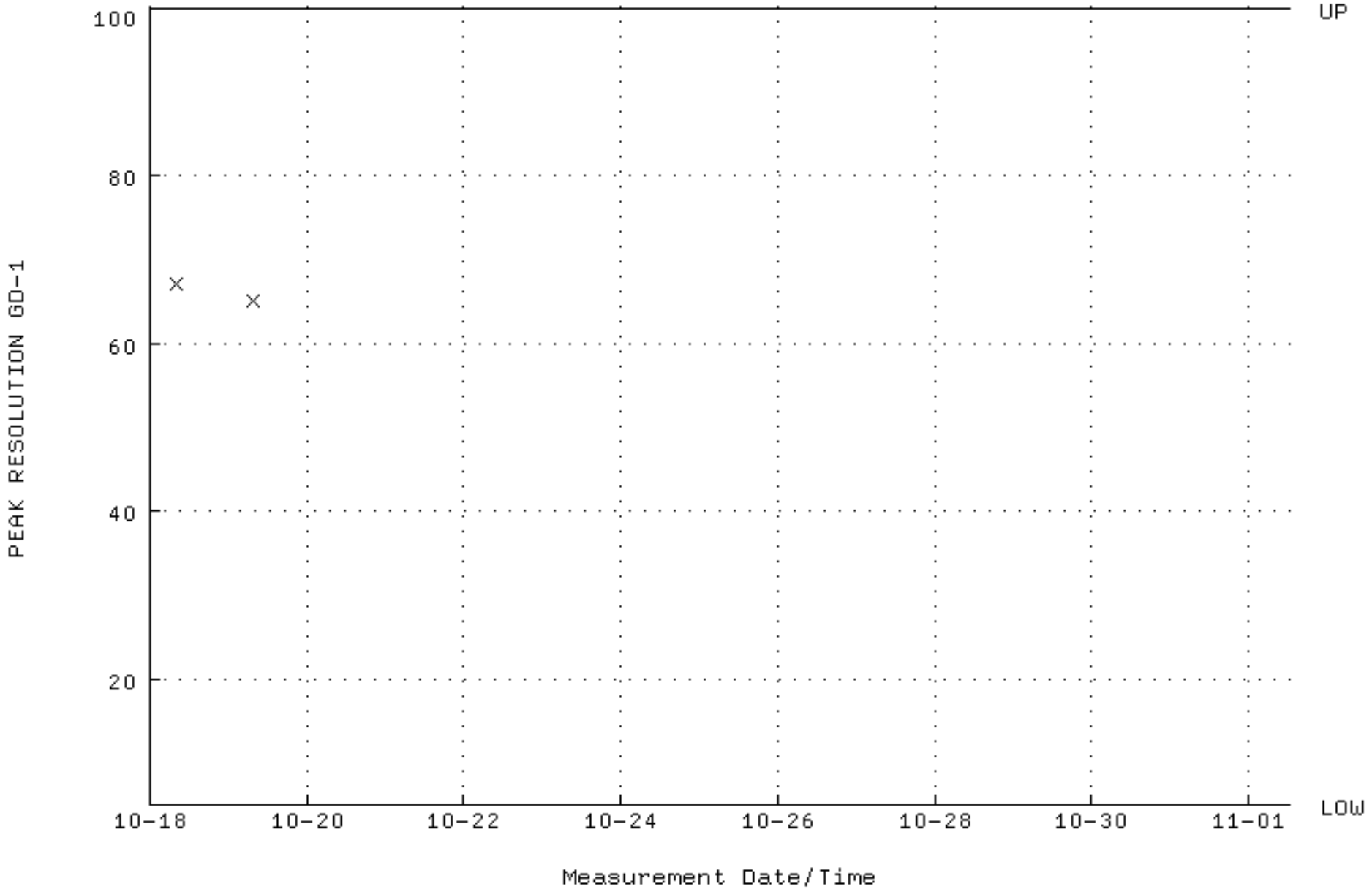
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.242678 through 0.262678



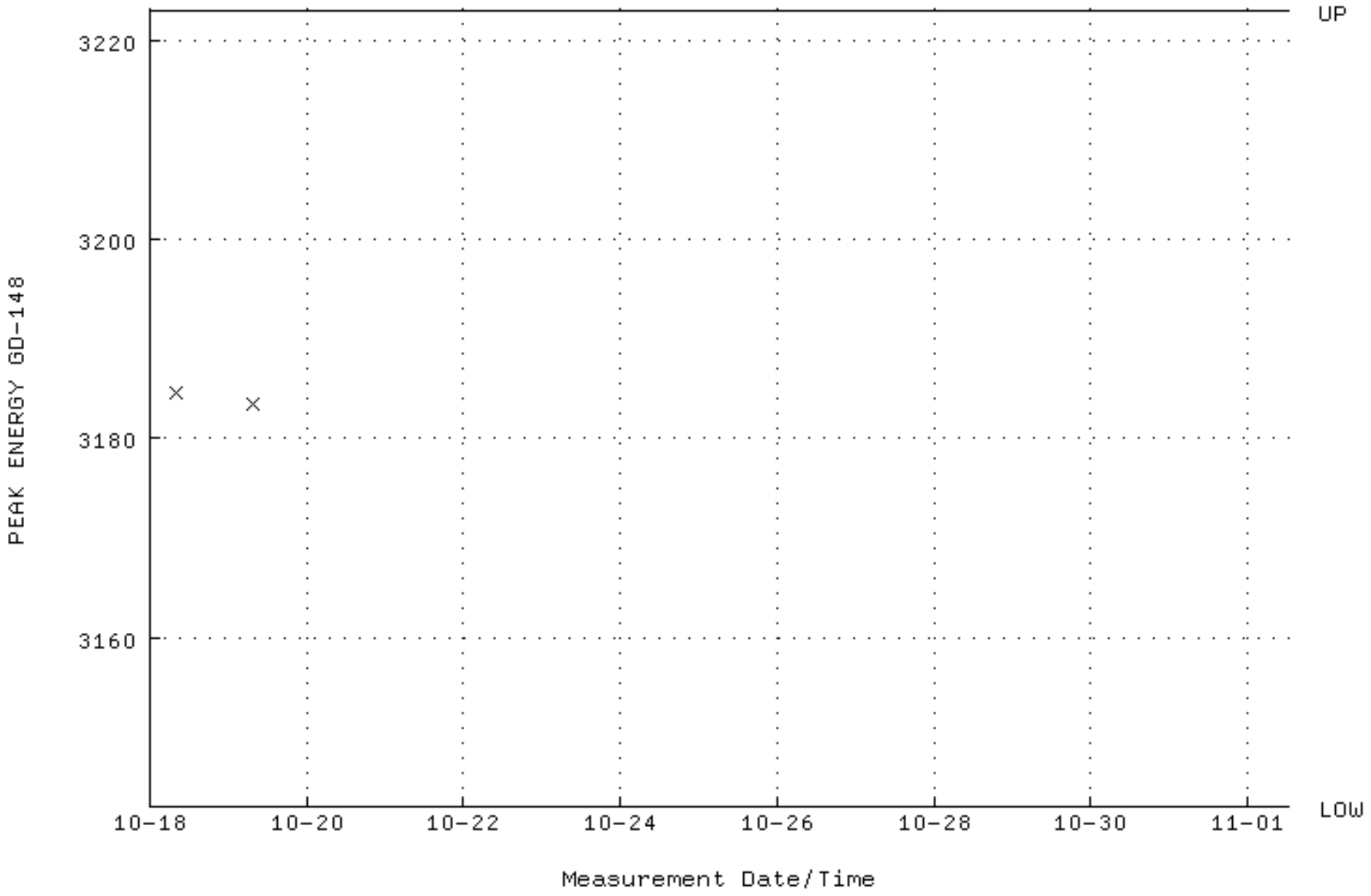
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 81.9720 through 90.6006



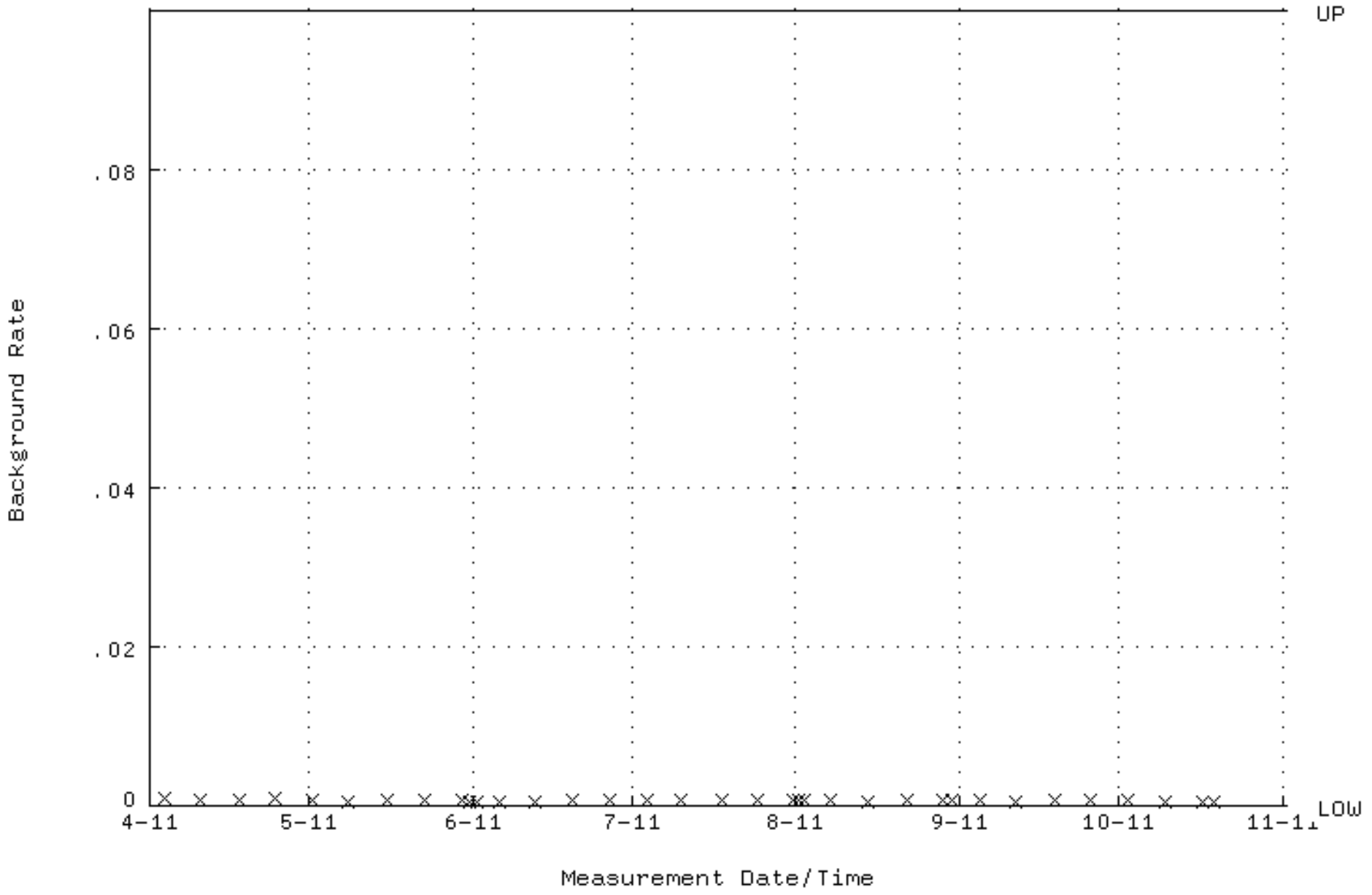
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



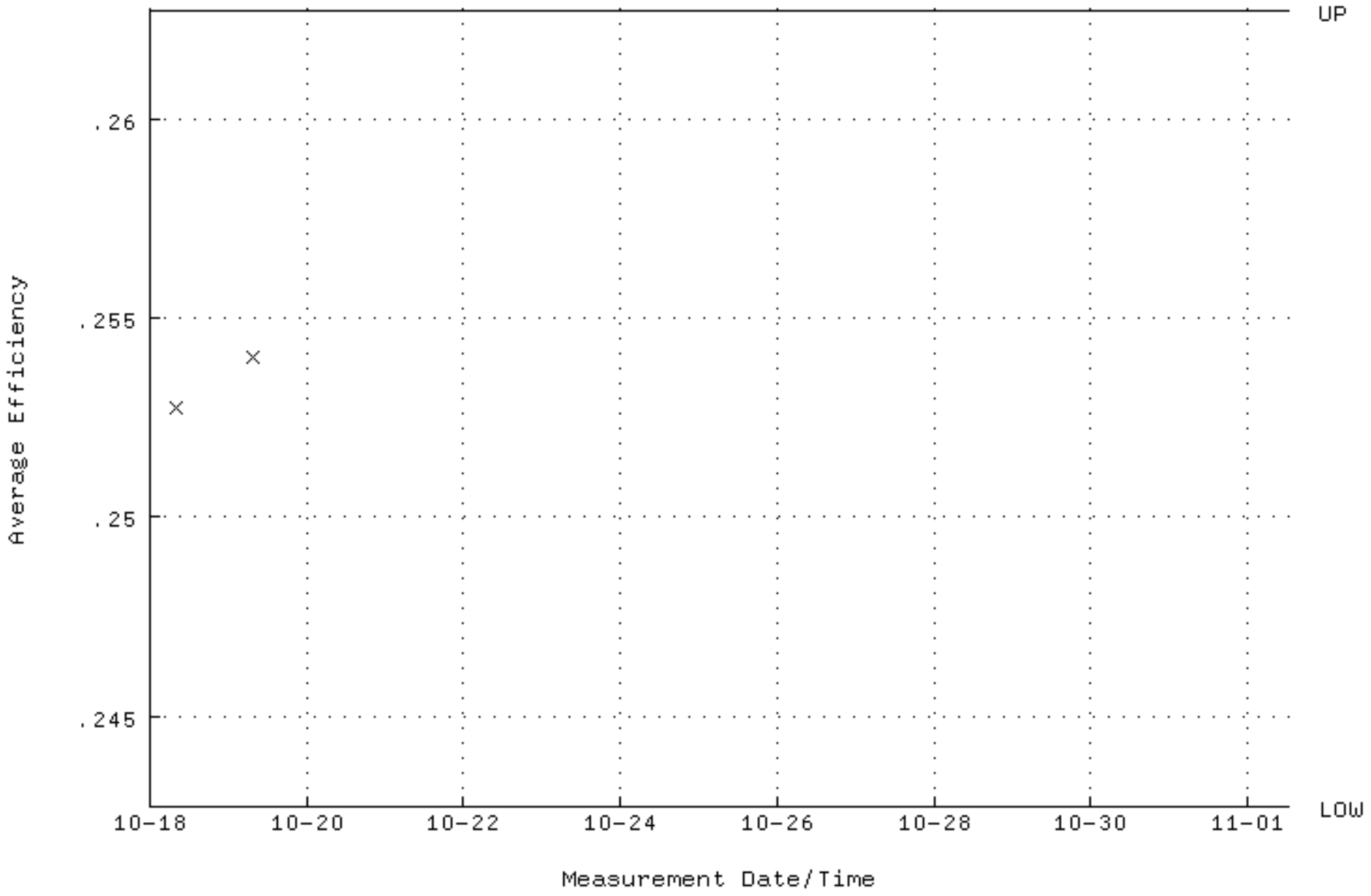
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:27 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



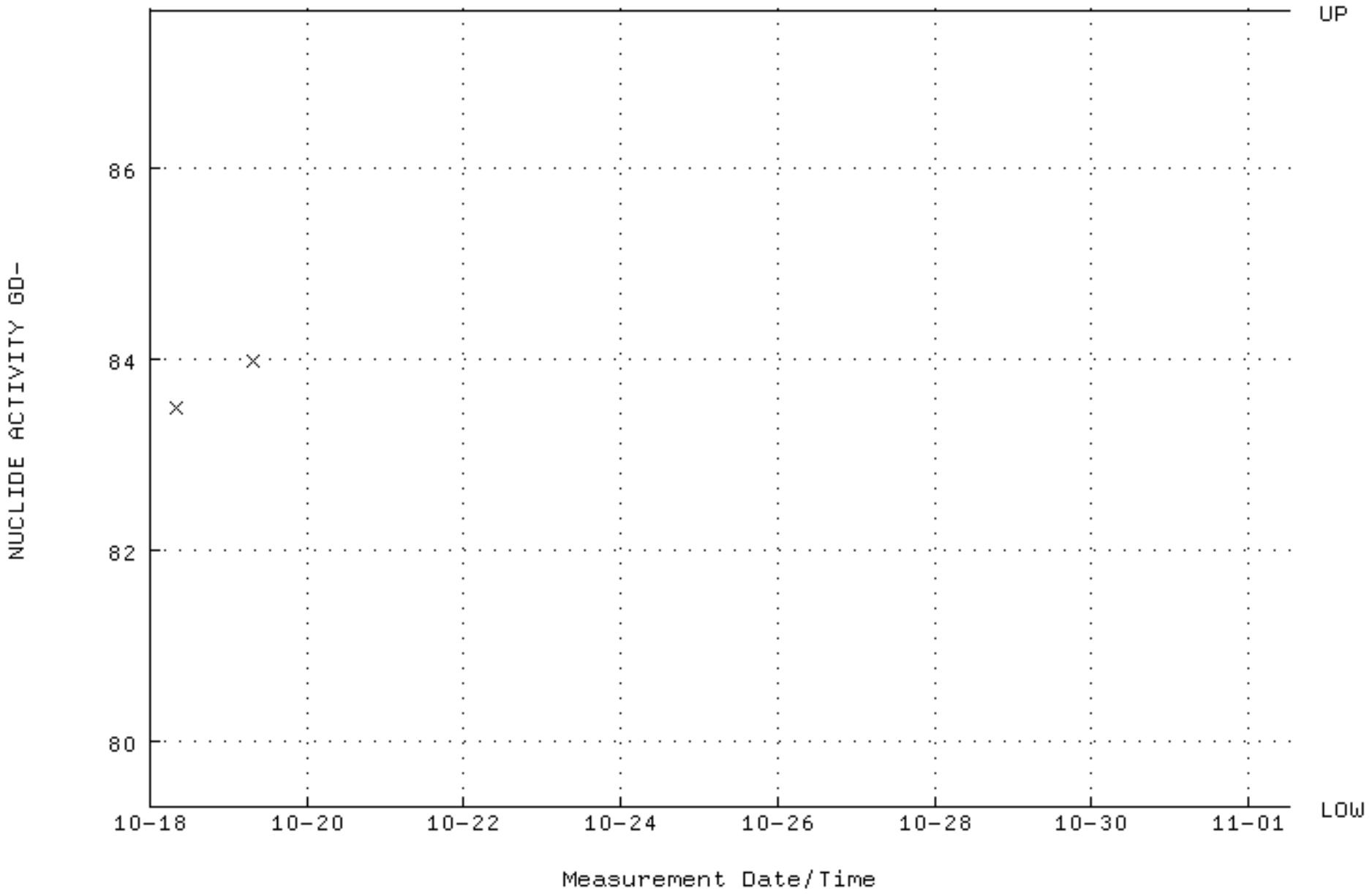
QA filename : DKA100:[ENV_ALPHA.QA.B]B125.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



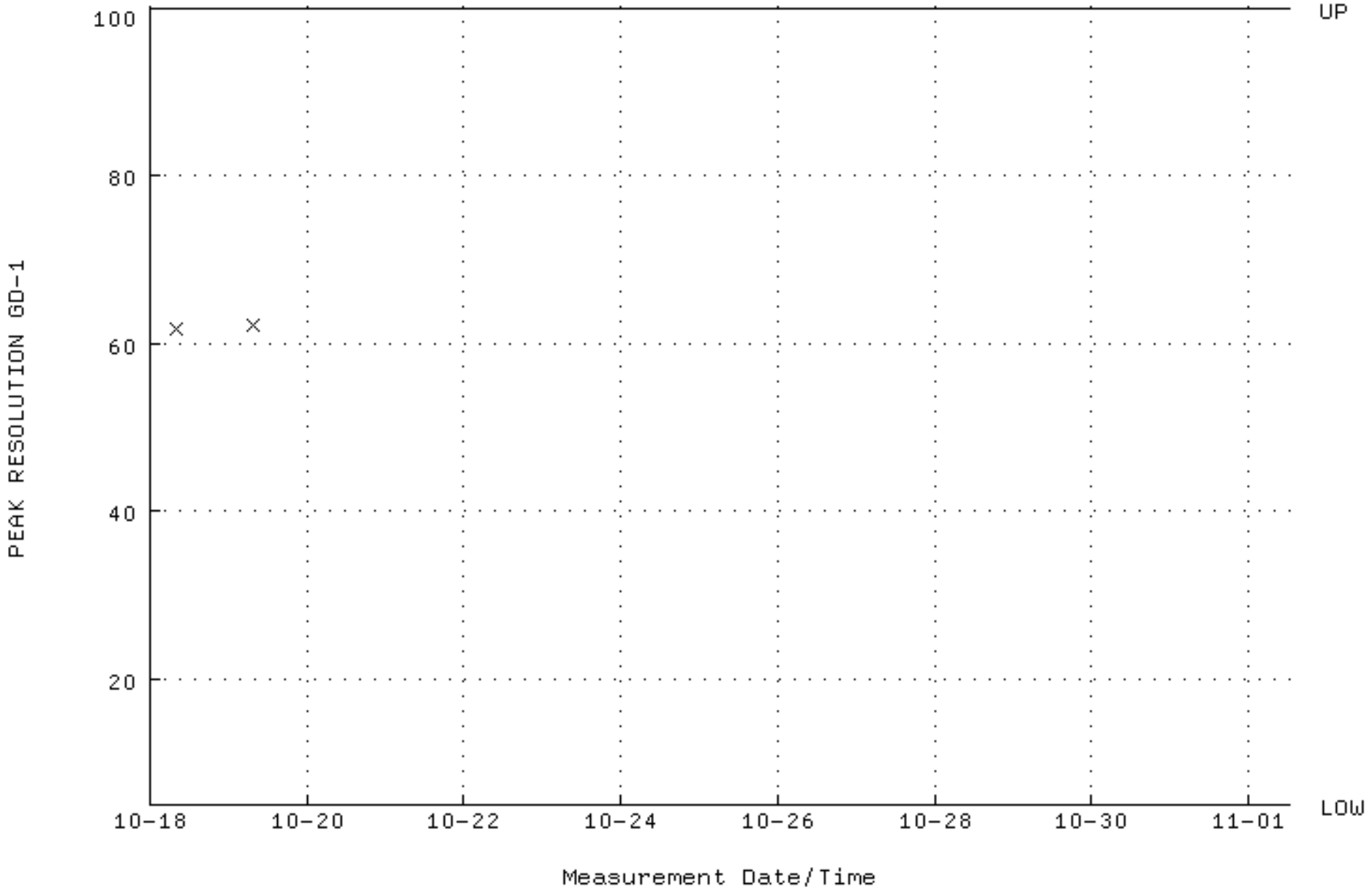
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:30 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.242722 through 0.262722



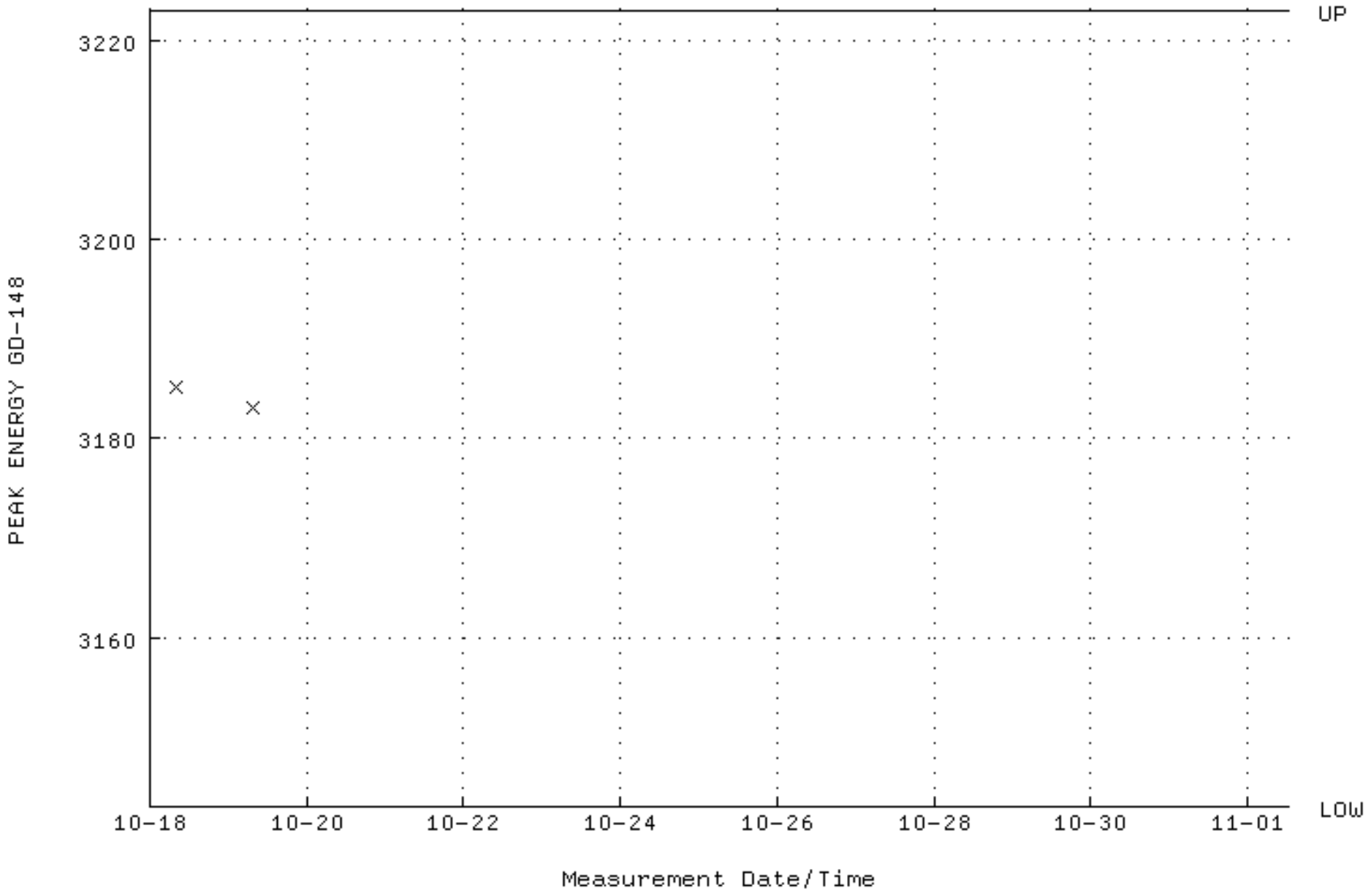
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:30 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 79.3105 through 87.6589



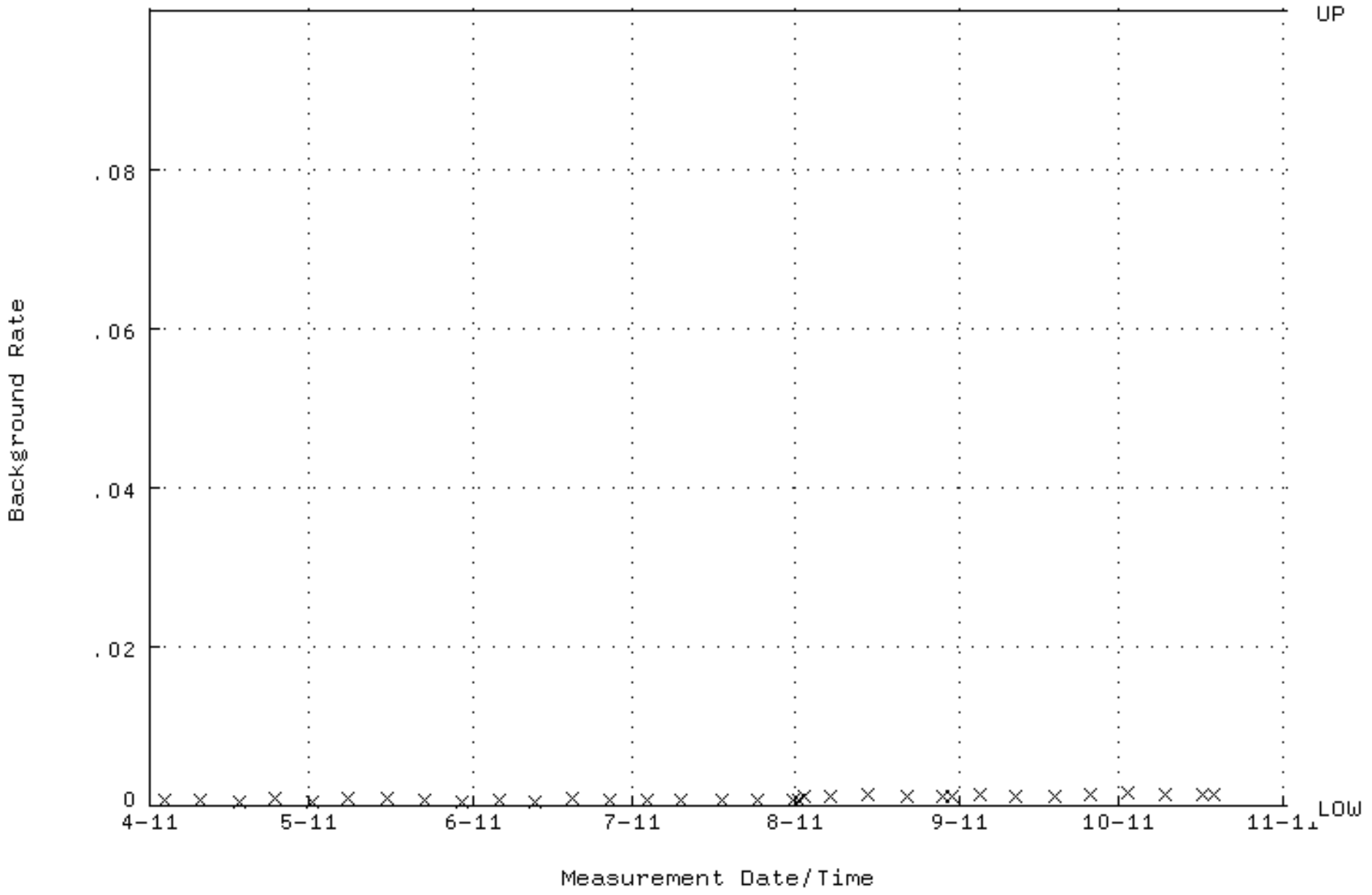
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:30 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



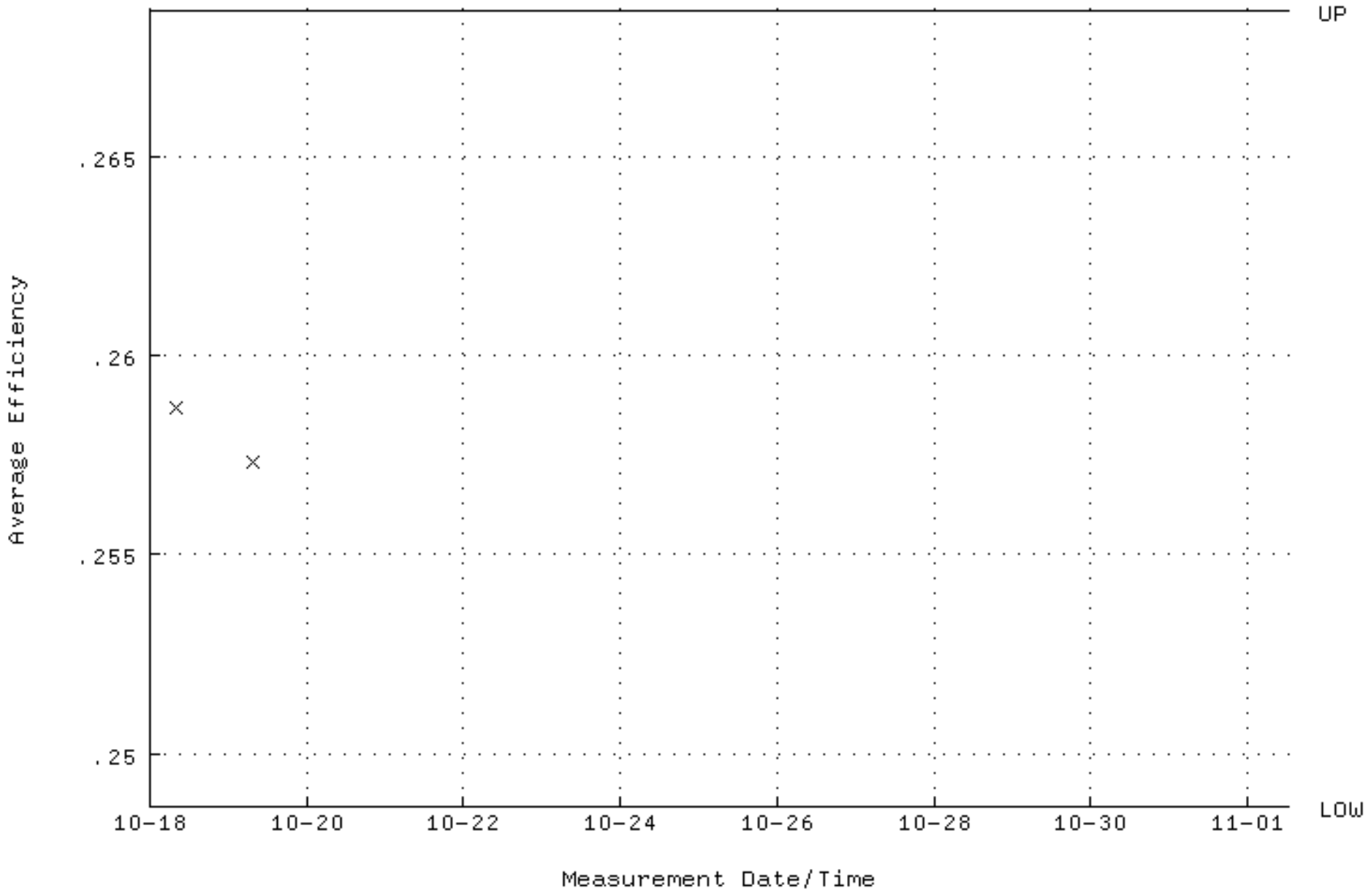
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:30 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



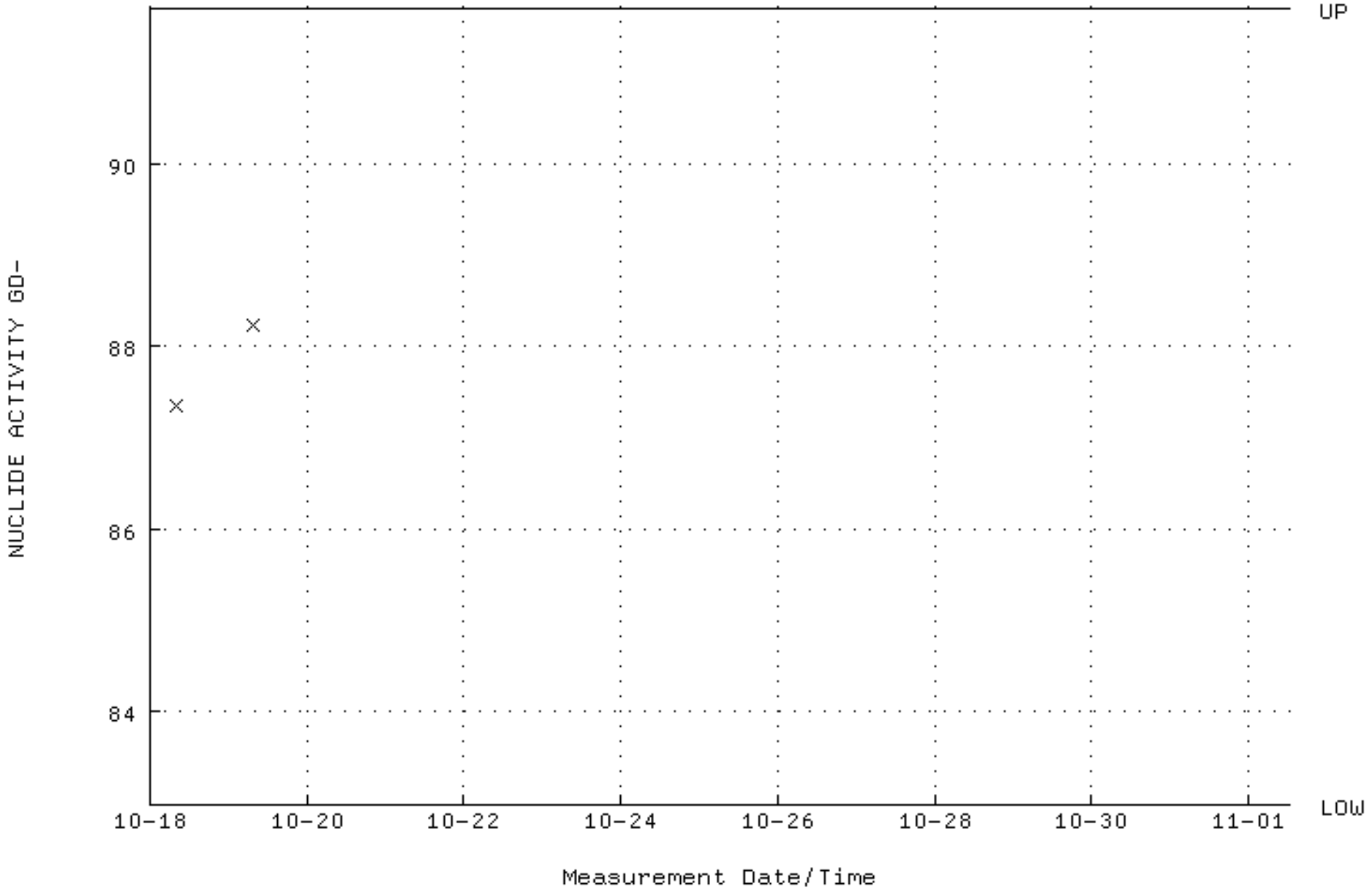
QA filename : DKA100:[ENV_ALPHA.QA.B]B126.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:18 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



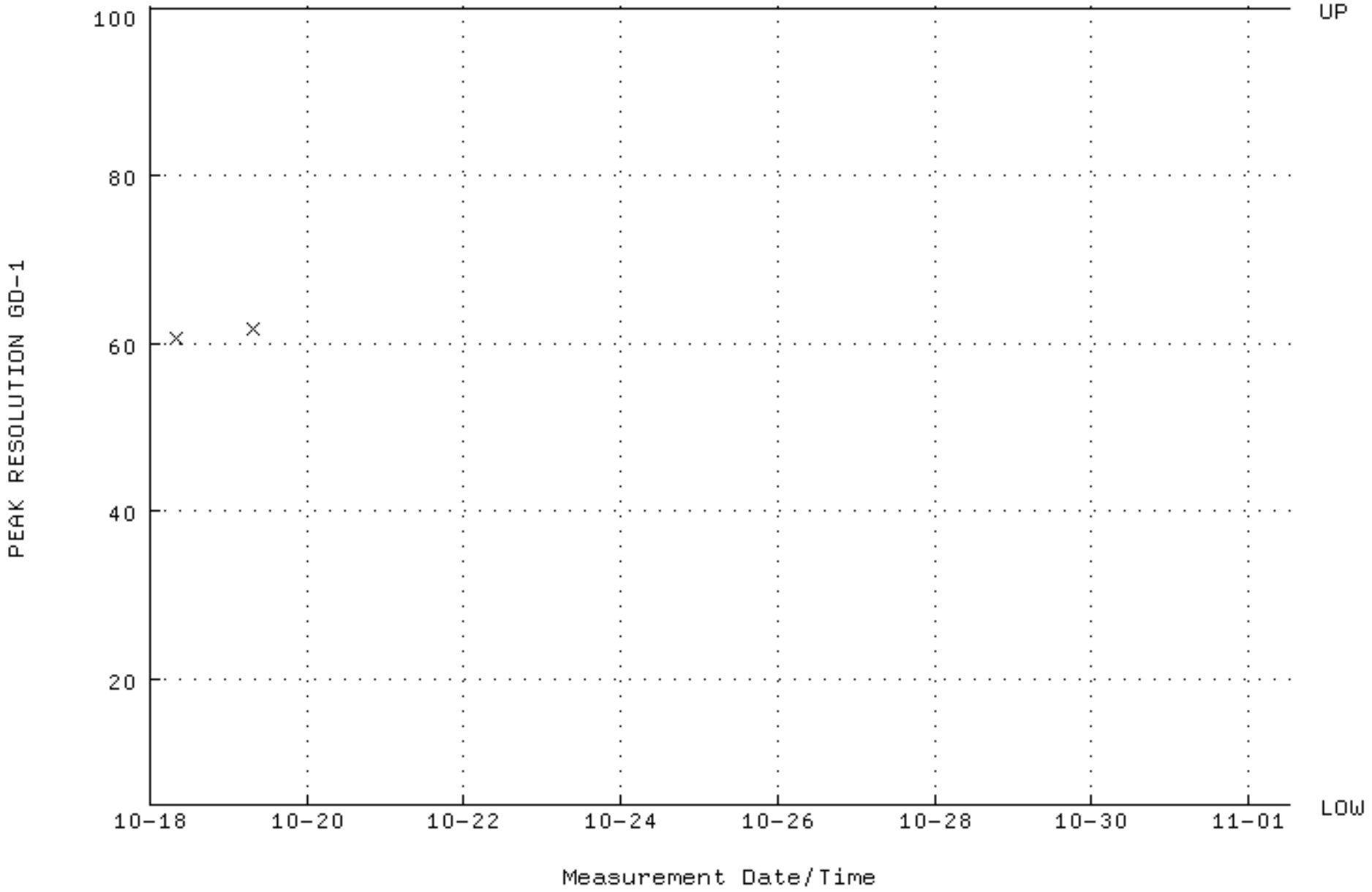
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:35 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.248664 through 0.268664



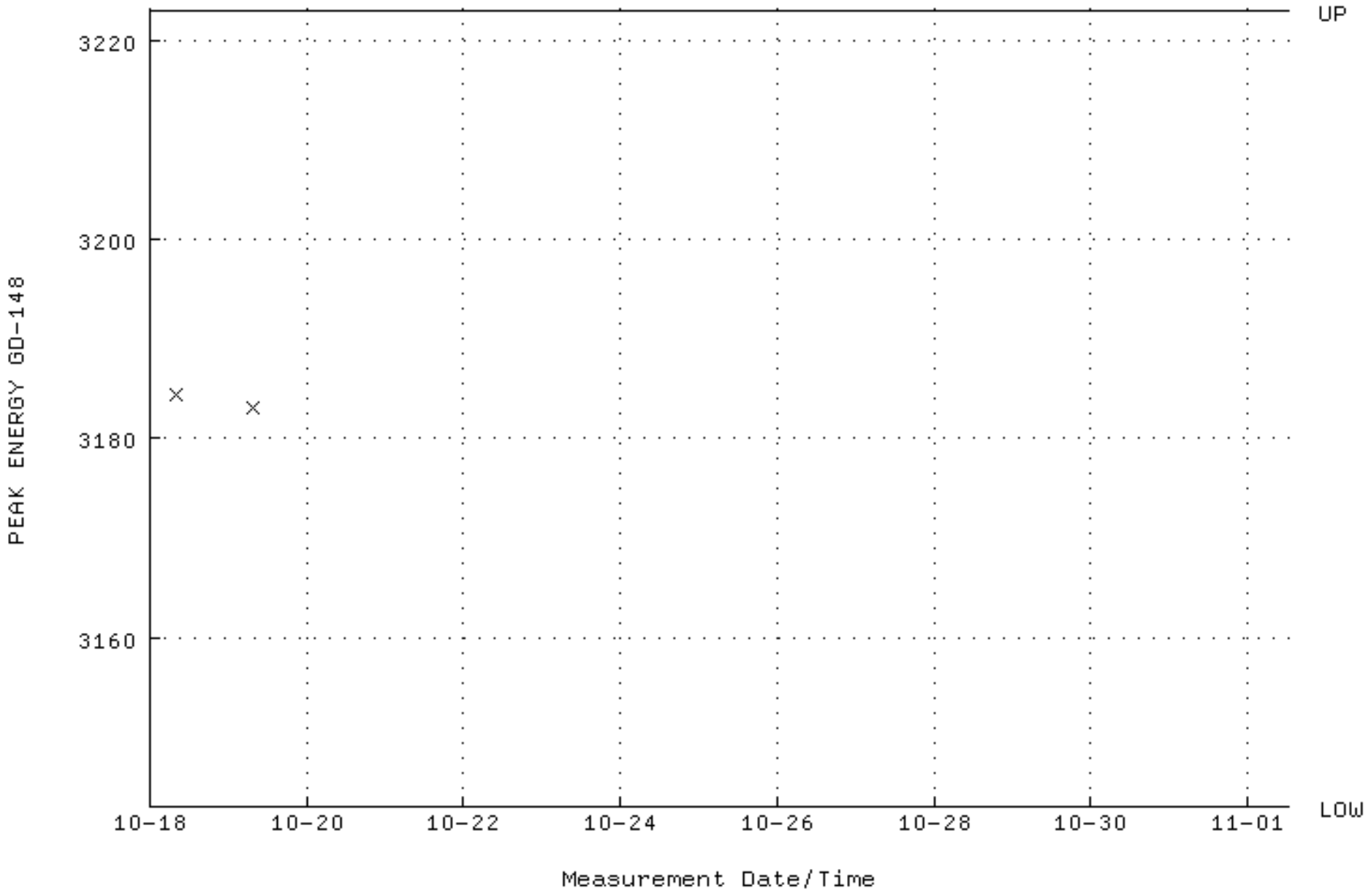
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:35 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 82.9705 through 91.7043



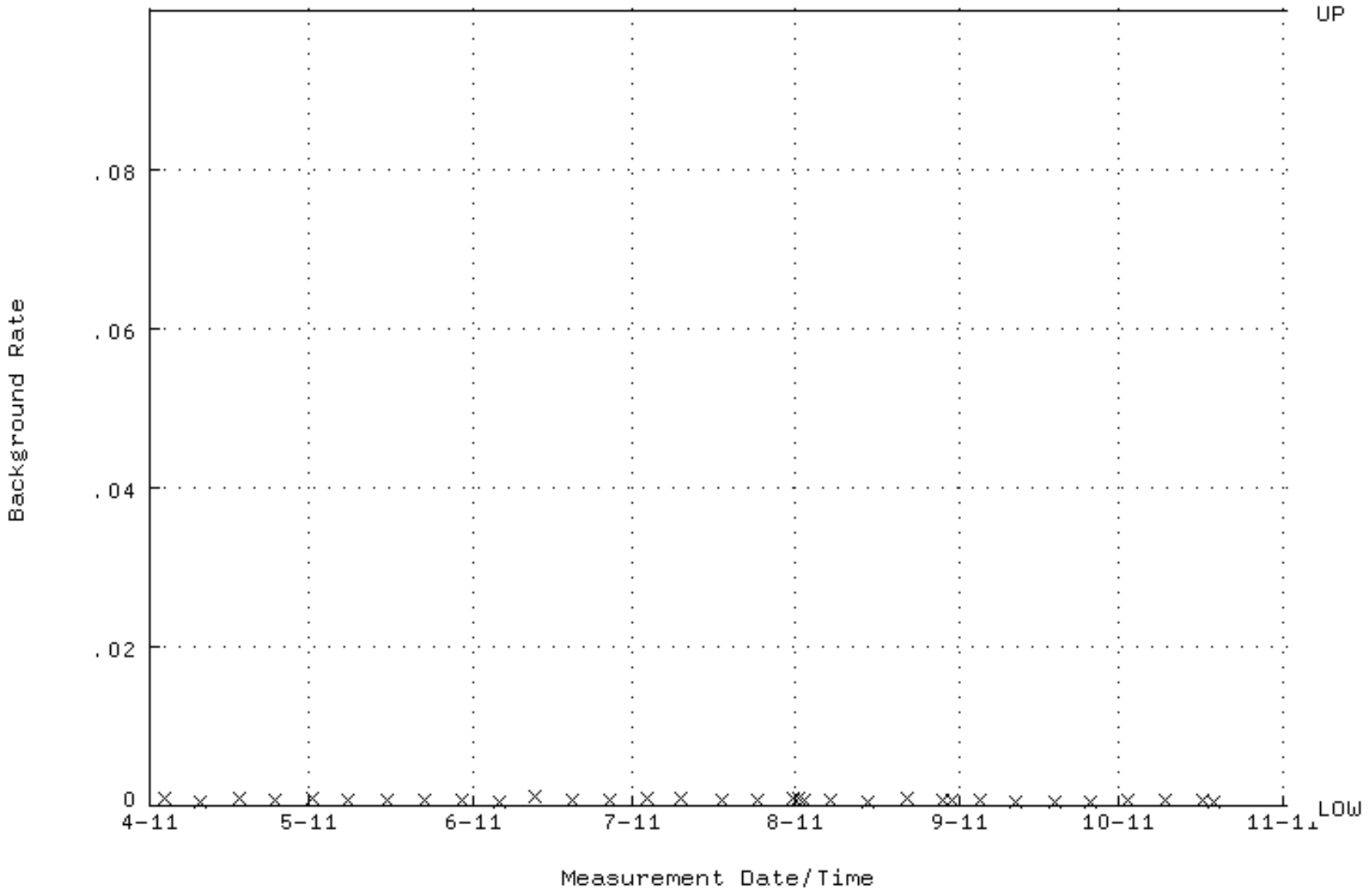
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:35 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



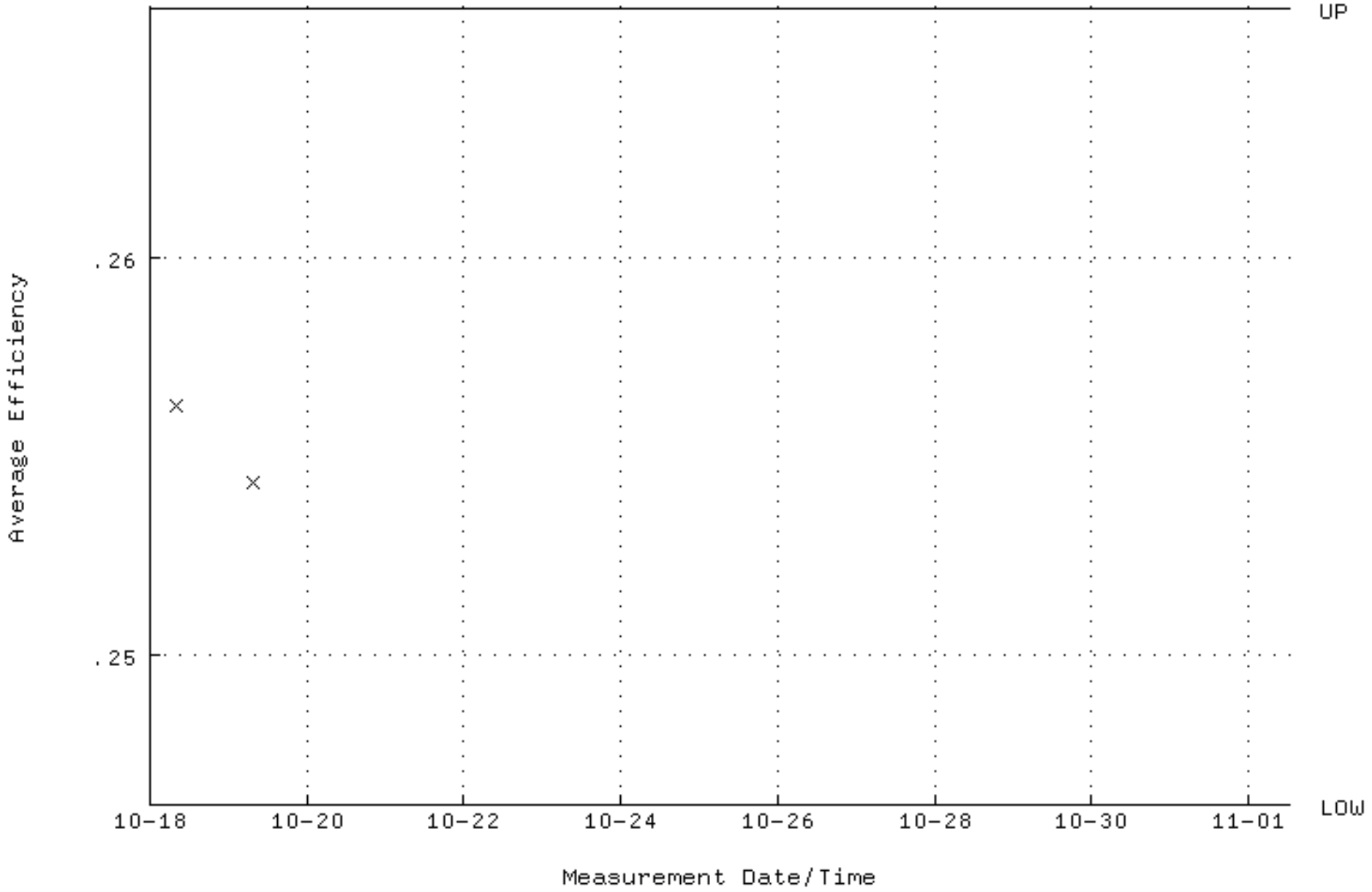
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:35 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



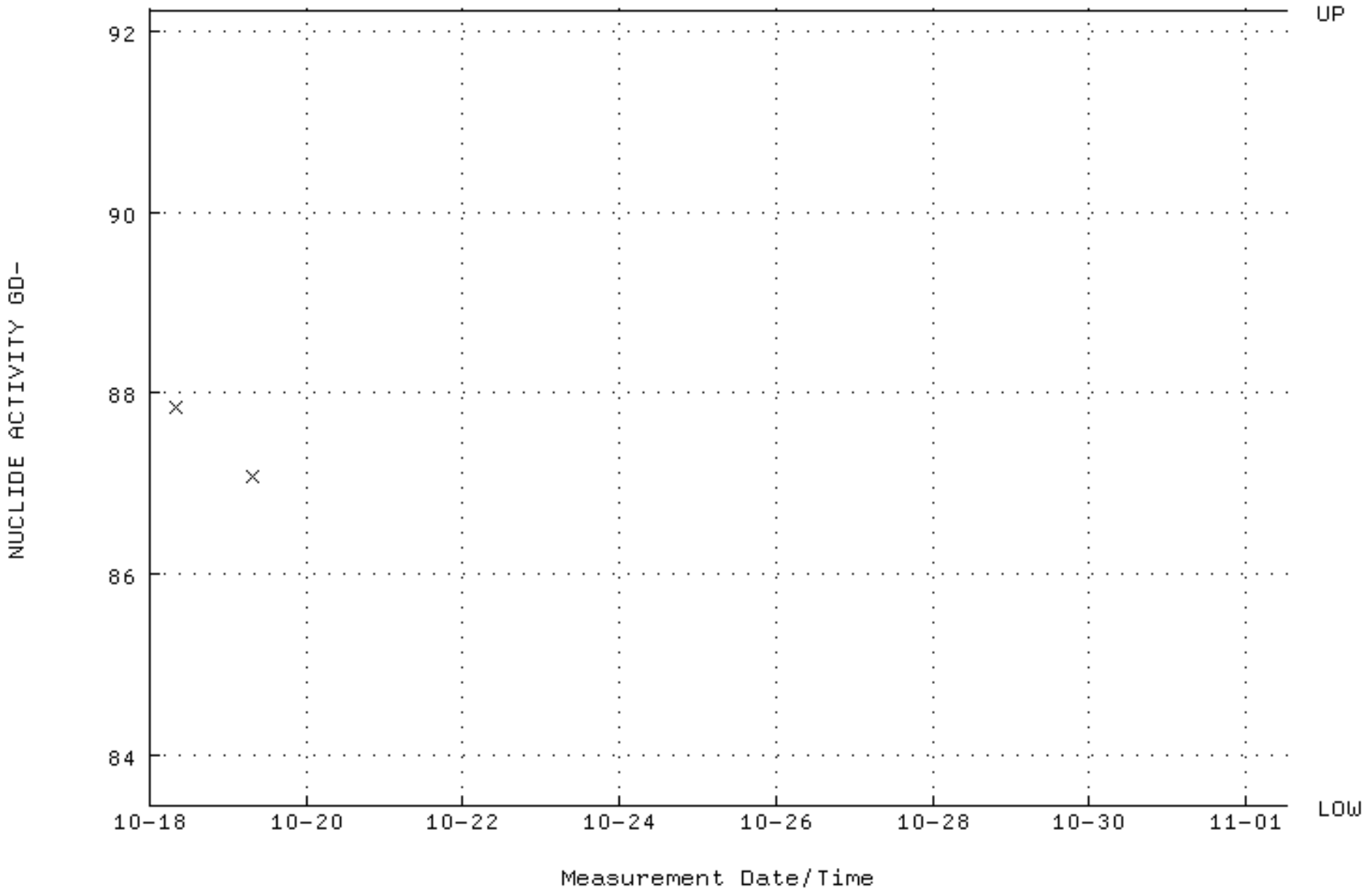
QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:22 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



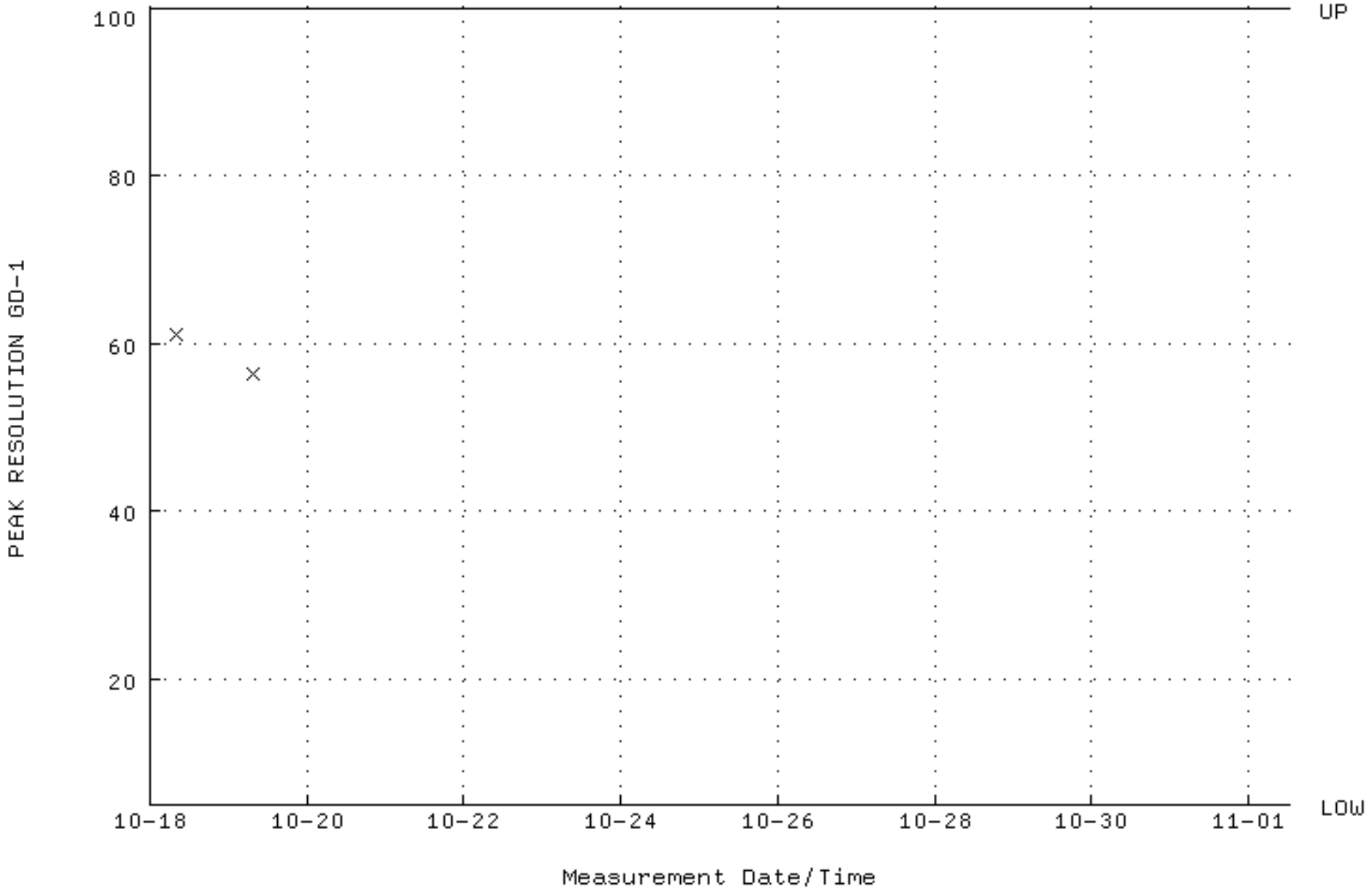
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:39 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.246243 through 0.266243



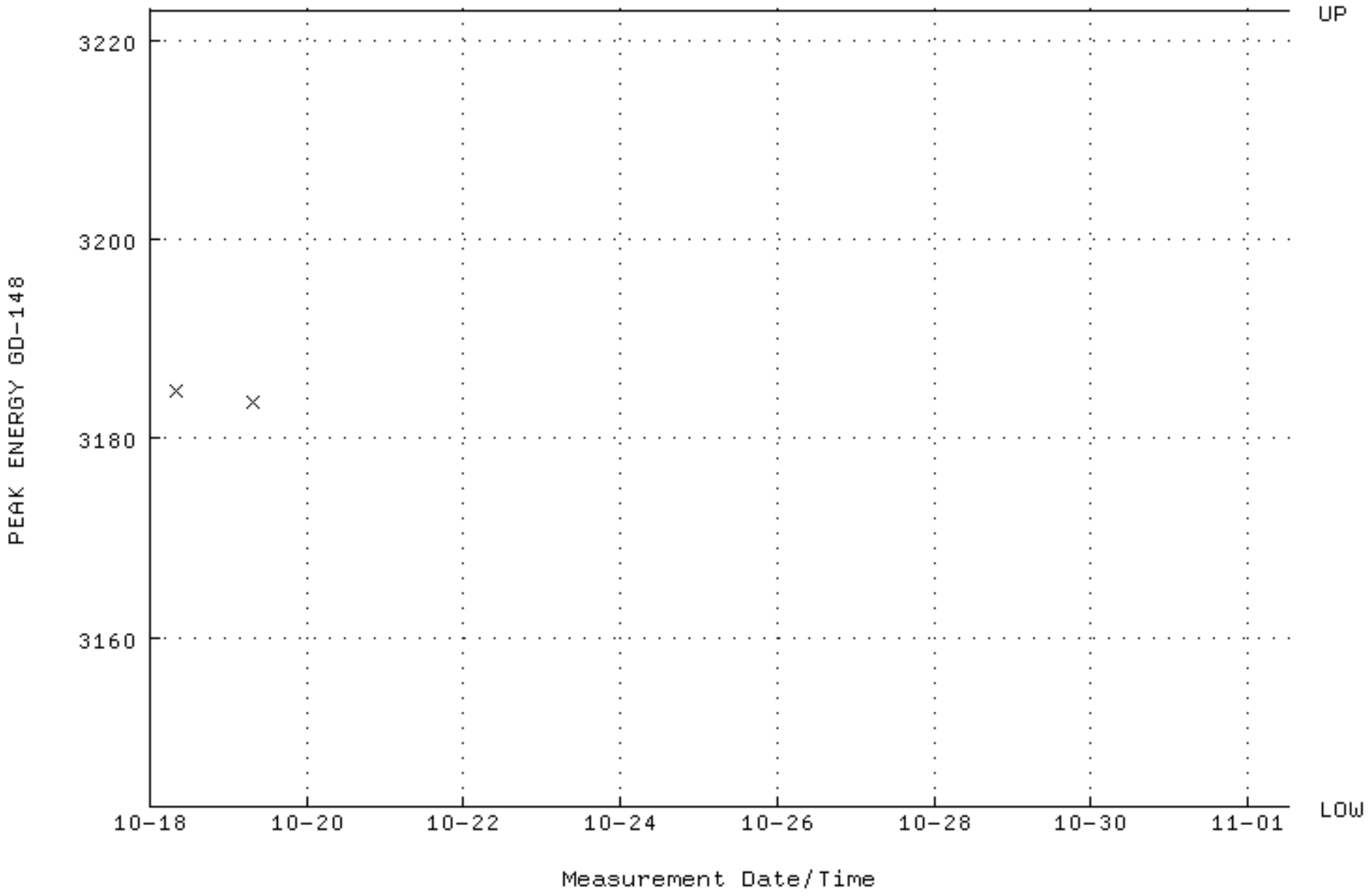
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:39 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 83.4424 through 92.2258



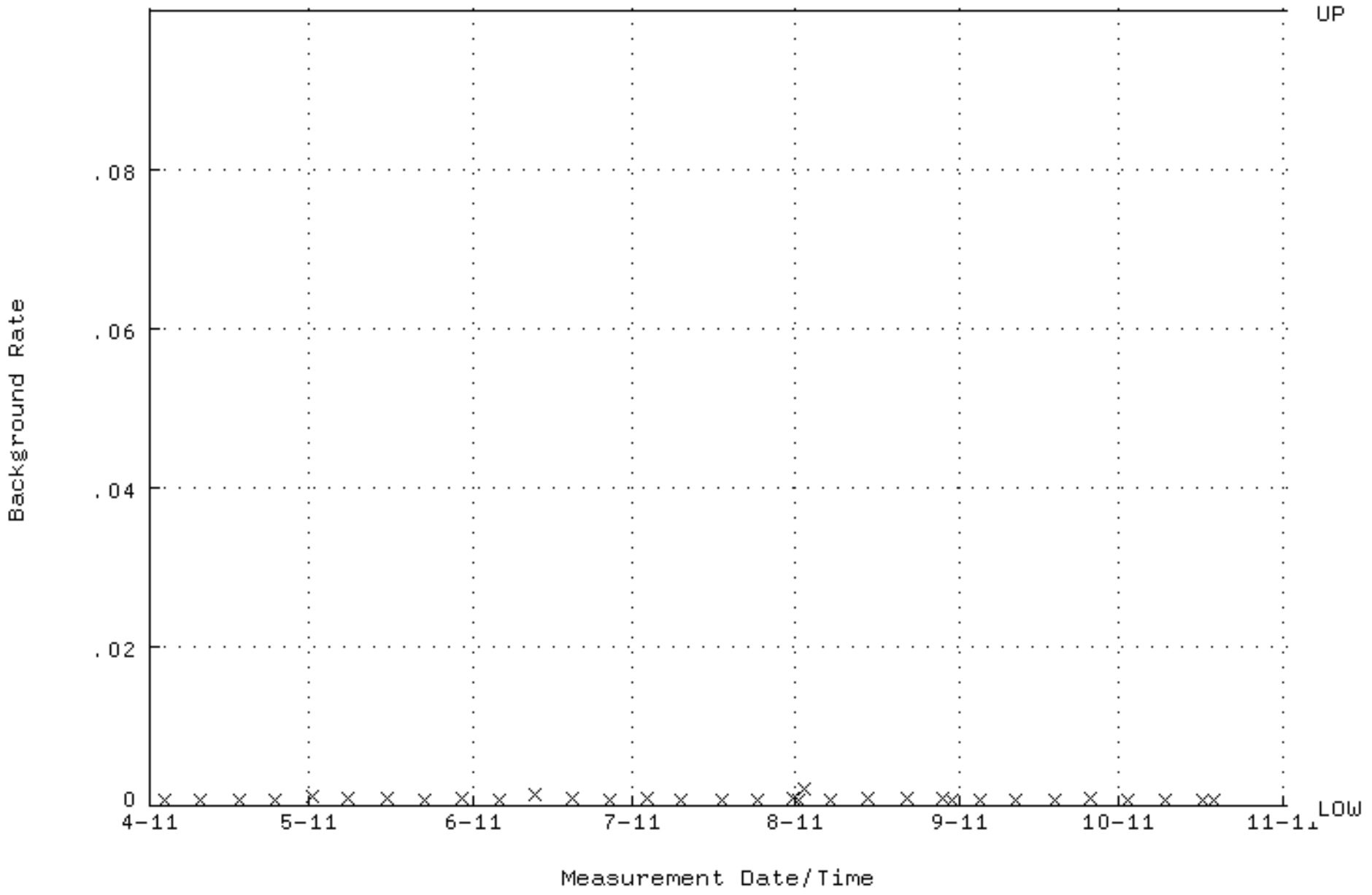
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:39 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



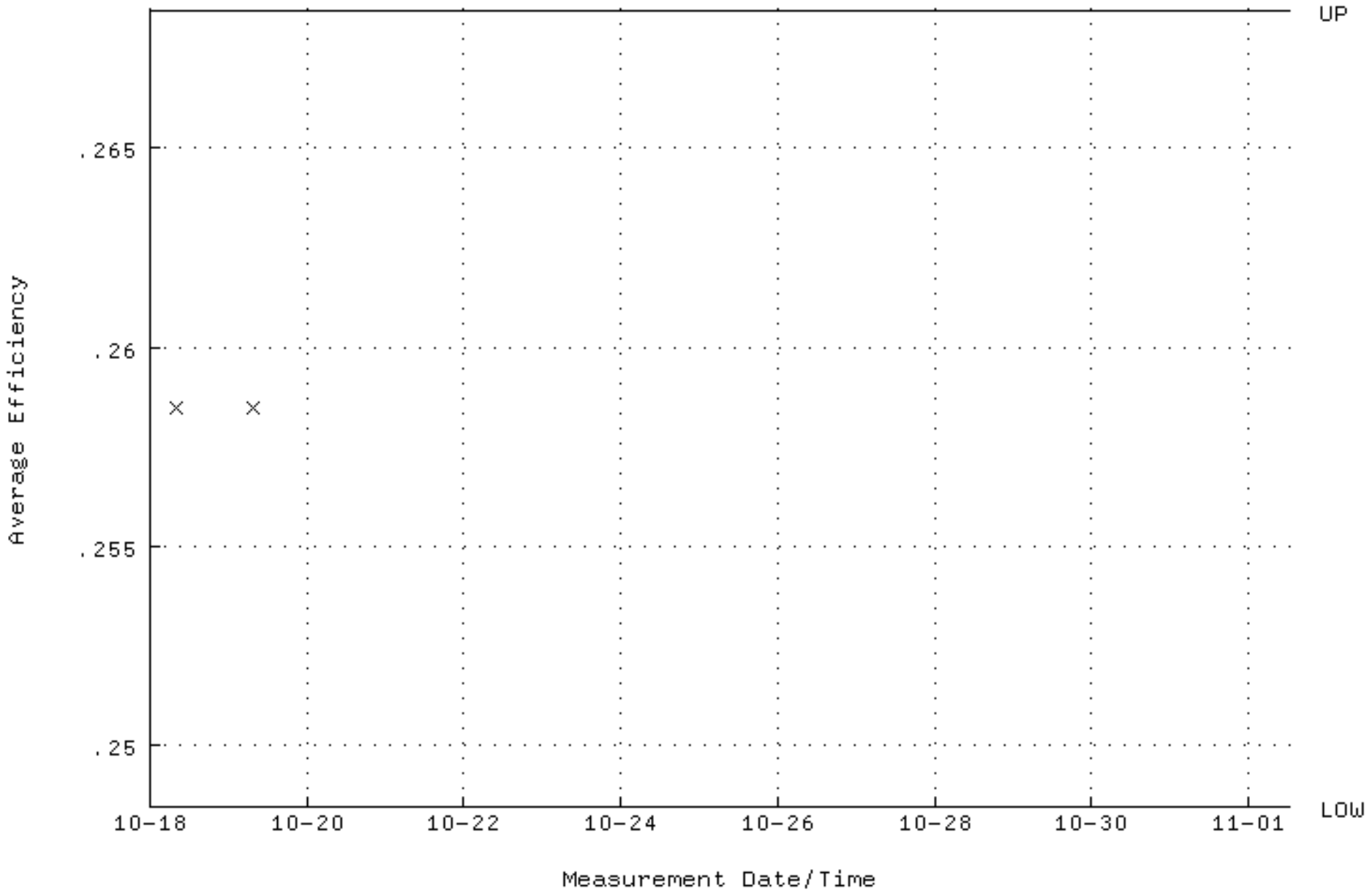
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:39 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



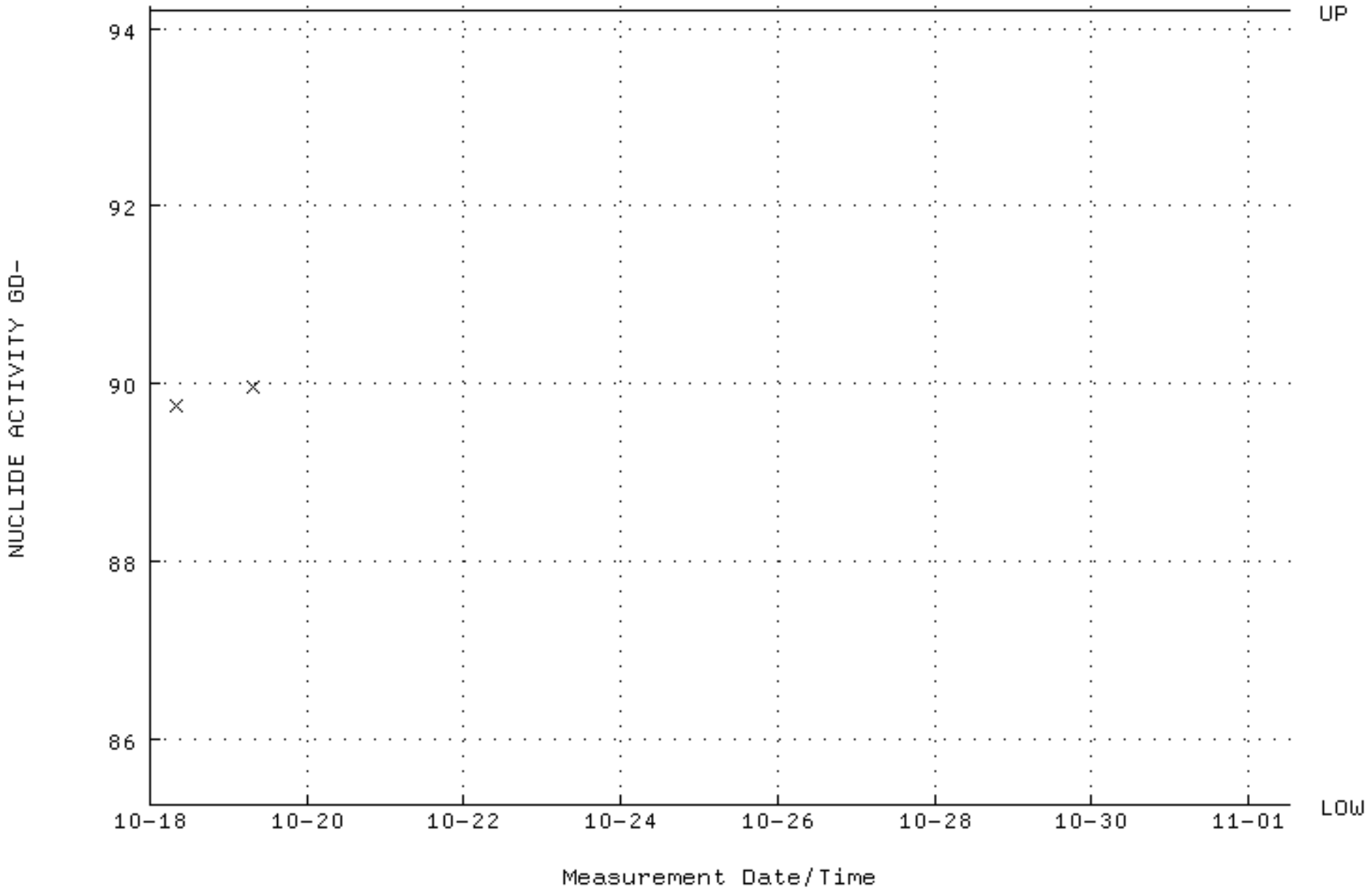
QA filename : DKA100:[ENV_ALPHA.QA.B]B128.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:25 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



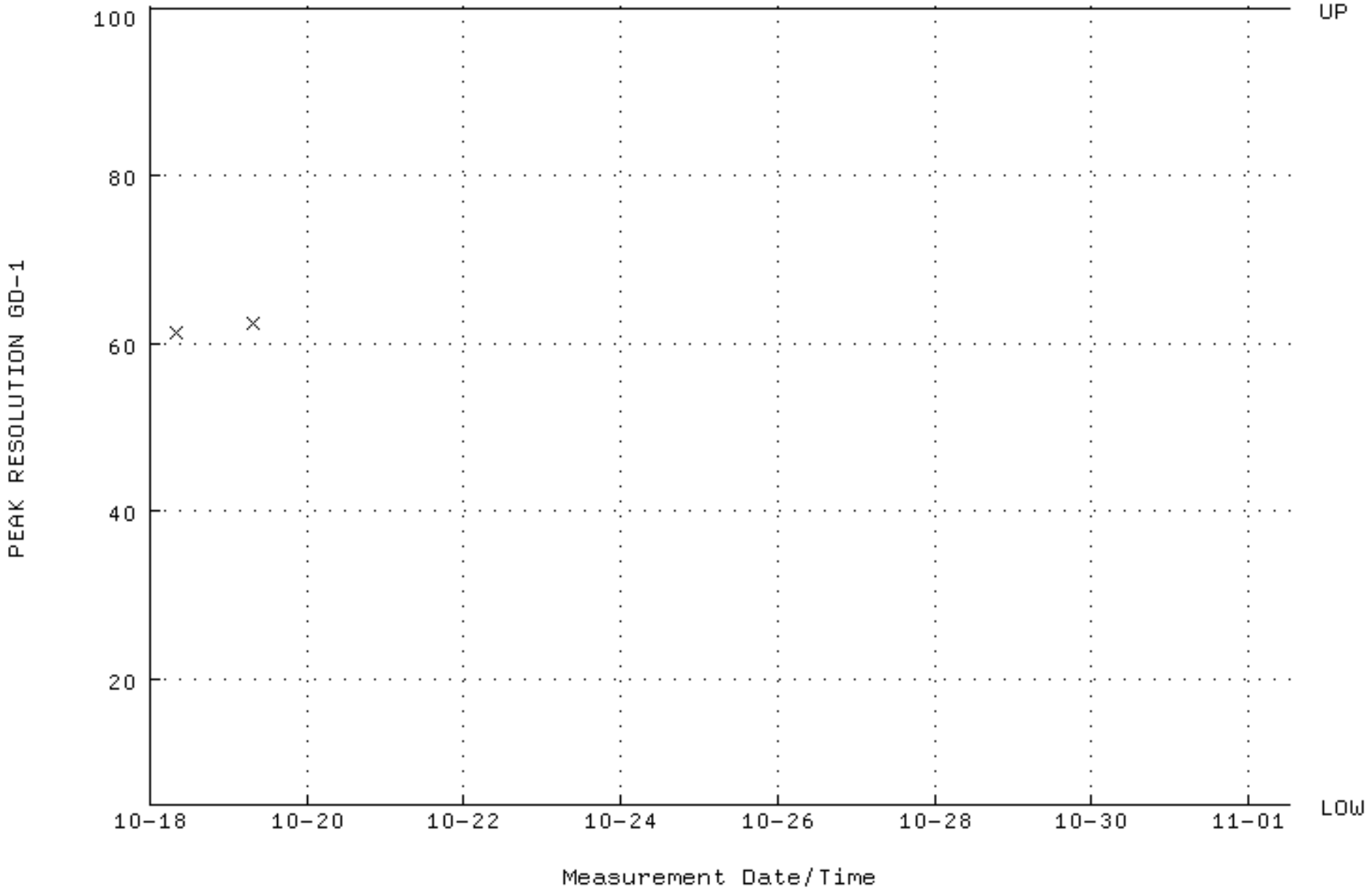
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:43 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.248453 through 0.268453



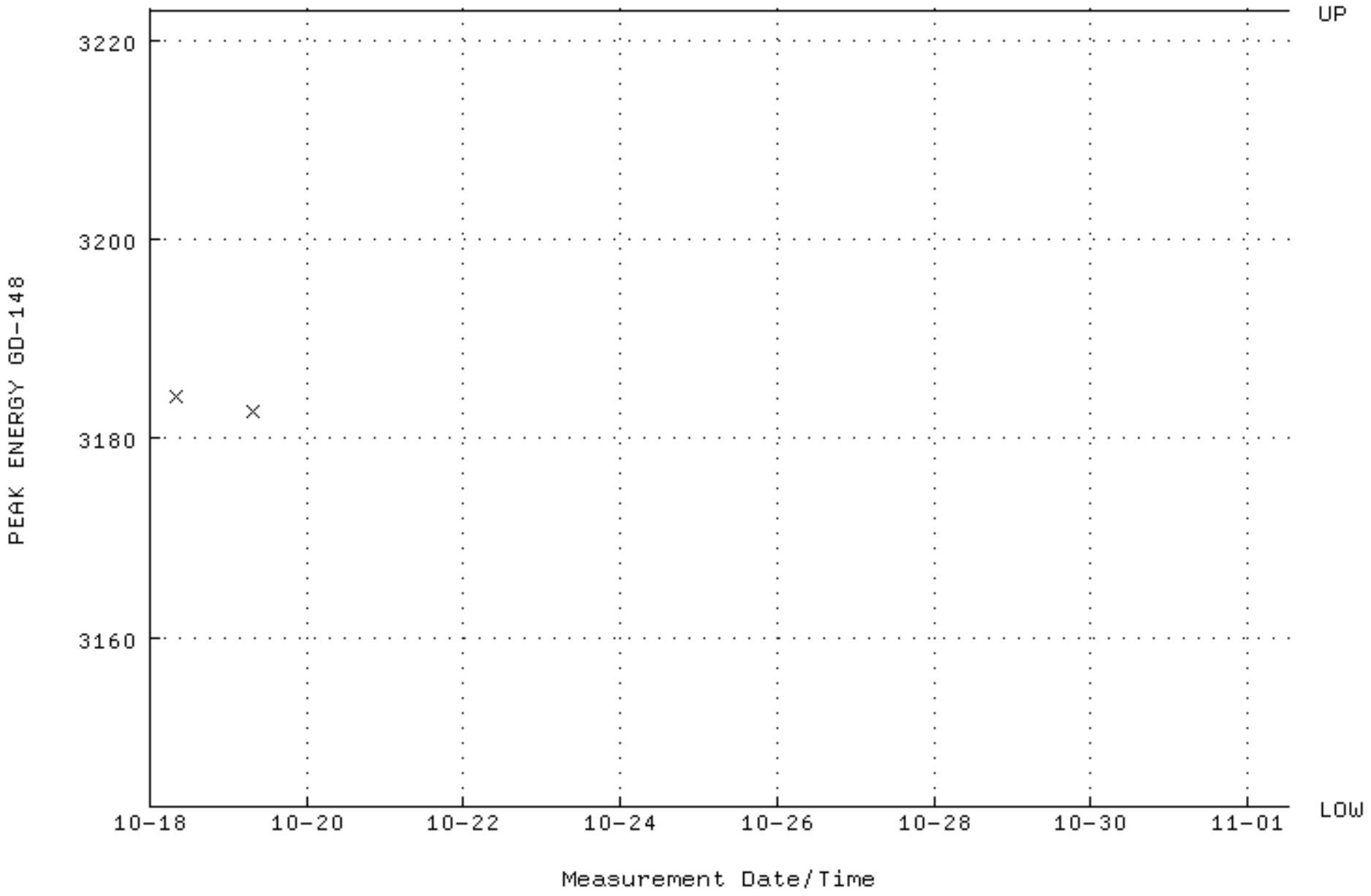
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:43 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.2515 through 94.2253



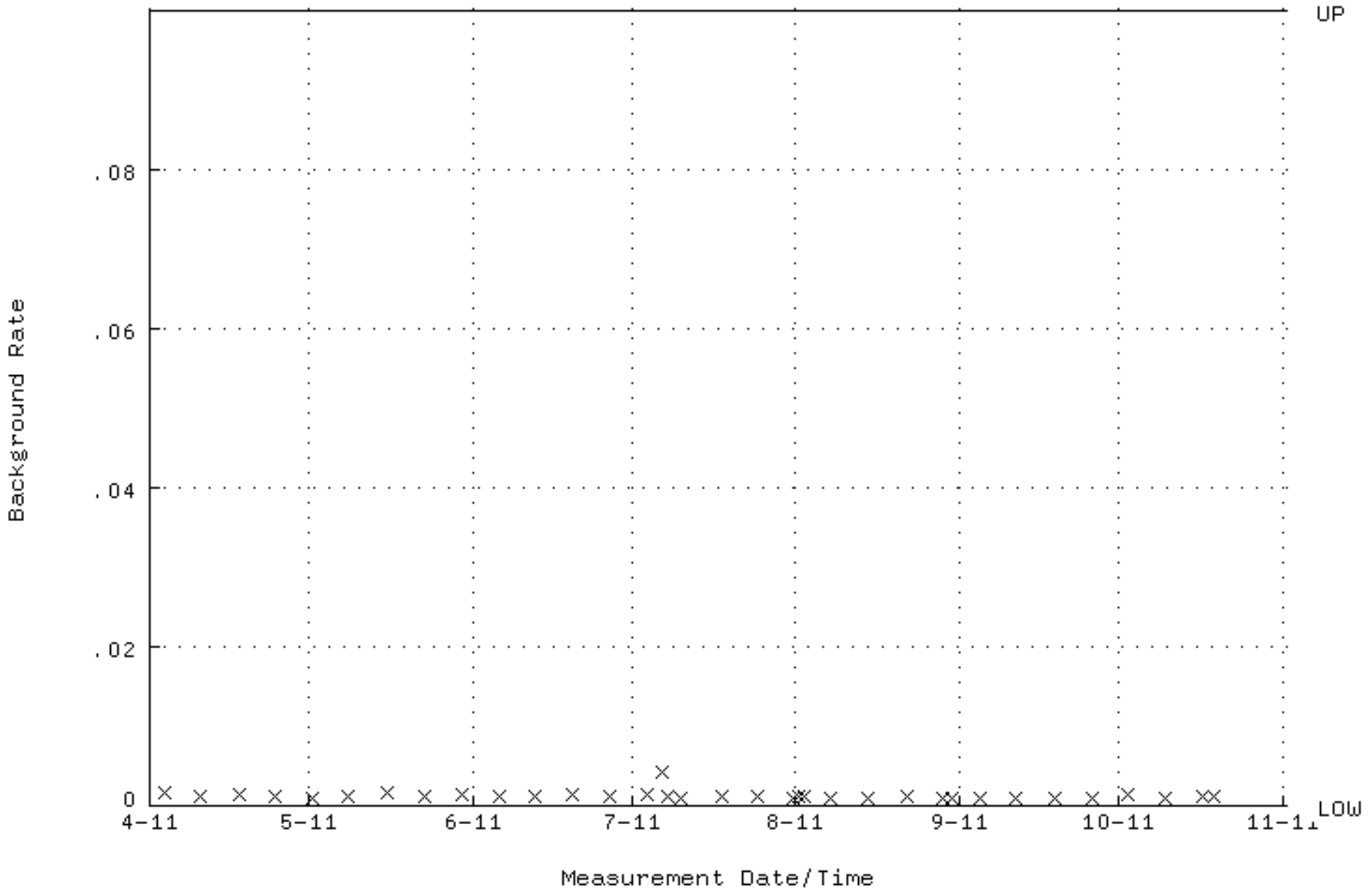
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:43 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



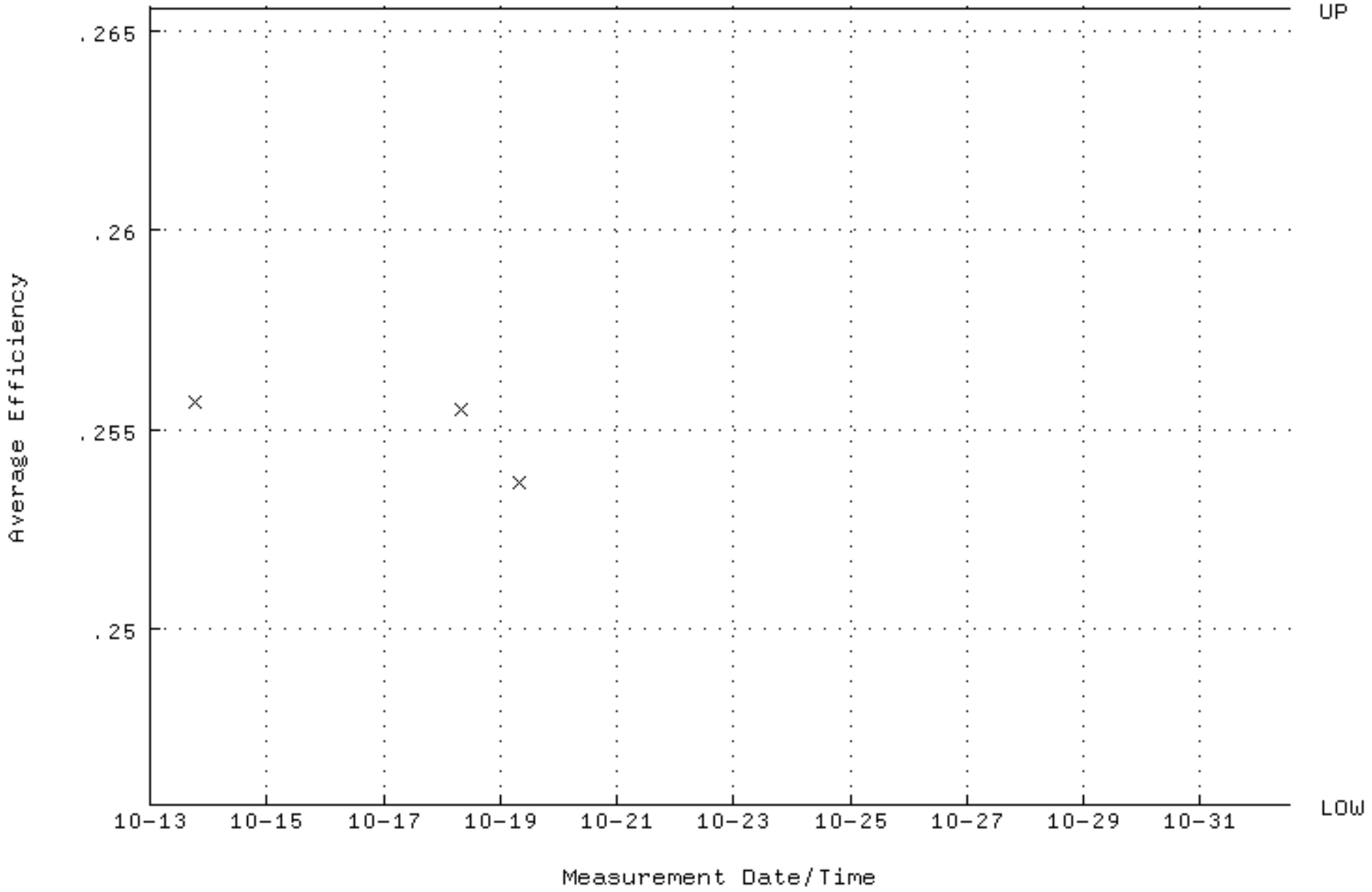
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:43 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



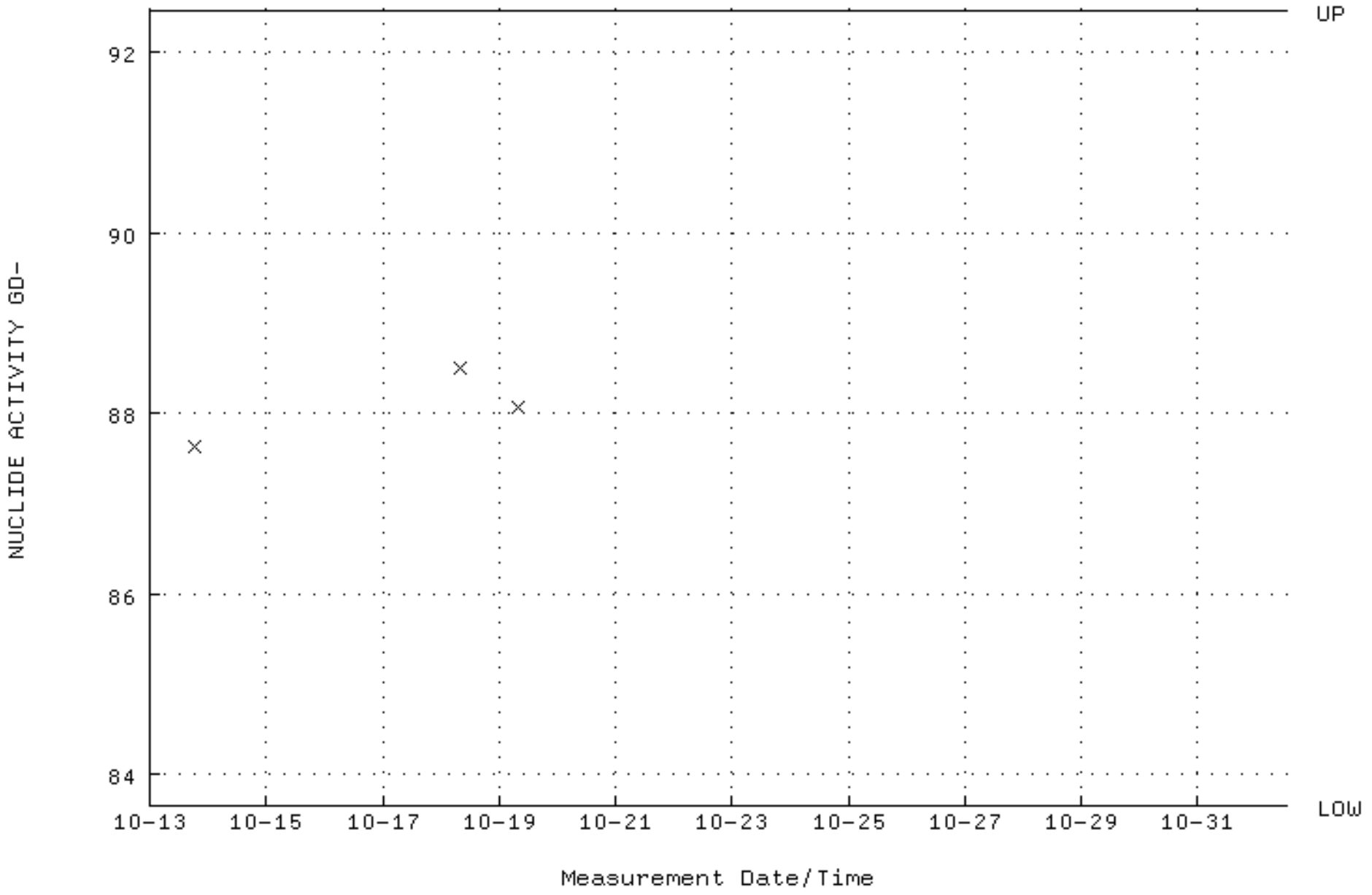
QA filename : DKA100:[ENV_ALPHA.QA.B]B129.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:30 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



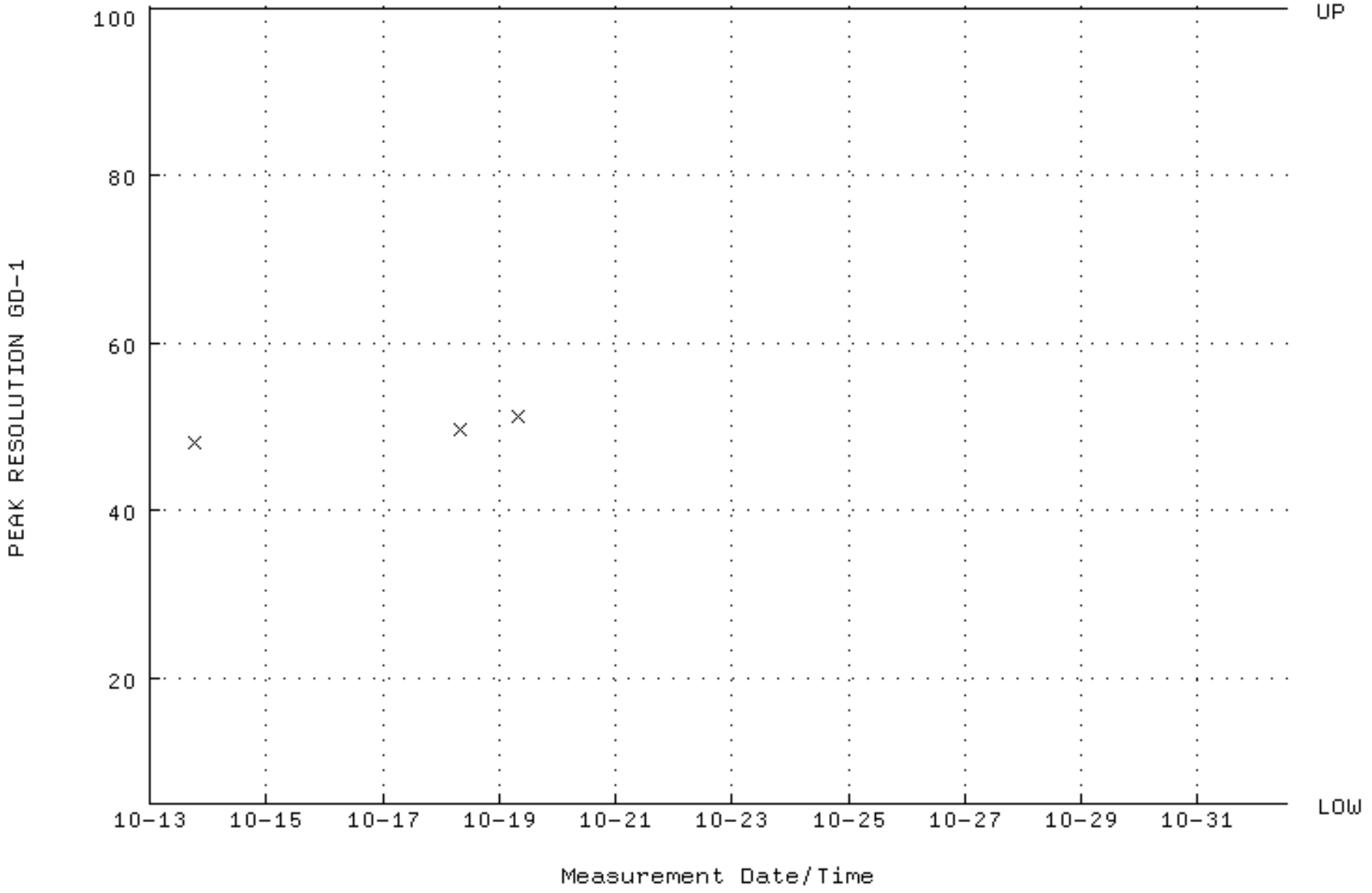
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 13-OCT-2011 18:22:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.245573 through 0.265573



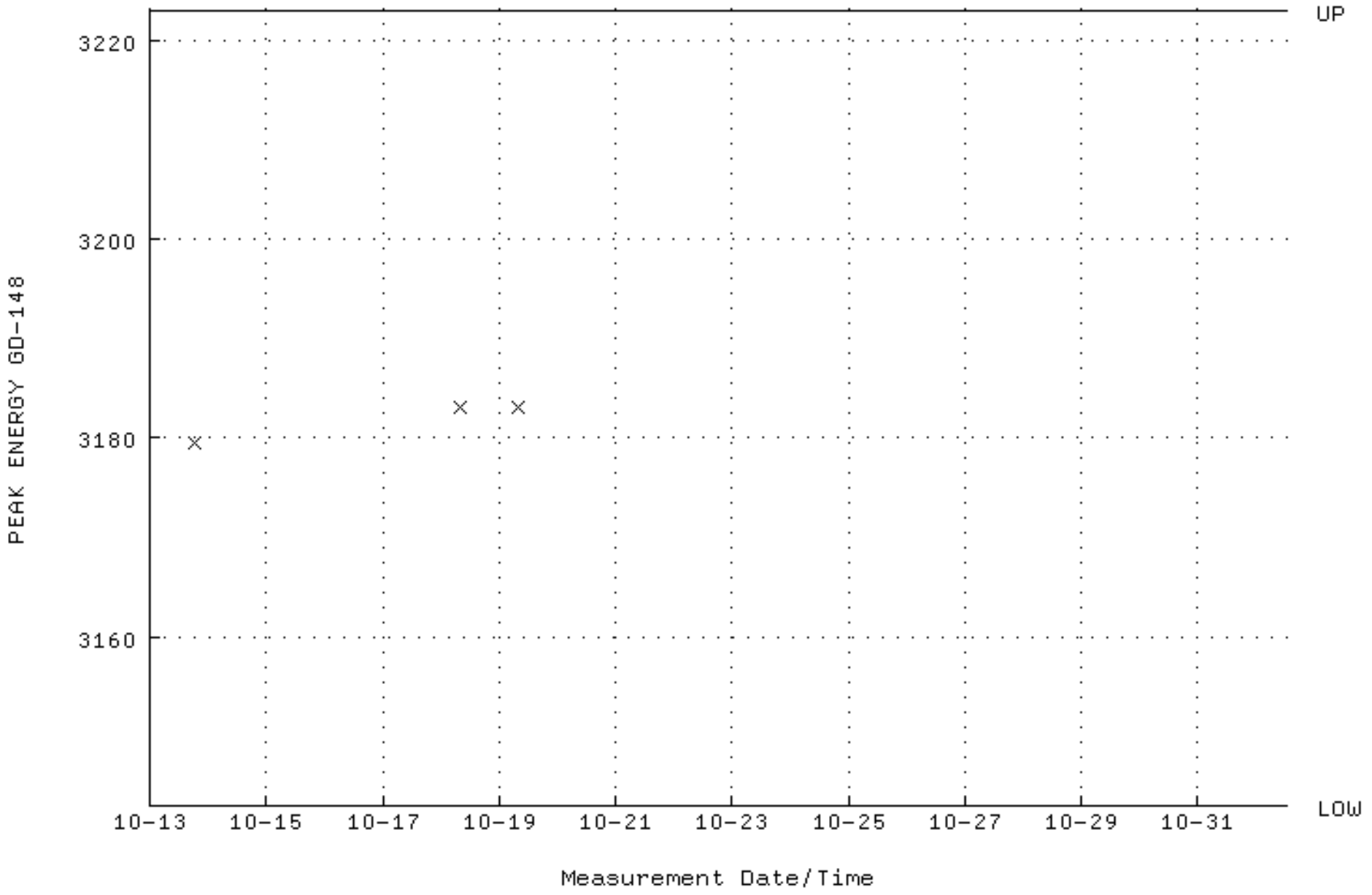
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 13-OCT-2011 18:22:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 83.6536 through 92.4592



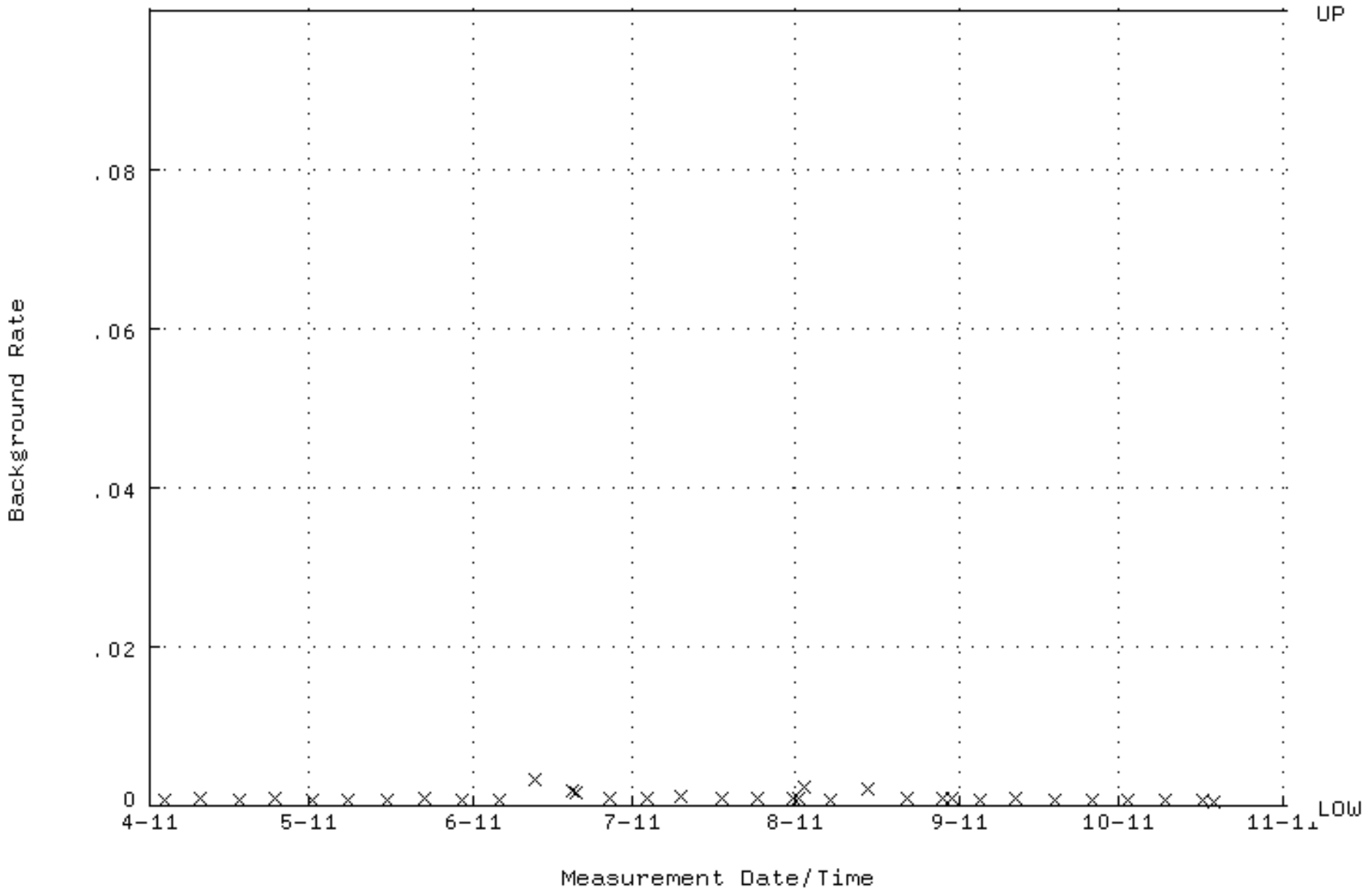
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 13-OCT-2011 18:22:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



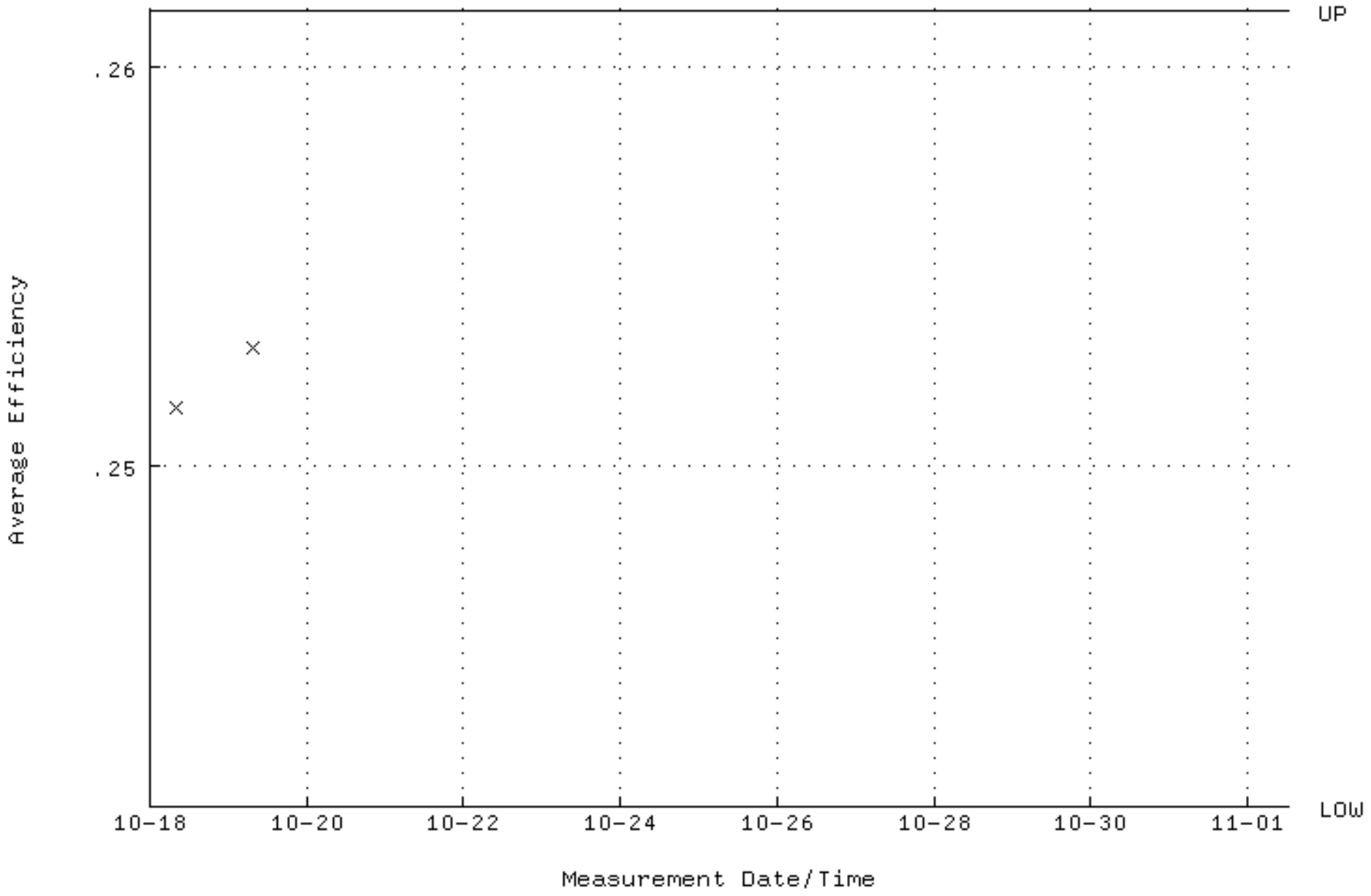
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 13-OCT-2011 18:22:14 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



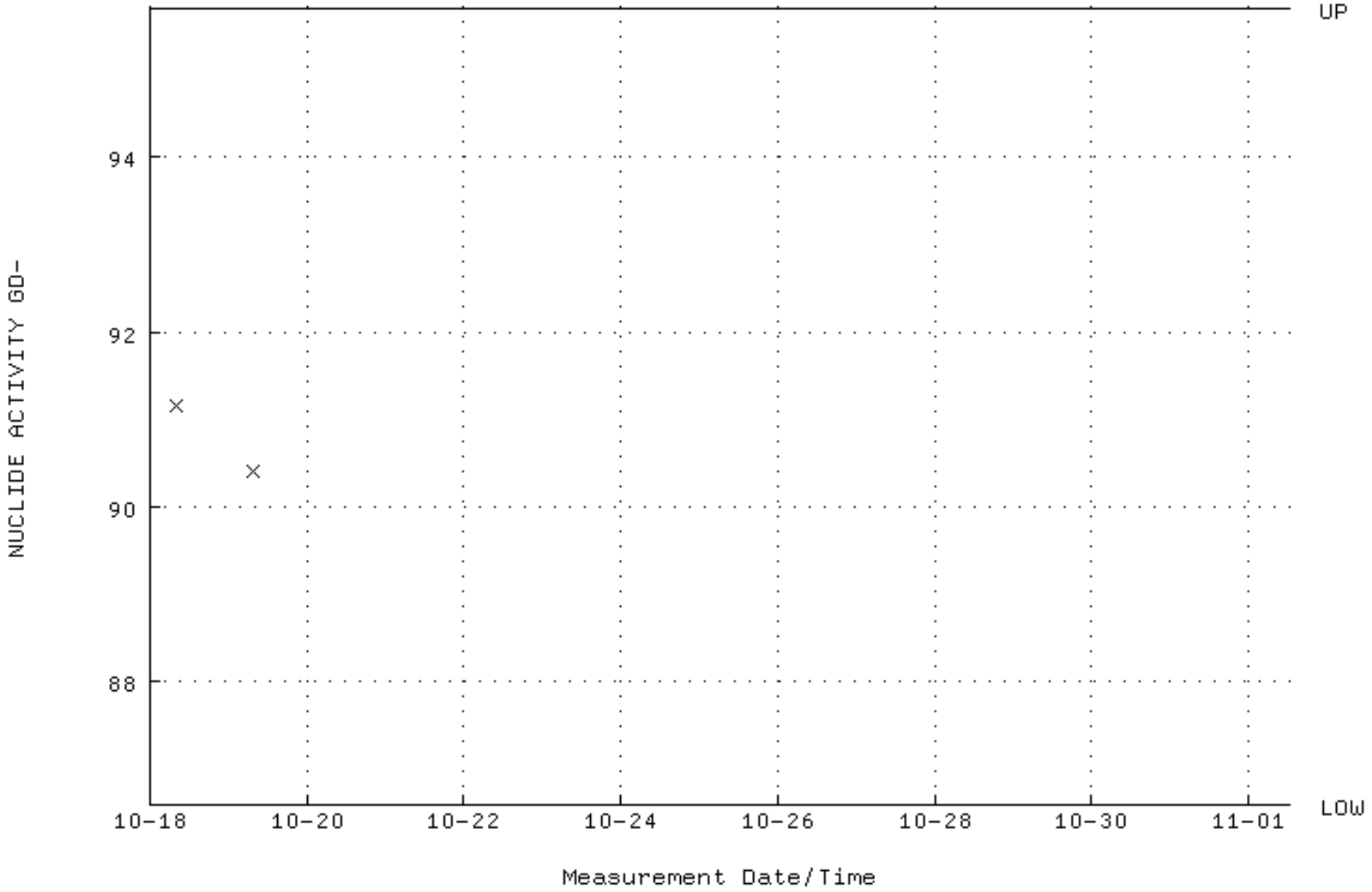
QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:33 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



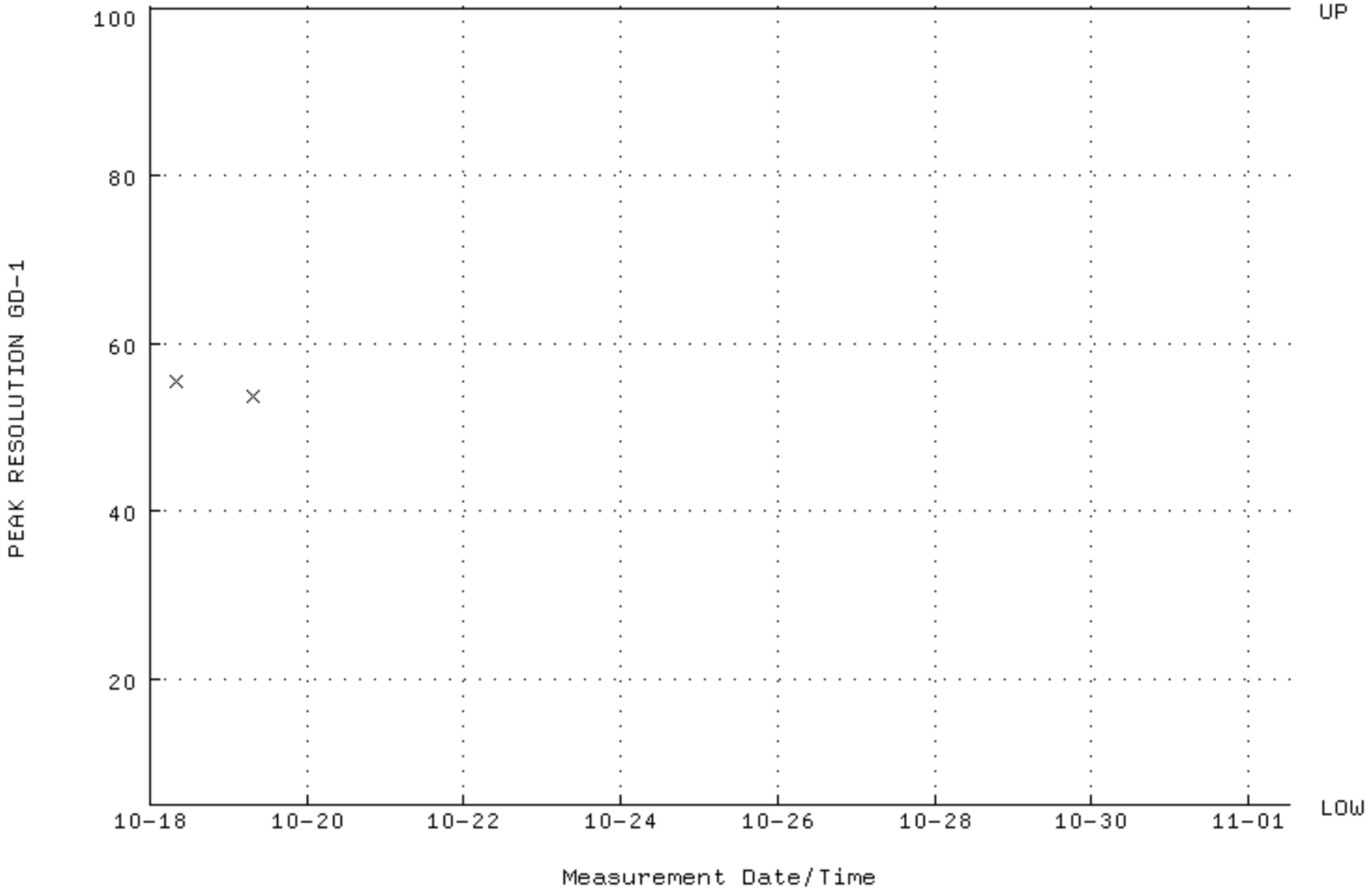
QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:50 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.241433 through 0.261433



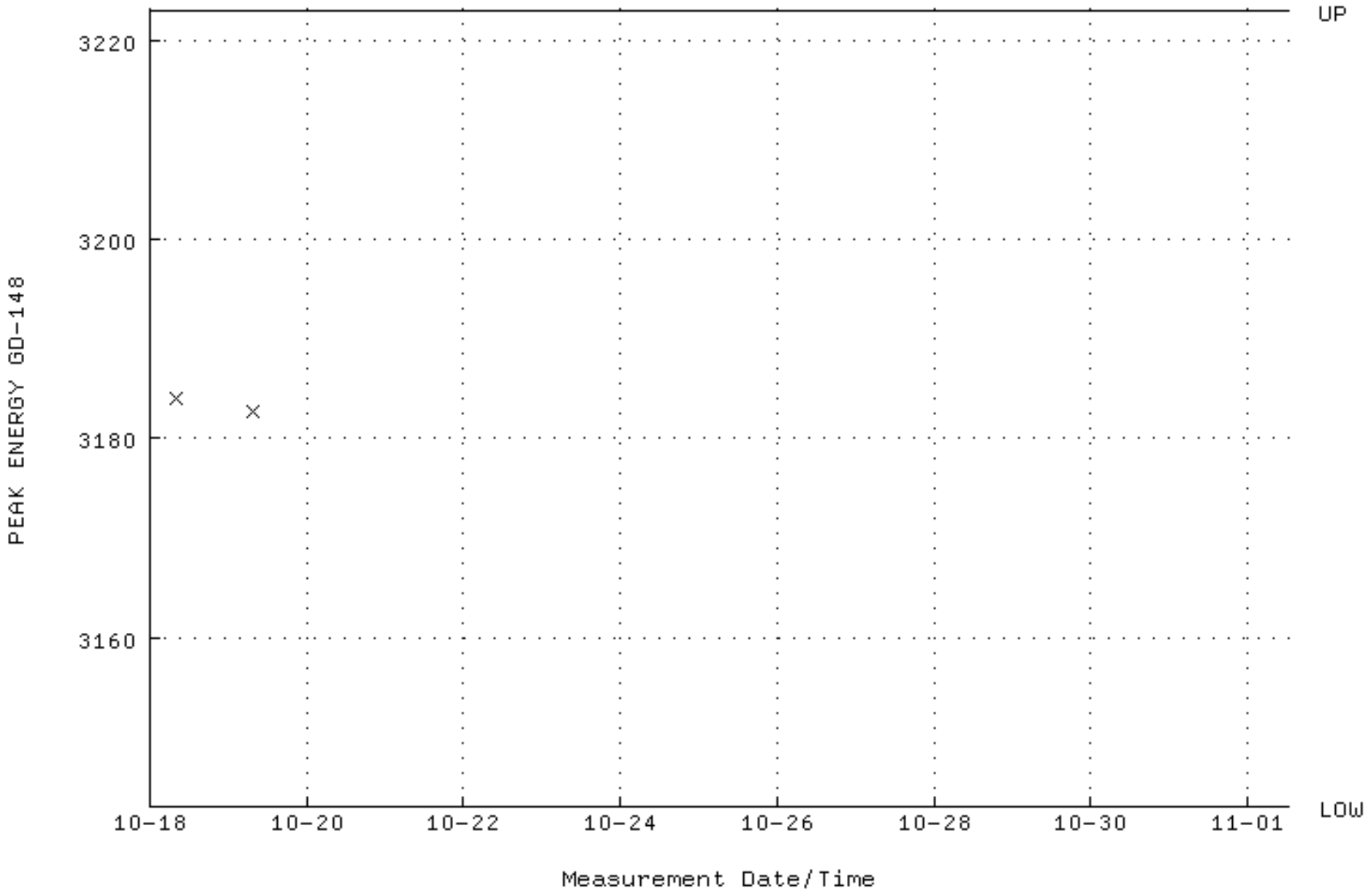
QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:50 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 86.5897 through 95.7044



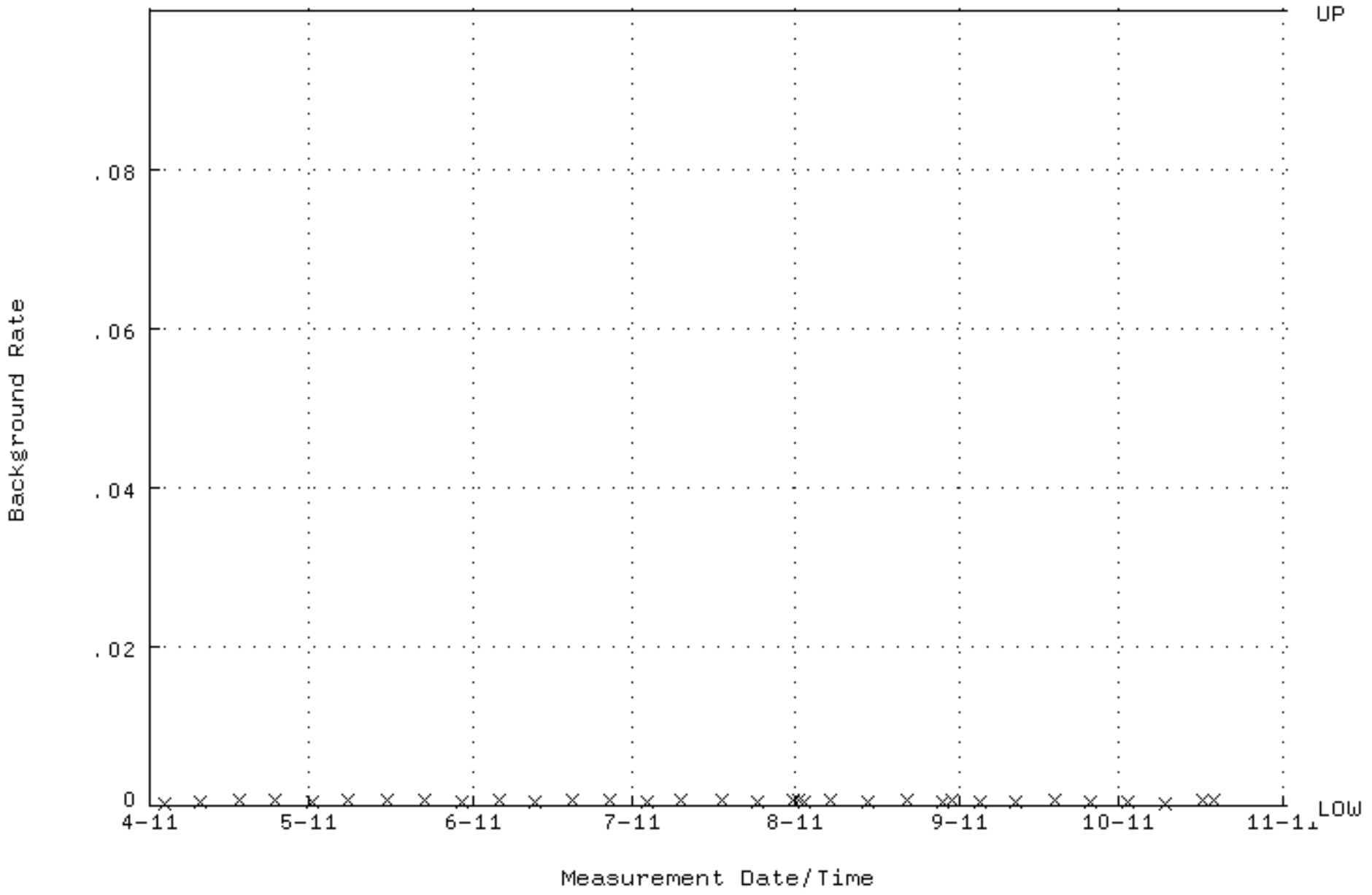
QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:50 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



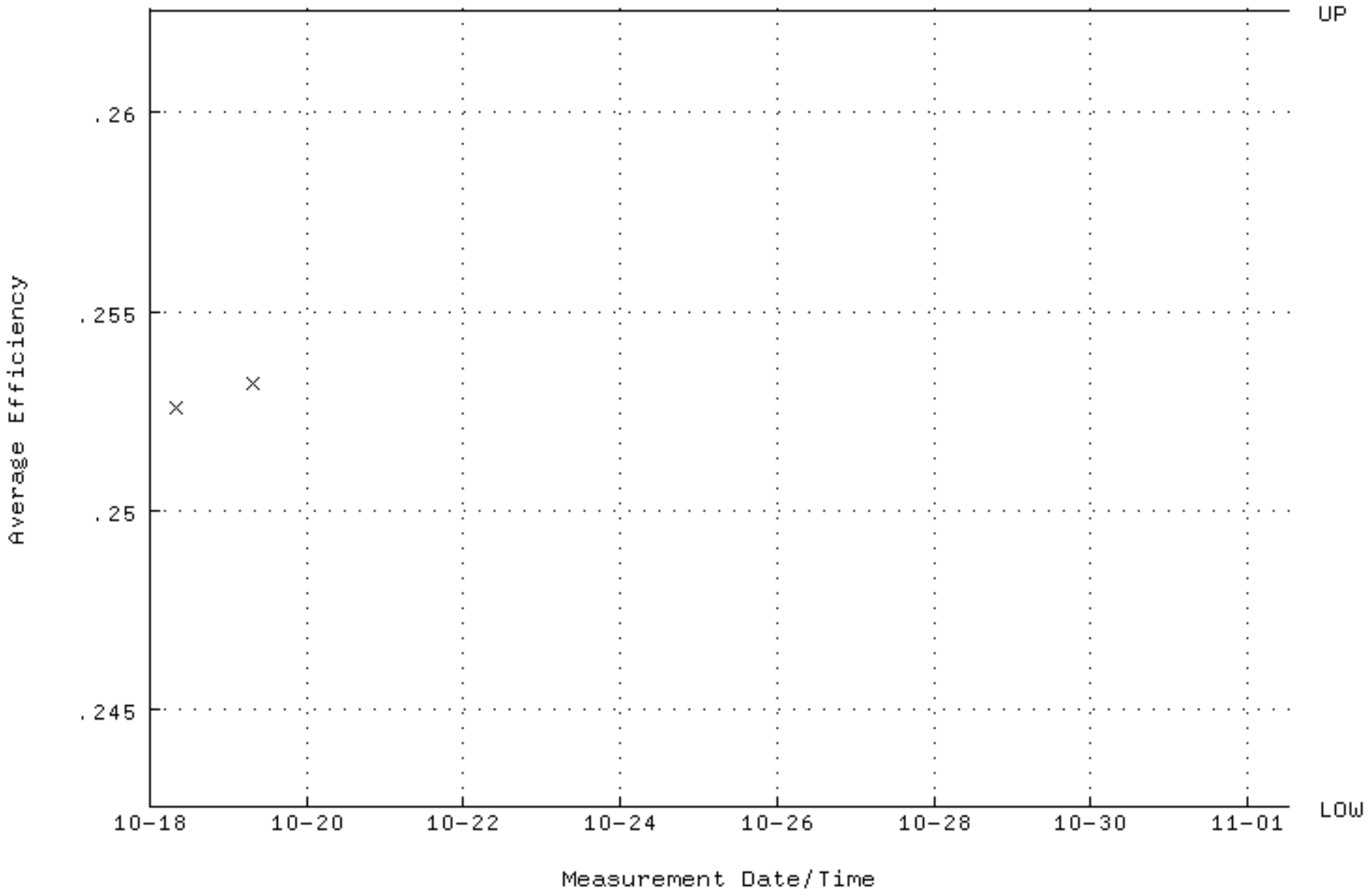
QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:50 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



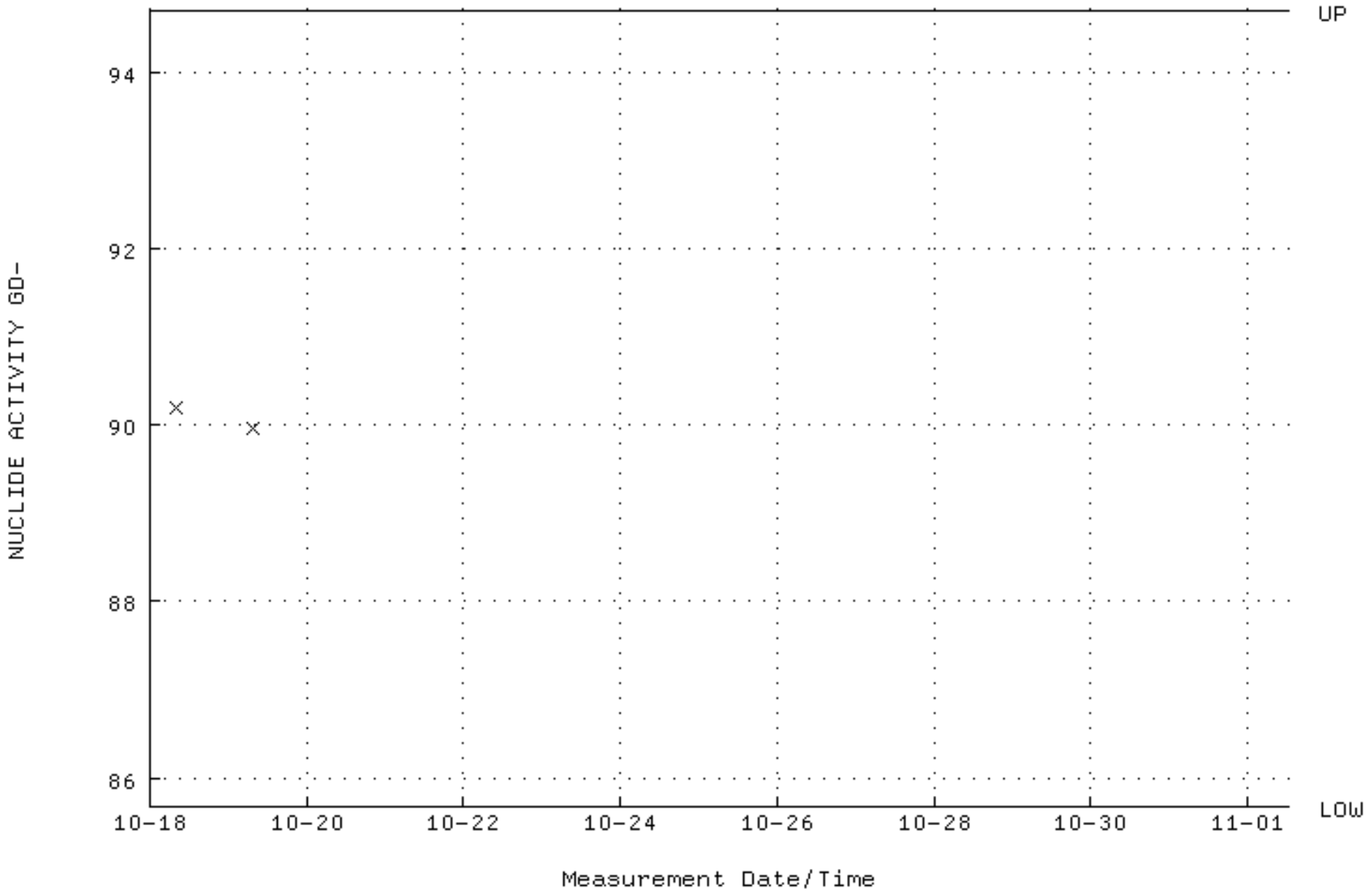
QA filename : DKA100:[ENV_ALPHA.QA.B]B131.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:37 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



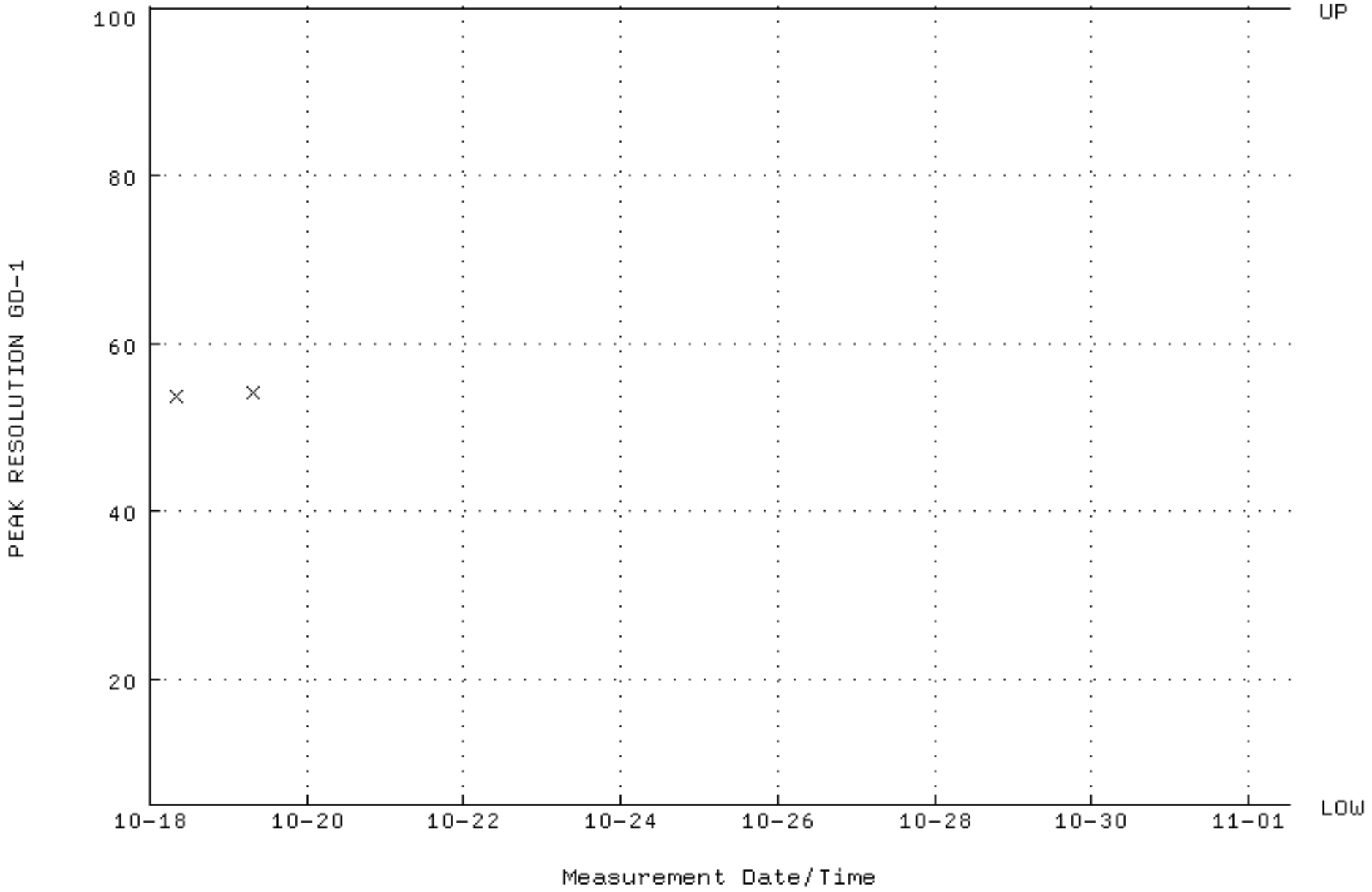
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:45:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.242563 through 0.262563



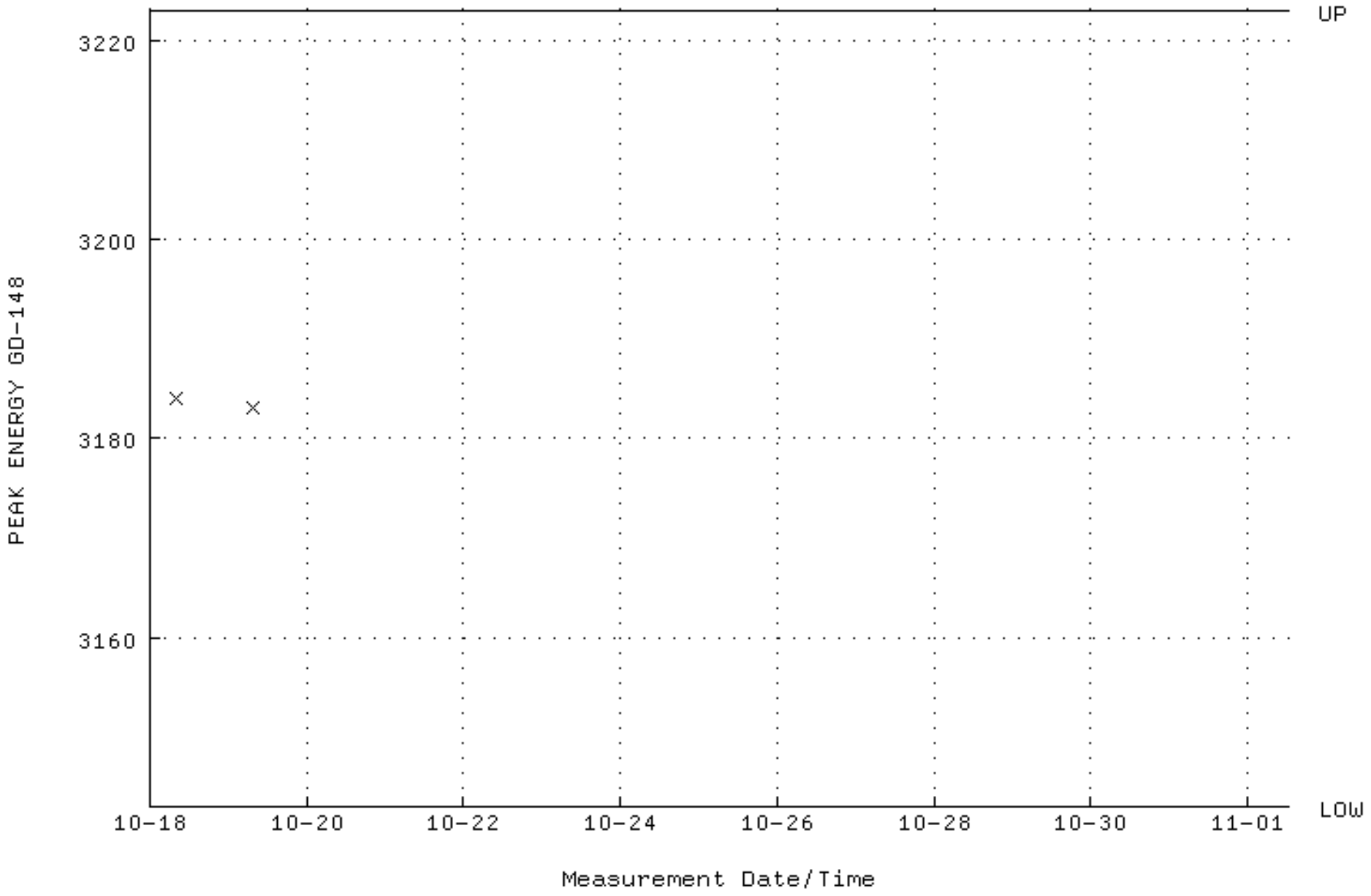
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:45:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 85.6760 through 94.6946



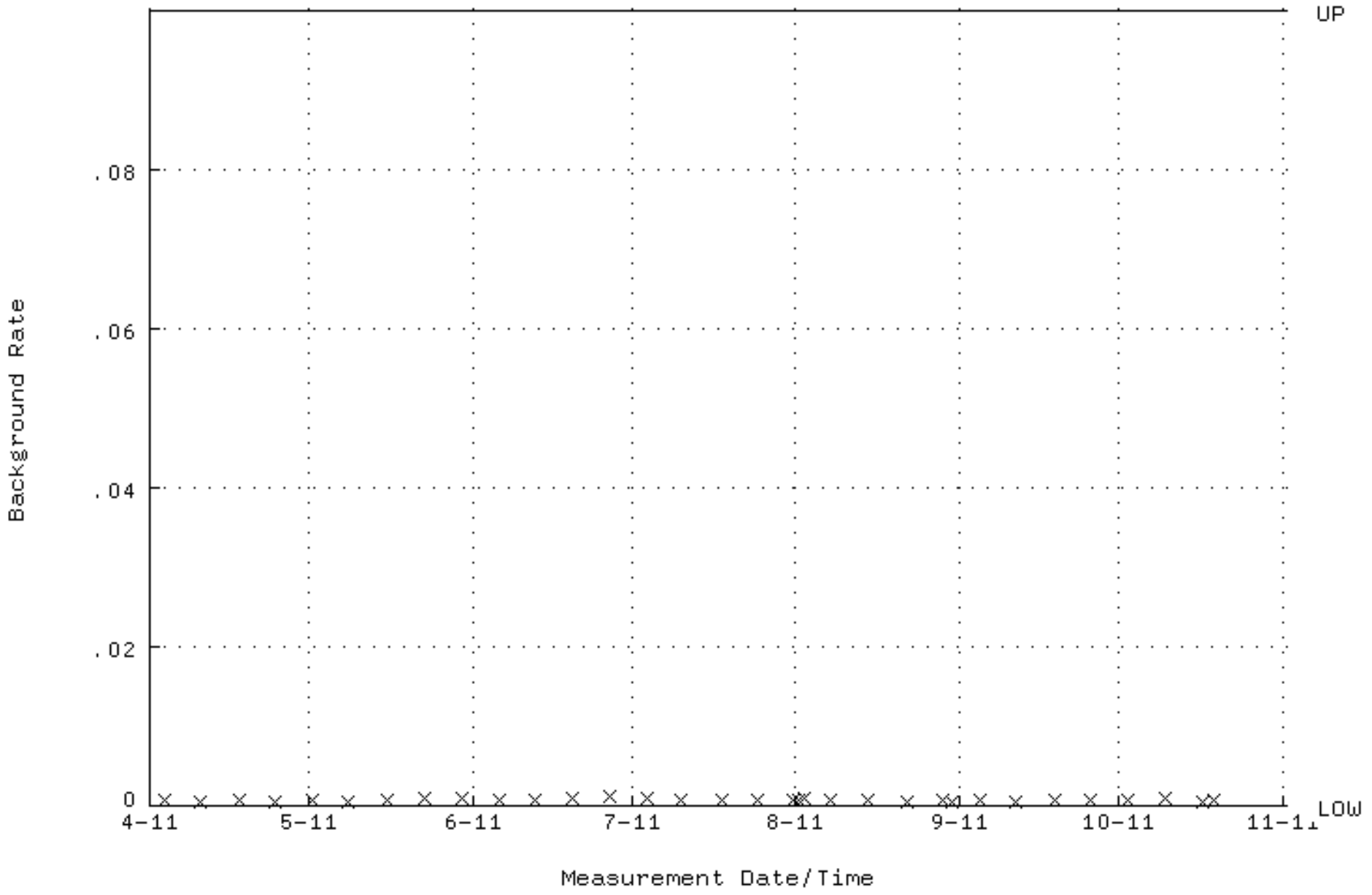
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:45:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



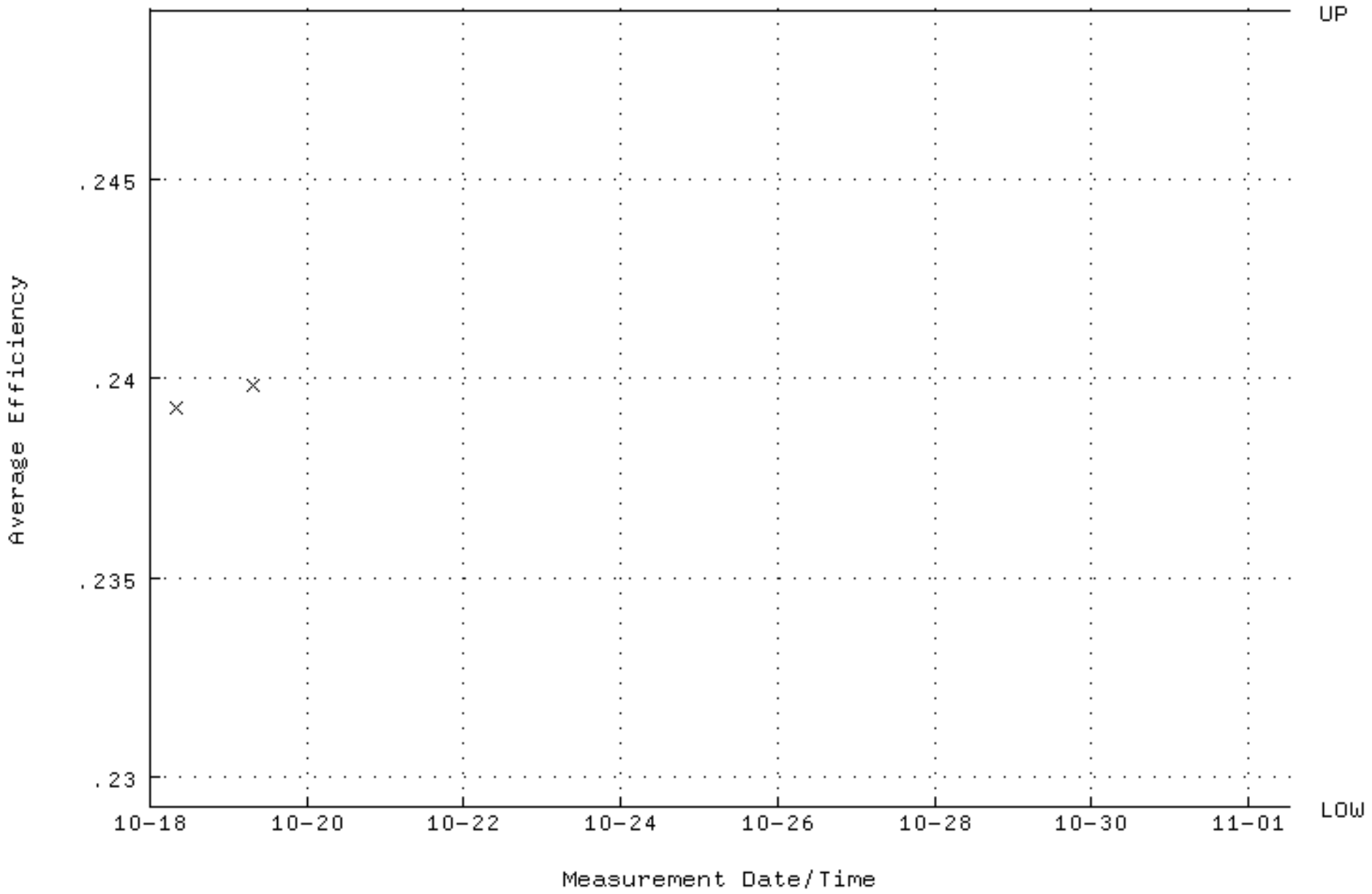
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:45:54 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



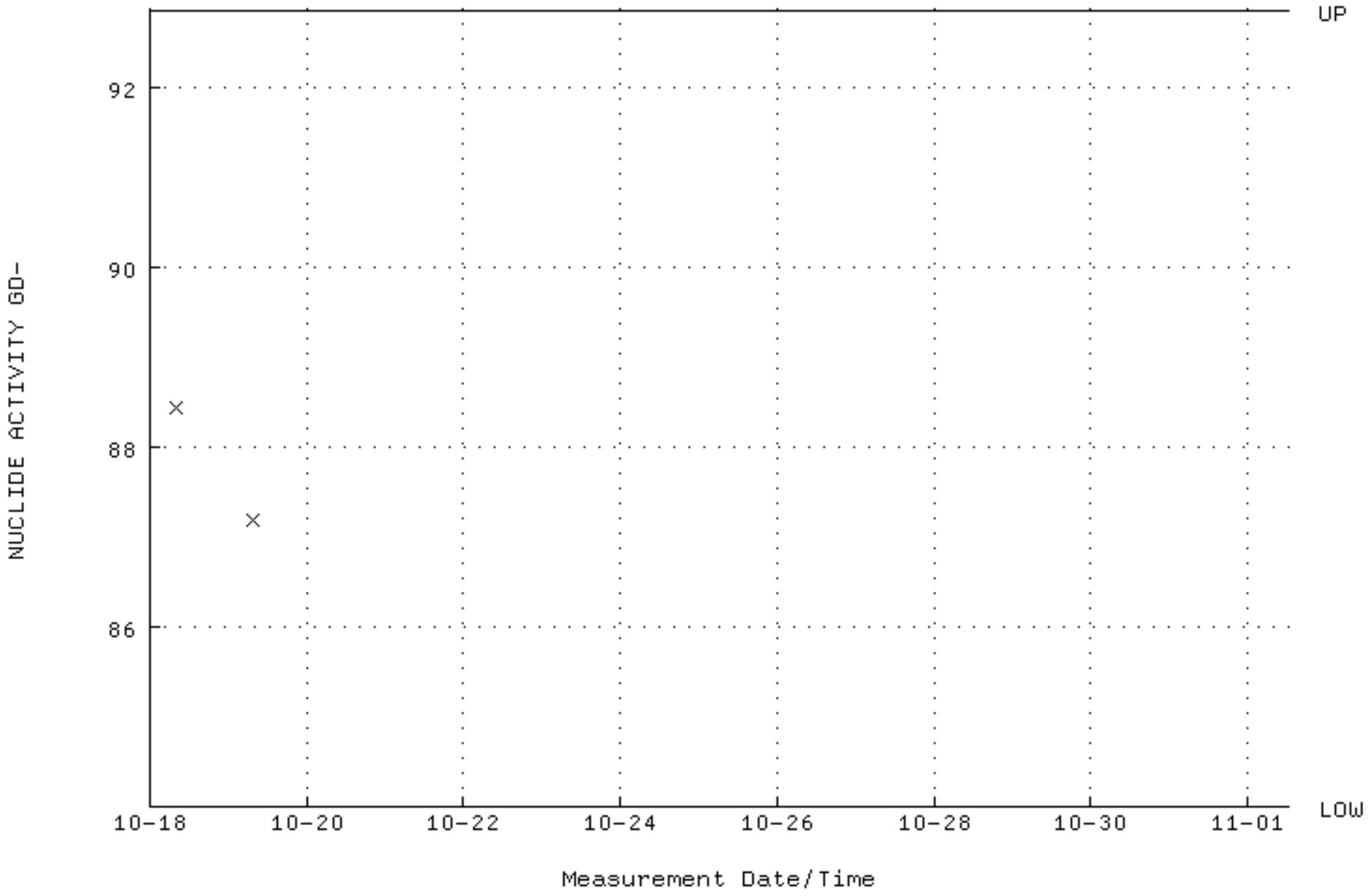
QA filename : DKA100:[ENV_ALPHA.QA.B]B132.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:41 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



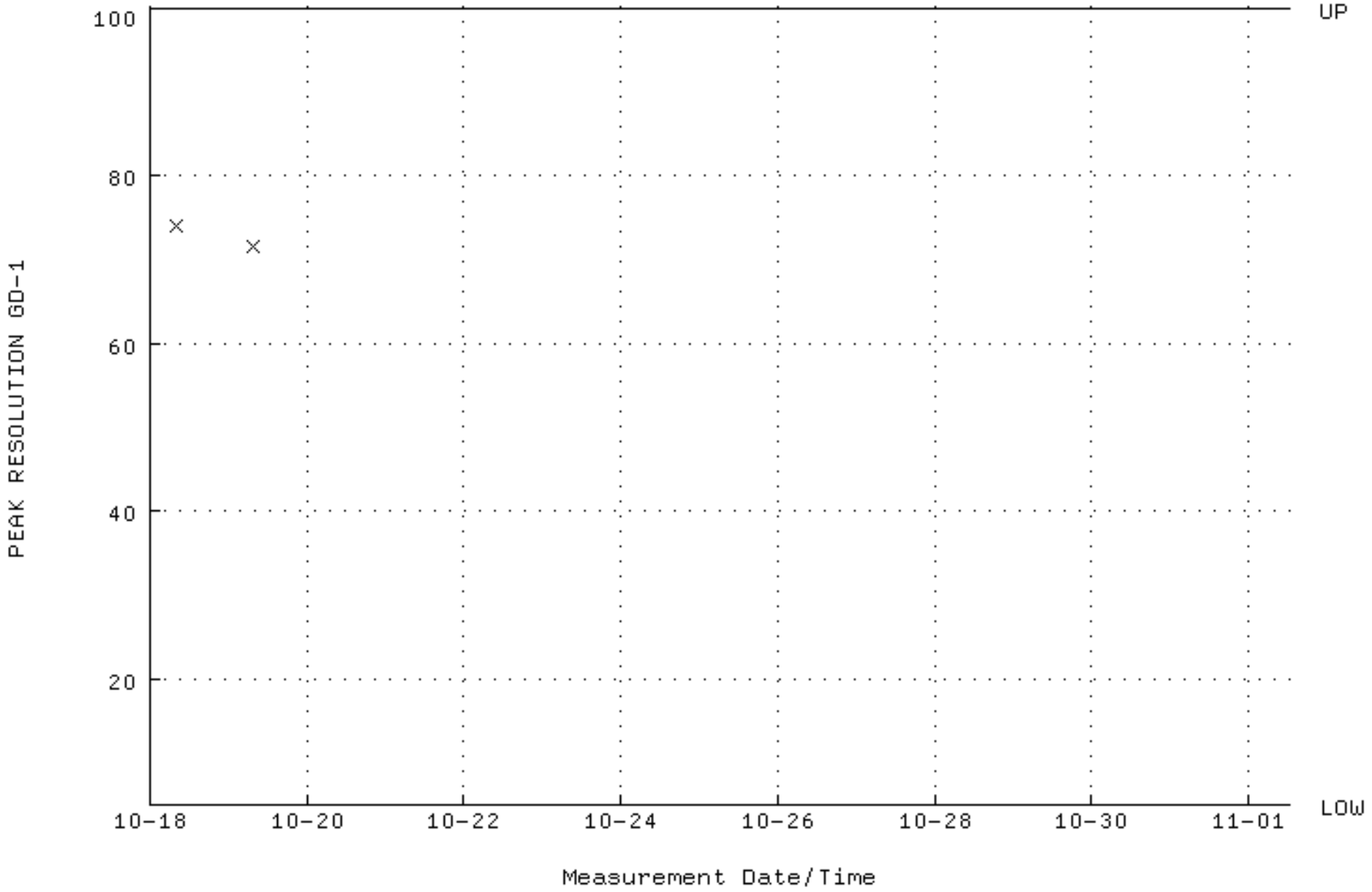
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:46:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.229237 through 0.249237



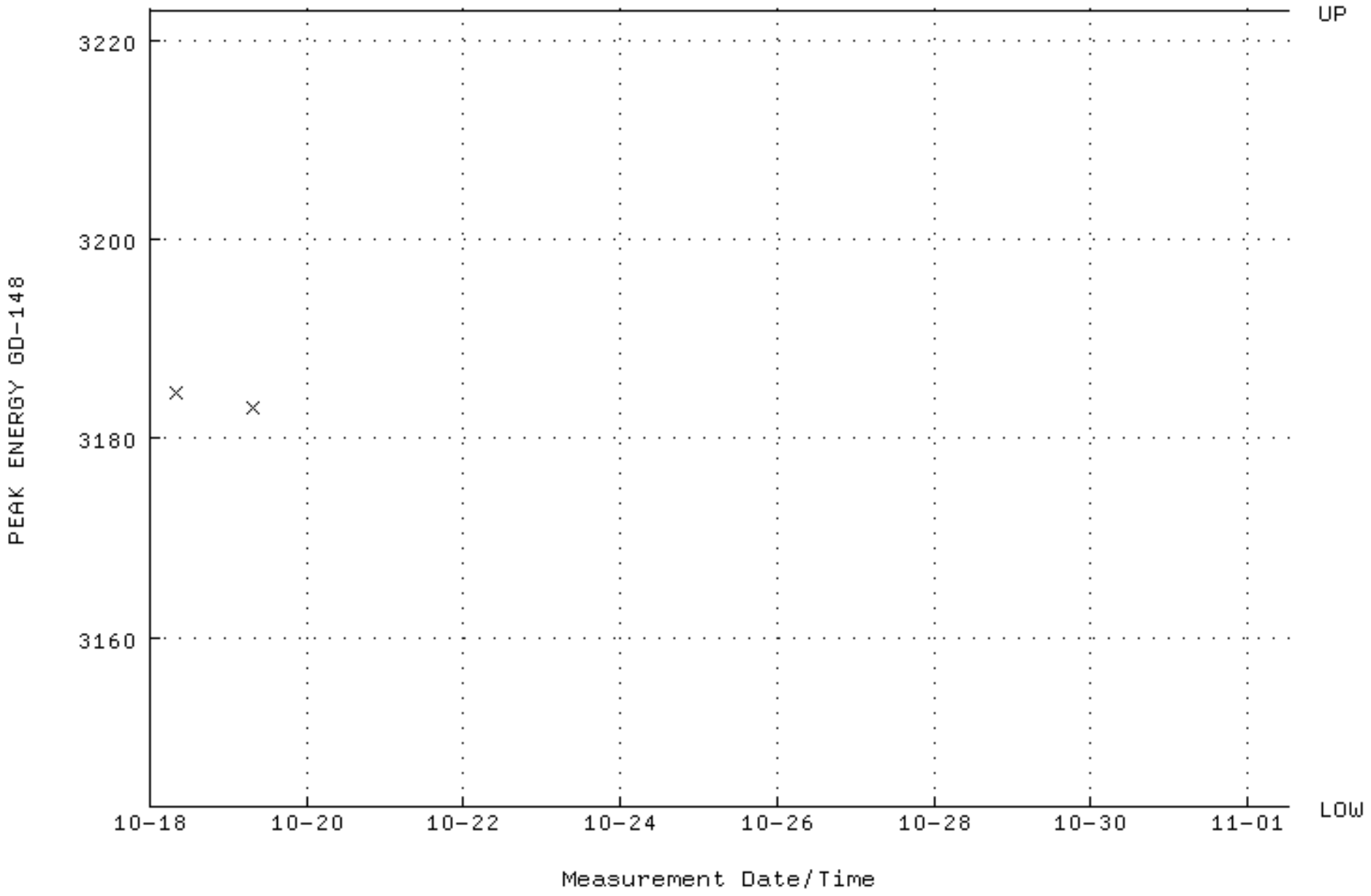
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:46:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 84.0014 through 92.8436



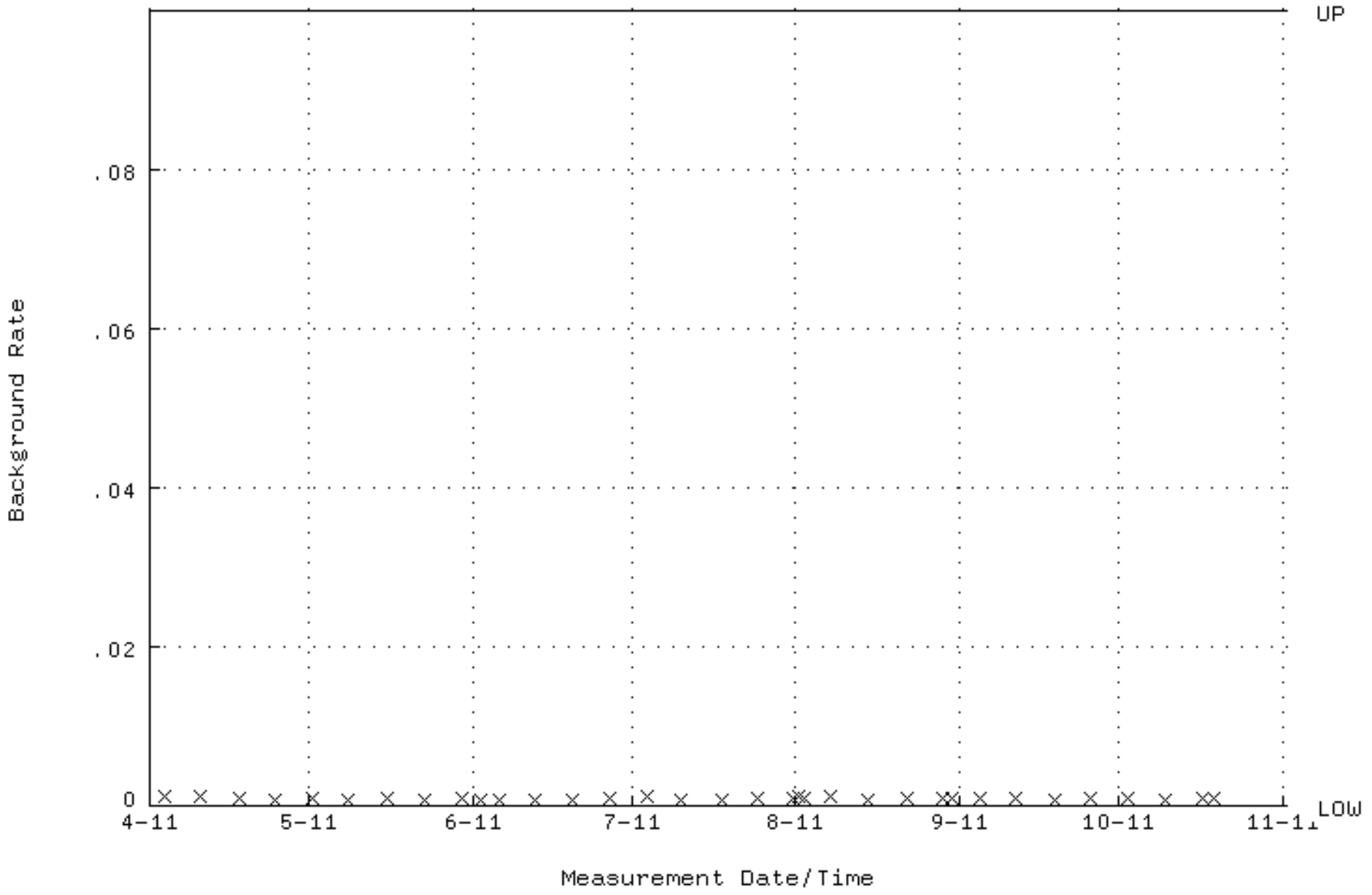
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:46:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



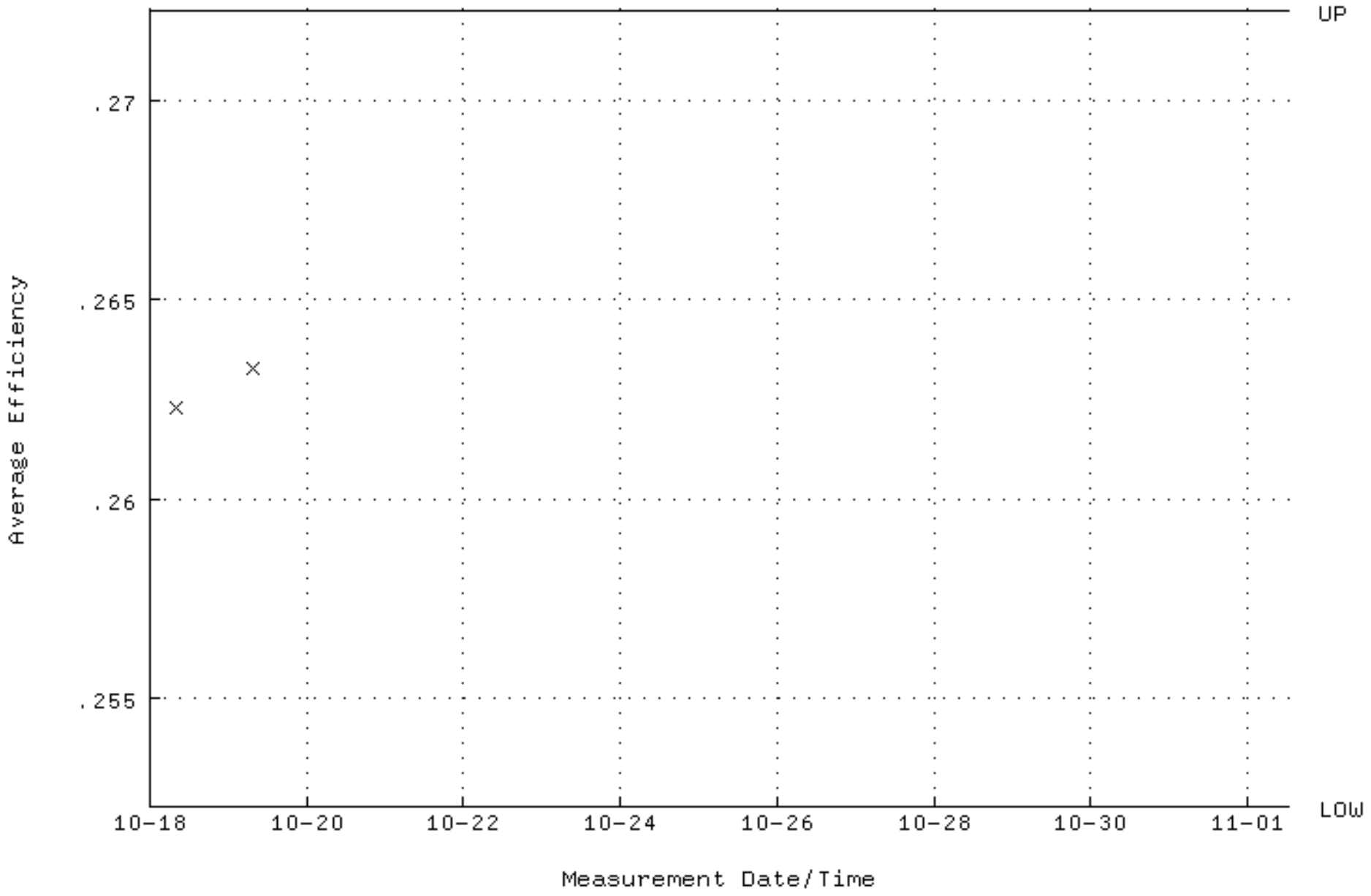
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:46:01 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



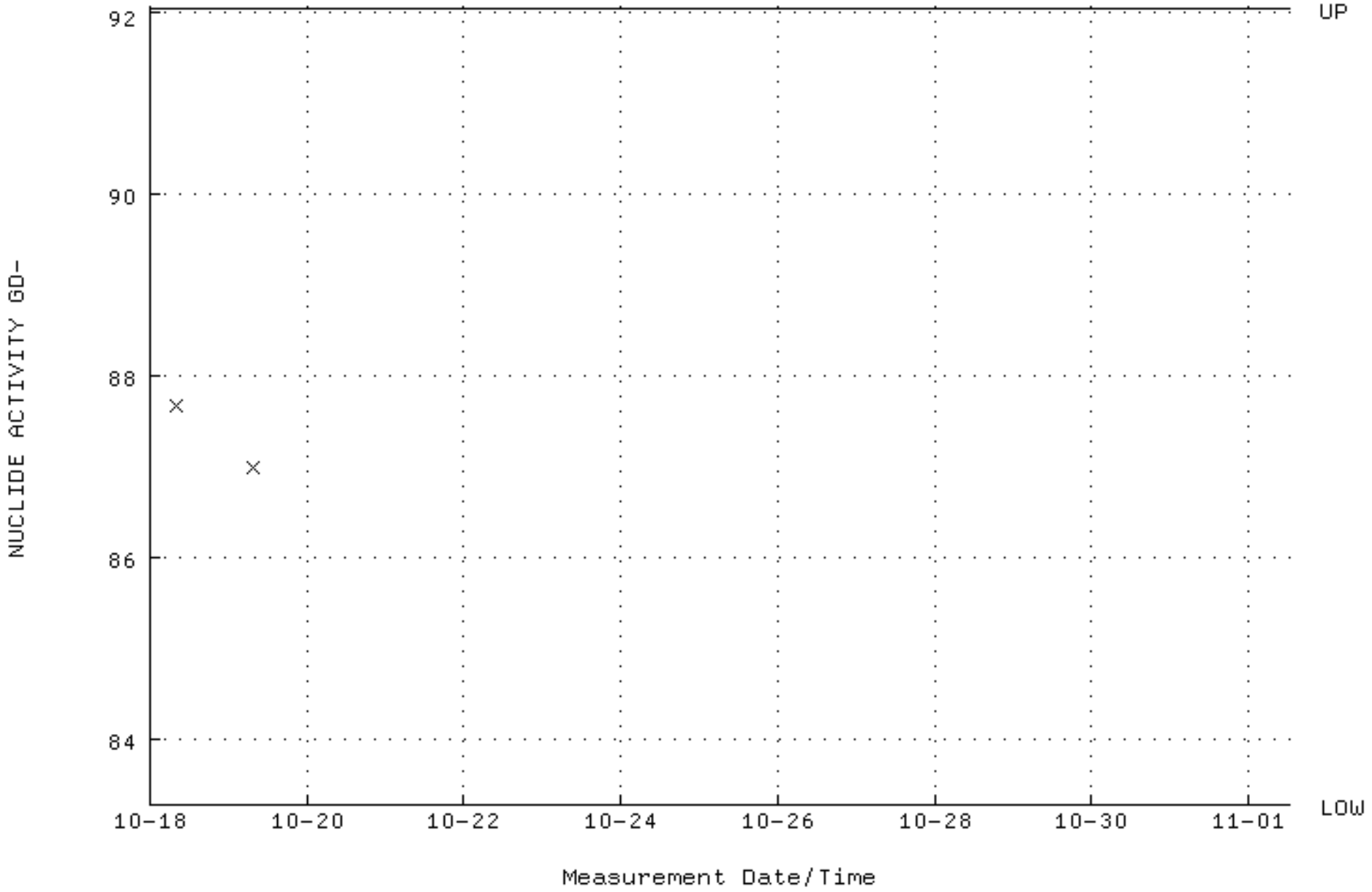
QA filename : DKA100:[ENV_ALPHA.QA.B]B134.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:51 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



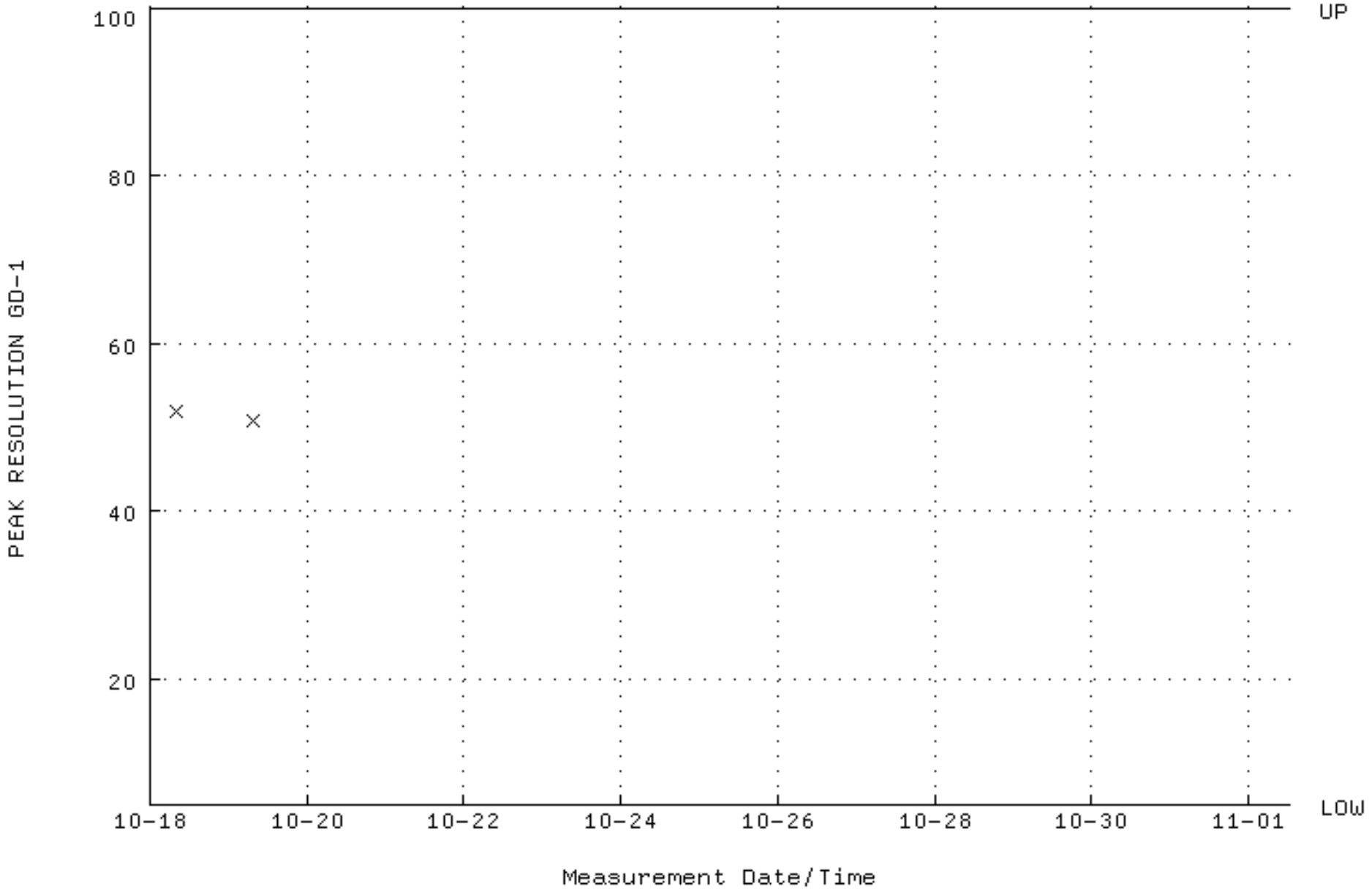
QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:46:05 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.252270 through 0.272270



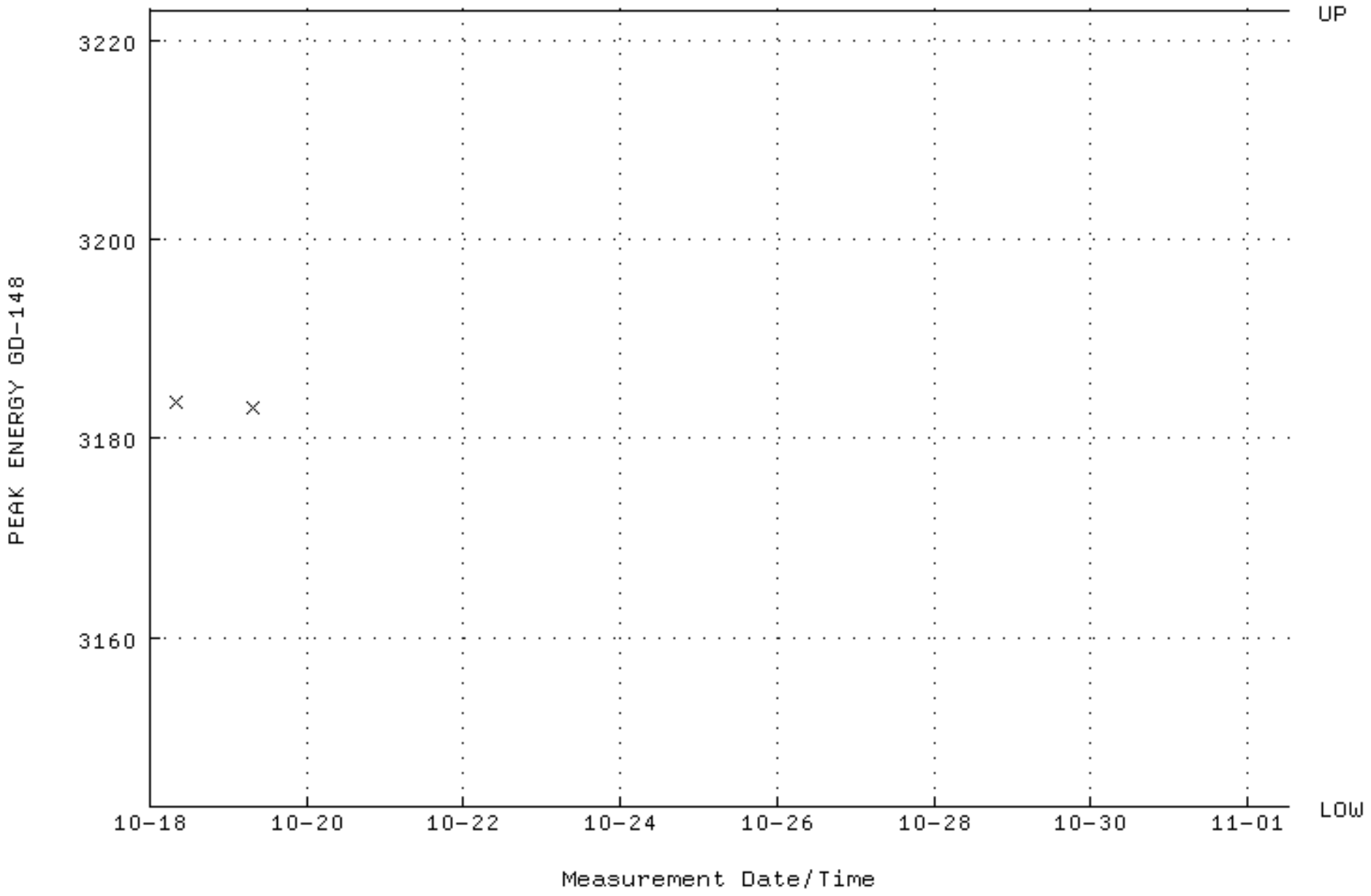
QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:46:05 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 83.2746 through 92.0404



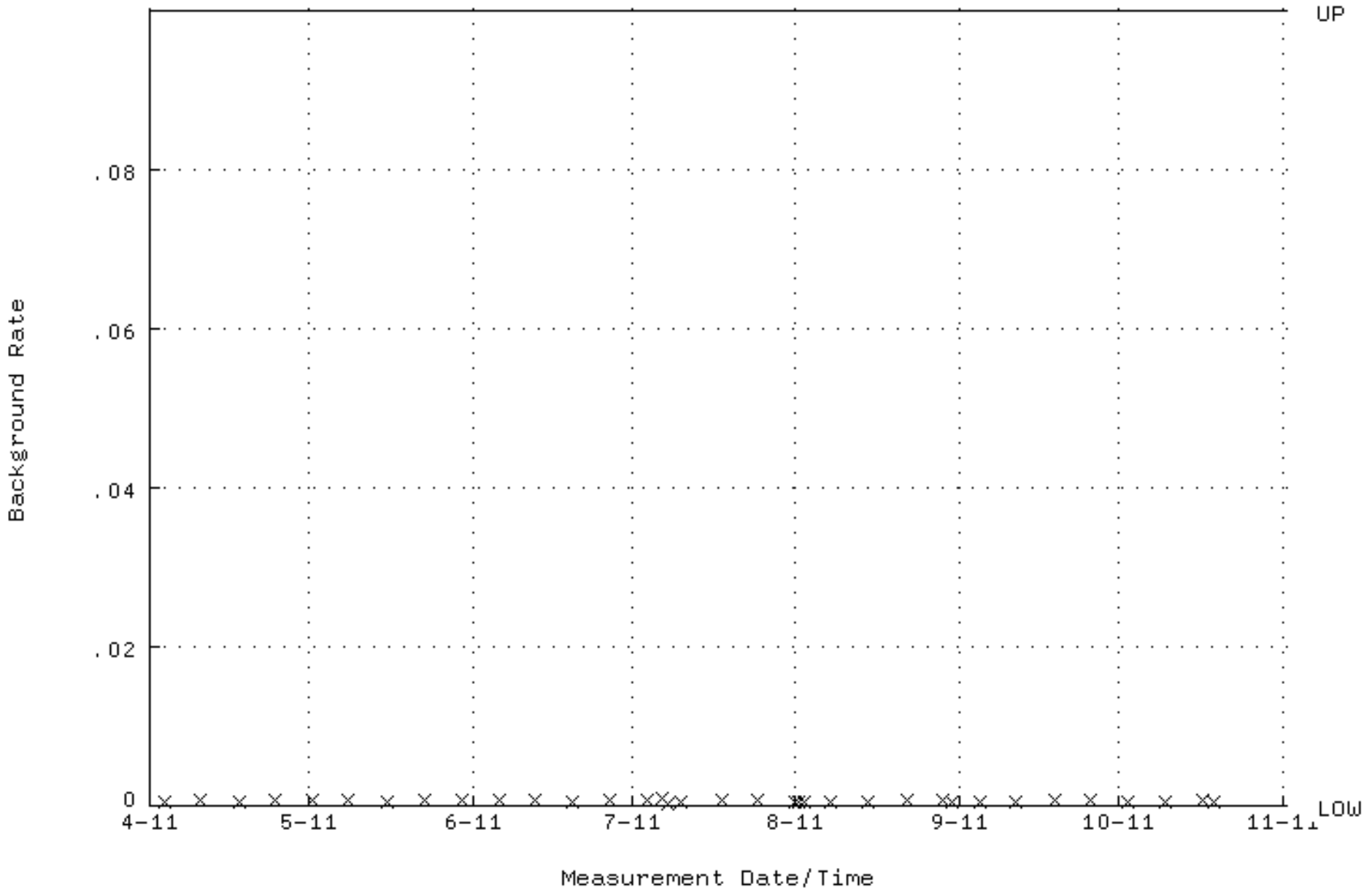
QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;5
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:46:05 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



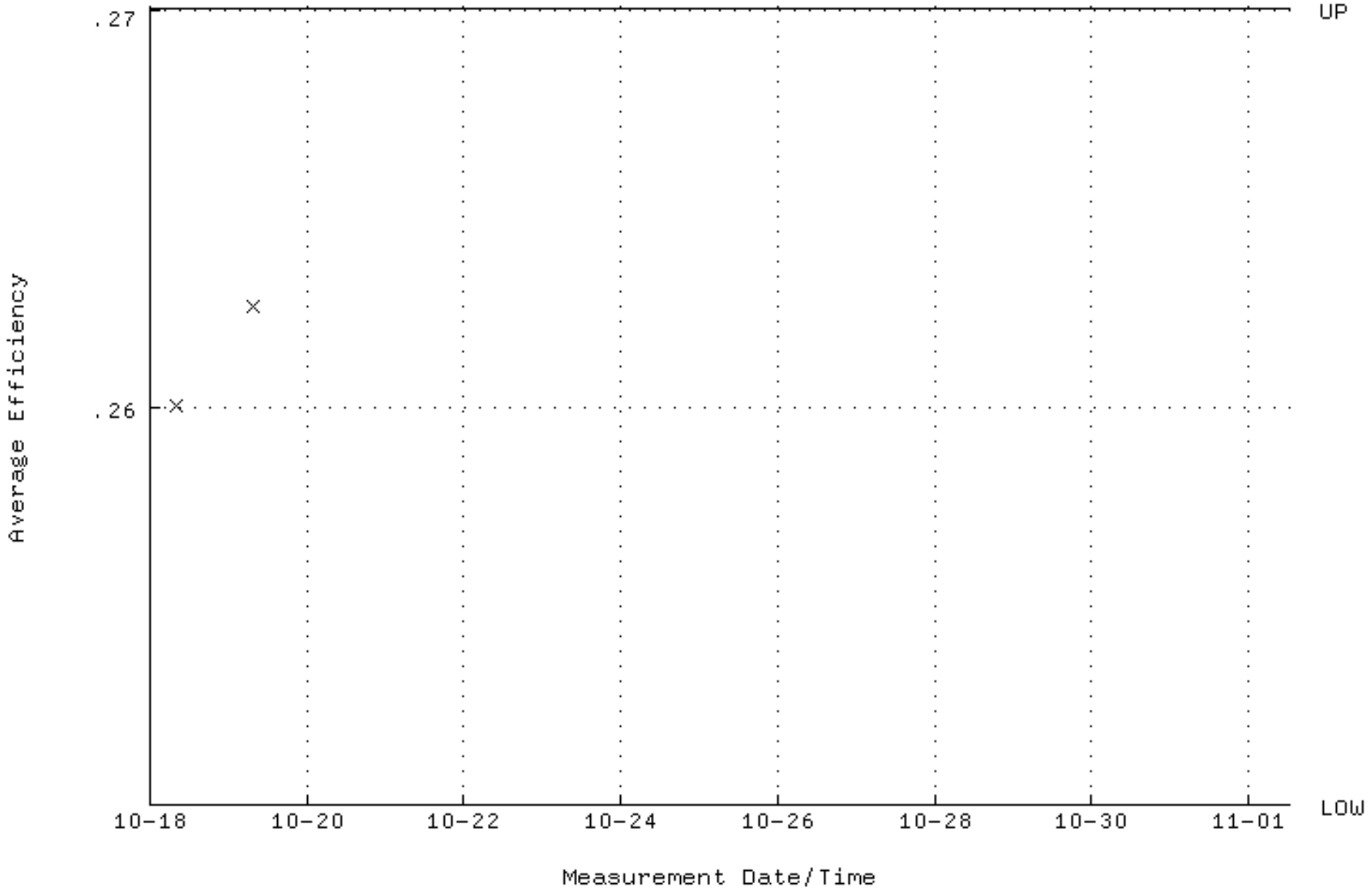
QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;5
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:46:05 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



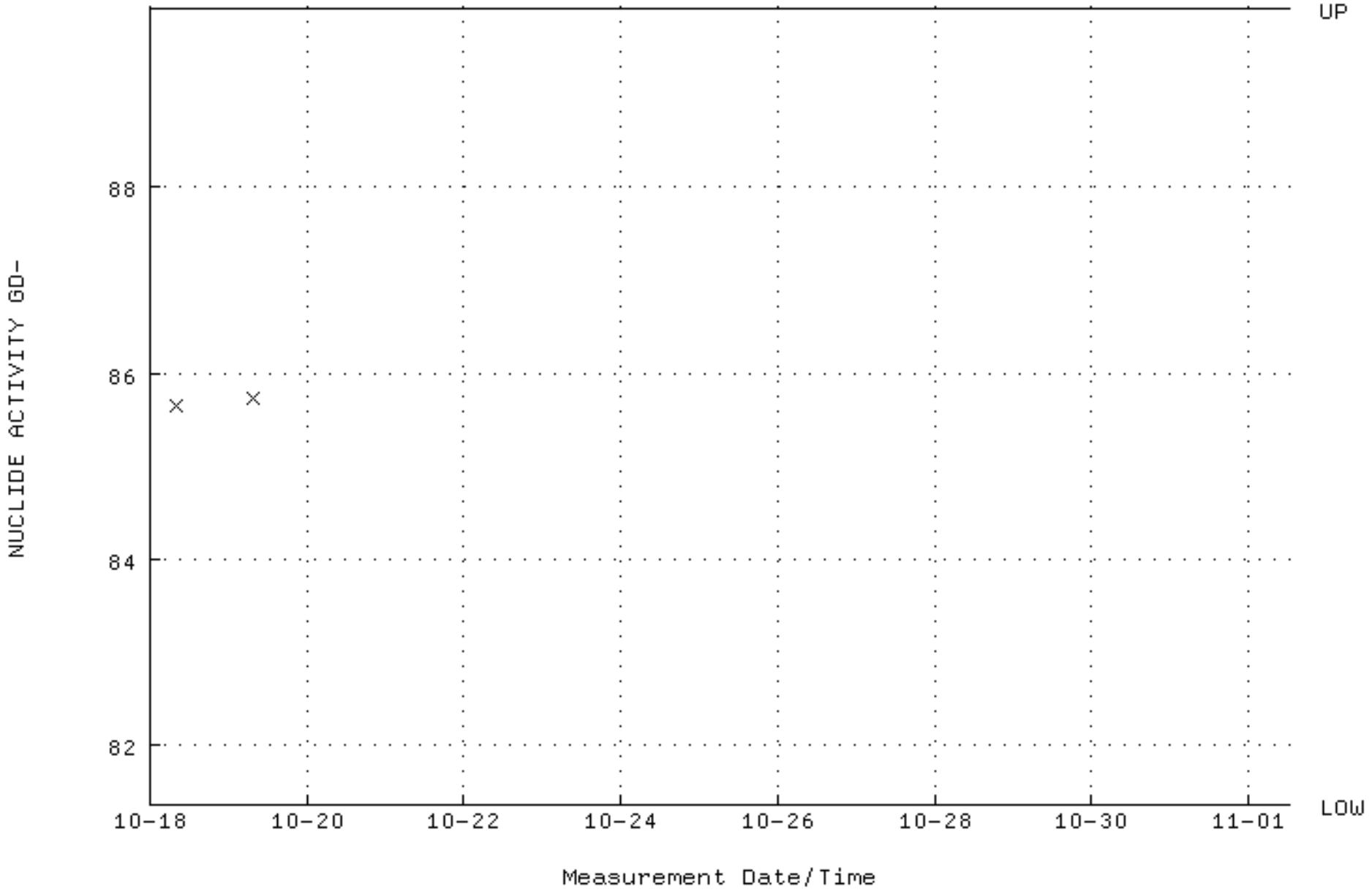
QA filename : DKA100:[ENV_ALPHA.QA.B]B135.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:55 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



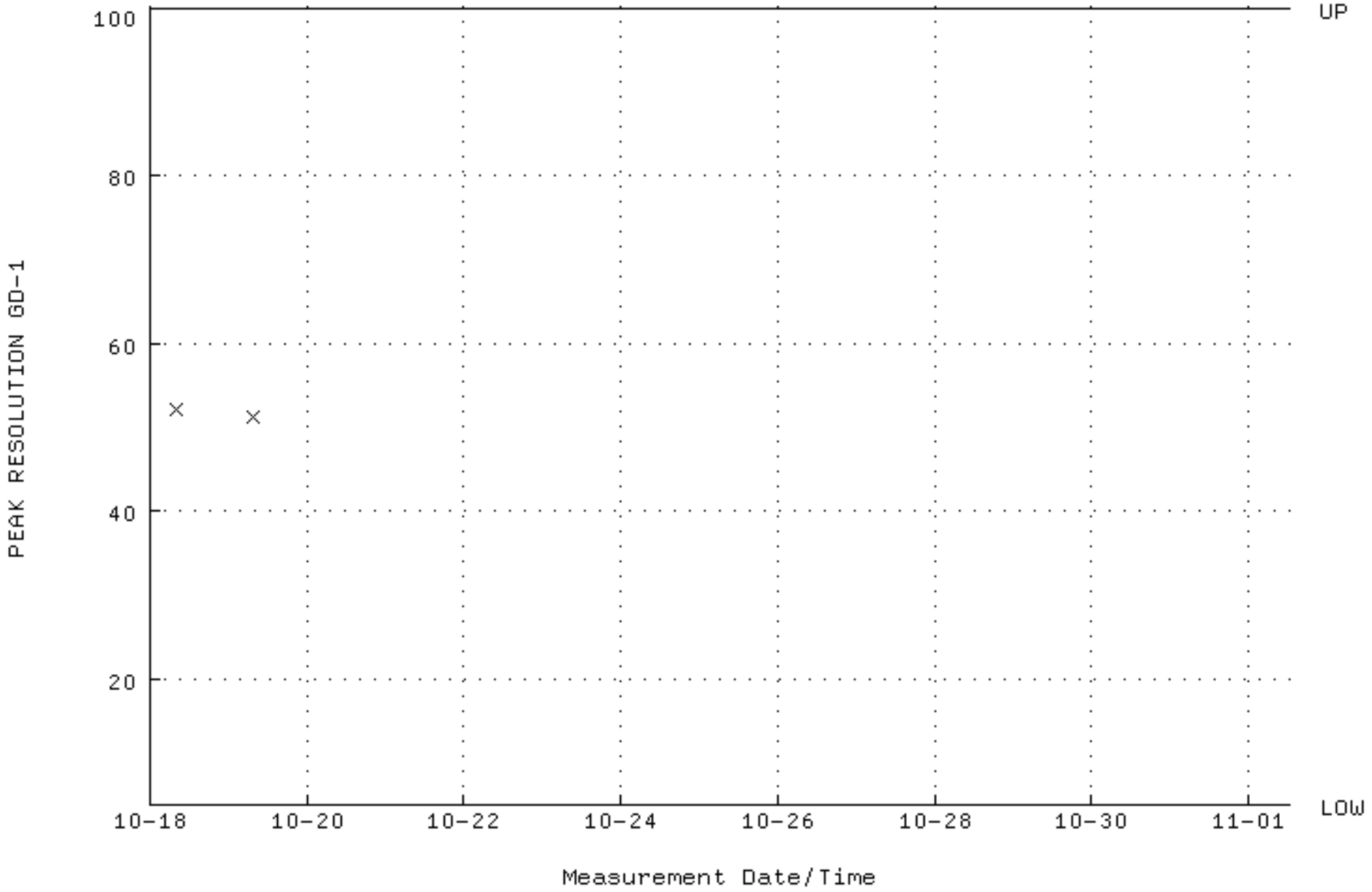
QA filename : DKA100:[ENV_ALPHA.QA.W]W136.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 18-OCT-2011 07:46:09 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.250024 through 0.270024



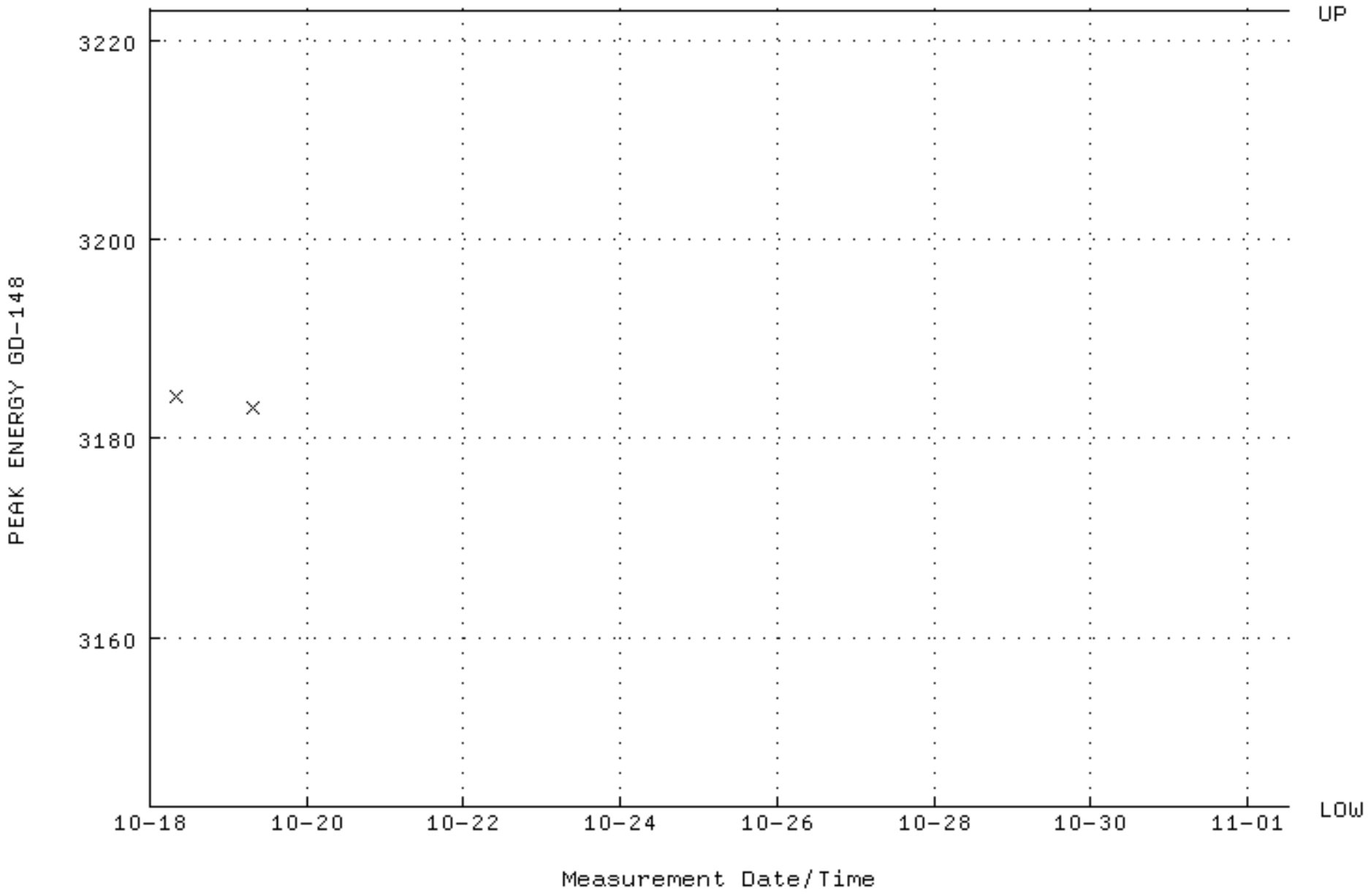
QA filename : DKA100:[ENV_ALPHA.QA.W]W136.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 18-OCT-2011 07:46:09 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 81.3588 through 89.9228



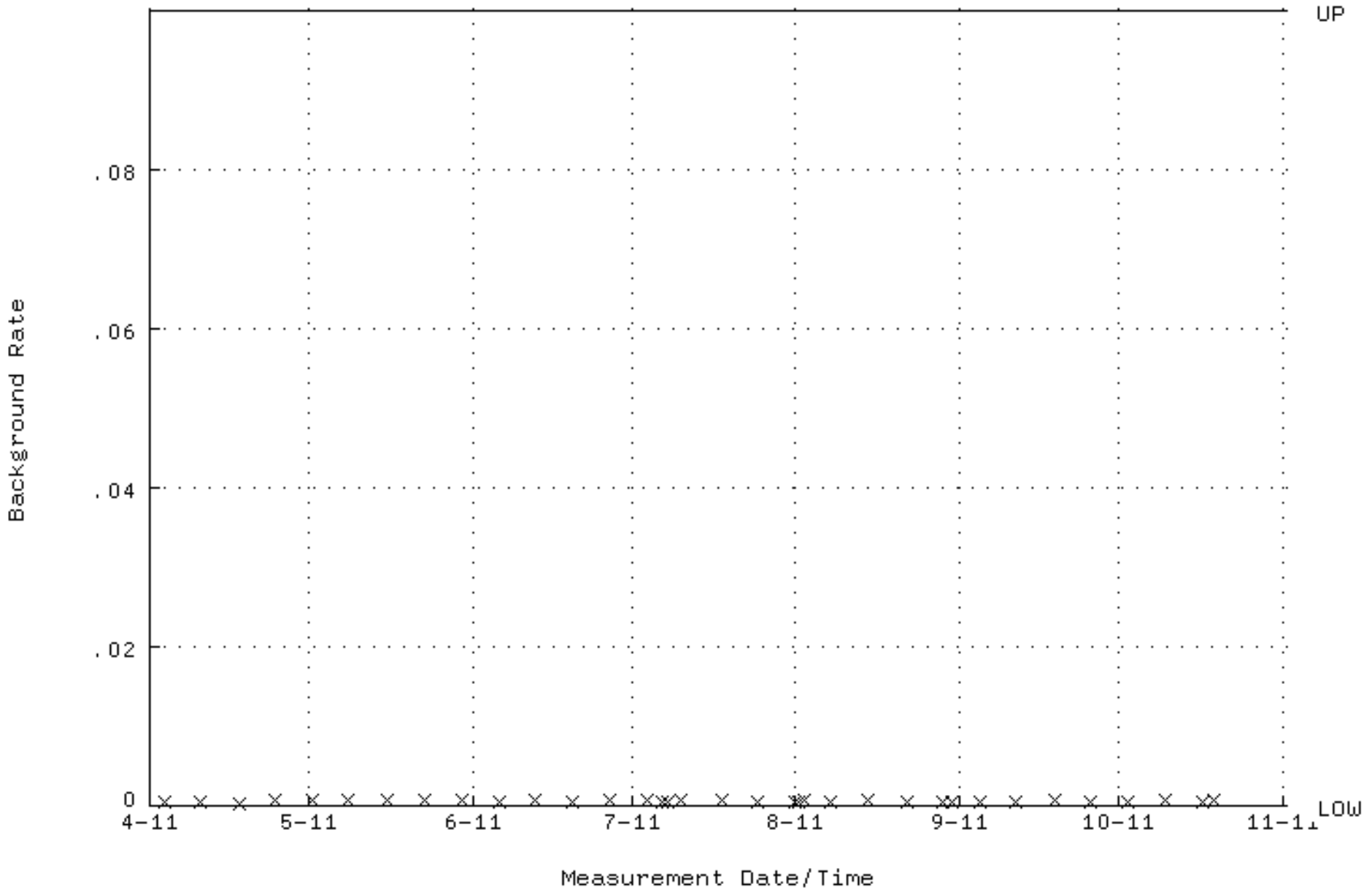
QA filename : DKA100:[ENV_ALPHA.QA.W]W136.QAF;4
Parameter Name : PSFWHM-GD148 (PEAK RESOLUTION GD-148)
Start/End Dates : 18-OCT-2011 07:46:09 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 5.00000 through 100.000



QA filename : DKA100:[ENV_ALPHA.QA.W]W136.QAF;4
Parameter Name : PSENERGY-GD148 (PEAK ENERGY GD-148)
Start/End Dates : 18-OCT-2011 07:46:09 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 3143.00 through 3223.00



QA filename : DKA100:[ENV_ALPHA.QA.B]B136.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 3-APR-2011 16:29:58 through 1-NOV-2011 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



Standards Data

Eckert & Ziegler
Isotope Products

24937 Avenue Tibbitts
Valencia, California 91355

Tel 661•309•1010
Fax 661•257•8303

1423

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide:	Po-209	**Customer:**	GENERAL ENGINEERING LABS.
Half-life:	102 ± 5 years	**P.O. No.:**	7328 RD
Catalog No.:	7209	**Reference Date:**	1-Jan-10 12:00 PST
Source No.:	1388-97	**Contained Radioactivity:**	101.6 **nCi** 3759 **Bq**

Physical Description:

A. Mass of solution:	5.16334 g in 5 mL V-Vial
B. Chemical form:	$Po(NO_3)_4$ in 1M HNO_3
C. Carrier content:	None
D. Density:	1.0318 g/mL @ 20°C

RECEIVED 11/13/09

Radioimpurities:

Co-57 = 0.00223% on 1-Jan-10

Radionuclide Concentration: 19.68 nCi/g, 728.2 Bq/g

Method of Calibration:

This source was prepared from a weighed aliquot of solution whose activity in µCi/g was determined using a liquid scintillation counter.

Uncertainty of Measurement:

A. Type A (random) uncertainty:	± 0.3 %
B. Type B (systematic) uncertainty:	± 3.0 %
C. Uncertainty in aliquot weighing:	± 0.0 %
D. Total uncertainty at the 99% confidence level:	± 3.0 %

Notes:

- See reverse side for leak test(s) performed on this source.
- EZIP participates in a NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (as in NRC Regulatory Guide 4.15).
- Nuclear data was taken from "Table of Radioactive Isotopes", edited by Virginia Shirley, 1986.
- This solution has a working life of 5 years.

Daniel James Van Dalsen
Quality Control

10-NOV-09
Date

EZIP Ref. No.: 1388-97

PC-S-051-142

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE(S) DESCRIBED ON THE FRONT SIDE. THE LEAK TEST(S) INDICATED BELOW WERE EITHER TAKEN DIRECTLY FROM ISO 9978:1992 OR DERIVED FROM THE LEAK TEST METHODS LISTED IN ISO 9978:1992 WHEN AN APPROPRIATE TEST WAS NOT SPECIFICALLY LISTED.

☒ **Standard Wipe Test**

The source was wiped over its entire surface with a moistened filter paper disk. After drying, the disk was checked for activity using a scintillation detector. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Special Wipe Test**

The source was wiped over its entire surface with moistened polystyrene. The polystyrene was then dissolved in a liquid scintillation cocktail and counted in a liquid scintillation counter. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Distilled Water Soak Test**

The source was immersed in distilled water and maintained at 50°C ± 5°C for a minimum of four hours or room temperature (20°C ± 5°C) for 24 hours. After removal of the source, the liquid was **a)** checked for activity using a liquid scintillation counter, or **b)** evaporated in a planchet and the residue checked for activity using a windowless proportional counter or end-window G.M. tube. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Liquid Scintillation Soak Test**

The source was immersed for a minimum of 3 hours at room temperature in a liquid scintillation cocktail, which does not attack the source's outer surface material. The source was stored away from light to avoid photoluminescence. The sealed source was then removed and the activity of the liquid scintillation cocktail was measured. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Gas Source Test**

The source was placed in a vacuum desiccator and maintained at a pressure of <10 mm Hg for not less than 12 hours. The activity was checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. There was <0.001 μCi beta-gamma of removable activity.

☐ **Ampoule Leak Test**

The ampoule was kept in an inverted position on a filter paper disk or polystyrene wipe for a minimum of 16 hours. The wipe was then checked for activity using a scintillation detector or liquid scintillation counter. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Bubble Leak Test**

The container was pressurized to its fill pressure; then soapy water was applied over its valve and neck or, the valve and neck of the vessel were immersed in water. If no growing bubbles were observed, the container was considered leak free.

☐ **Wipe Test for Industrial Ni-63 Sources**

The sources were wipe tested by an approved sampling plan, which called for either 100% of the batch to be individually wipe tested, or, a subset thereof. The wipe test(s) used to test for removable contamination and the results of those tests are recorded on the front of this form.

☐ **Pressure Test for Triotech Kr-85 Sources**

Prior to filling the vessel with Kr-85 gas, the vessel was evacuated to <5 mm Hg, the gas manifold system shut off and the system allowed to stand for a minimum of 30 minutes. A vacuum difference not greater than the known vacuum loss of the manifold system itself signified the vessel did not leak.

☐ **Leak Test Not Applicable**

The active area of the source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test or special wipe test depending on the nuclide. There was <0.001 μCi beta-gamma and <0.0001 μCi alpha of removable activity.

☐ **Other Leak Test**

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1423
Prepared By:	Mary Aders
Carrier Conc:	1M HNO3
Reference Date:	01/01/2010
Ampoule Mass (g):	5.16334 g
Uncertainty:	+/- 3 %
LogBook No:	RC-S-051-142

A Solution Material Info			
Isotope:	Polonium-209		
Prepared By:	Ashley Drochter		
Prep Date:	11/13/2009		
Verification Date:	10/31/2011		
Expiration Date:	10/30/2012		
Primary Code:	1423-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.9869 g		
Density(g/mL):	1.0294	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(4.9869 g) * (728.2 Bq/g) * (60 dpm/Bq) / (100 mL) = 2178.8763 dpm/mL
(4.9869 g) * (728.2 Bq/g) * (60 dpm/Bq) / (1.0294 g/mL) / (100 mL) = 2116.5523 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
11/13/2009	Ashley Drochter	4.645	200	1423-B	49.1569 dpm/mL	11/02/2010	11/02/2011
04/21/2011	Ashley Drochter	4.6828	200	1423-C	49.5569 dpm/mL	04/21/2011	04/21/2012
05/12/2011	Ashley Drochter	5.1275	200	1423-D	54.2631 dpm/mL	05/12/2011	05/12/2012
10/31/2011	Ashley Drochter	5.0634	200	1423-E	53.5847545 dpm/mL	10/31/2011	10/30/2012

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Po-209 Standard 1423-D

A. Drochter	Isotope	Value	Uncertainty
5/12/2011	1423-D	2.270	0.3220
	1423-D	2.360	0.3220
	1423-D	2.350	0.3470
Mean Value (Counting) =	2.327	96.07	**Pass**
Stdev =	0.049328829		**Rule 3 (Pass/Fail)**
Target =	2.42		
Lower Limit =	2.228009009		
Upper Limit =	2.425324324		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.098657657		
10 % of Mean =	0.232666667		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 1423-D using 0.1 mL for each source. Each standard was combined with 0.1 mL of Po-210 standard 1437-B. Each source was plated to a nickel disk by spinning for 4-6 hours in 1M HCL. Each source was counted using routine alpha spec procedures. DPM values for Po-209 were calculated by comparison to Po-210 certified values.

5/16/11

5/16/11

1437

Eckert & Ziegler
Isotope Products

24937 Avenue Tibbitts
Valencia, California 91355

Tel 661•309•1010
Fax 661•257•8303

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide:	Po-210	**Customer:**	GENERAL ENGINEERING LABS.
Half-life:	138.376 ± 0.002 days	**P.O. No.:**	7329 RD
Catalog No.:	7310	**Reference Date:**	1-Jan-10 12:00 PST
Source No.:	1415-18	**Contained Radioactivity:**	5.066 **µCi** 187.4 **kBq**

Physical Description:

A. Mass of solution:	5.16459 g in 5 mL flame-sealed ampoule
B. Chemical form:	$PoCl_4$ in 2M HCl
C. Carrier content:	None
D. Density:	1.033 g/mL @ 20°C

Radioimpurities:

None detected

Radionuclide Concentration: 0.9809 µCi/g, 36.29 kBq/g

Method of Calibration:

This source was prepared from a weighed aliquot of solution whose activity in µCi/g was determined using a liquid scintillation counter.

Uncertainty of Measurement:

A. Type A (random) uncertainty:	± 0.9 %
B. Type B (systematic) uncertainty:	± 3.0 %
C. Uncertainty in aliquot weighing:	± 0.0 %
D. Total uncertainty at the 99% confidence level:	± 3.1 %

Notes:

- See reverse side for leak test(s) performed on this source.
- EZIP participates in a NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (as in NRC Regulatory Guide 4.15).
- Nuclear data was taken from NCRP Report No. 58, 1985.
- This solution has a working life of 9 months.

Daniel James Van Dalsem
Quality Control

9-Dec-09
Date

EZIP Ref. No.: 1415-18

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1437
Prepared By:	Ashley Drochter
Carrier Conc:	2 M HCl
Reference Date:	01/01/2010
Ampoule Mass (g):	5.16459 g
Uncertainty:	+/- 3.1 %
LogBook No:	RC-S-051-155

A Solution Material Info			
Isotope:	Polonium-210		
Prepared By:	Ashley Drochter		
Prep Date:	04/29/2010		
Verification Date:	09/16/2011		
Expiration Date:	11/23/2011		
Primary Code:	1437-A		
Dilution(mL):	100 mL		
Mass of Parent(g):	4.9606 g		
Density(g/mL):	1.0388	Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(4.9606 g) * (36290 Bq/g) * (60 dpm/Bq) / (100 mL) = 108012.1044 dpm/mL
(4.9606 g) * (36290 Bq/g) * (60 dpm/Bq) / (1.0388 g/mL) / (100 mL) = 103977.7674 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
04/29/2010	Ashley Drochter	.5087	100	1437-B	528.9349 dpm/mL	04/12/2011	11/23/2011

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Po-210 Standard 1437-B

A. Drochter	**Isotope**	**Value**	**Uncertainty**
4/12/2011	1437-B #1	2.250	0.3170
	1437-B #2	2.440	0.3430
	1437-B #3	2.390	0.3510
Mean Value (Counting) =	2.360	102.75	**Pass**
Stdev =	0.098488578		**Rule 3 (Pass/Fail)**
Target =	2.30		
Lower Limit =	2.163022844		
Upper Limit =	2.556977156		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.196977156		
10 % of Mean =	0.236		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1437-B using 0.1 mL for each source. Each standard was combined with 0.1 mL of Po-209 standard 1423-B. Each source was plated to a nickel disk by spinning for 4-6 hours in 2 M HCL. Each source was counted using routine alpha spec procedures. DPM values for Po-210 were calculated by comparison to Po-209 certified values.

Runlogs

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1151771**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297001	SAMPLE	MXS2	1033	OCT-28-11 15:04:55	DONE		06-OCT-11 07:29
288297002	SAMPLE	MXS2	1036	OCT-28-11 15:04:55	DONE		06-OCT-11 07:30
288297003	SAMPLE	MXS2	1072	OCT-28-11 15:04:57	DONE		12-OCT-11 07:14
288297004	SAMPLE	MXS2	1073	OCT-28-11 15:04:57	DUSE		12-OCT-11 07:14
288297005	SAMPLE	MXS2	1074	OCT-28-11 15:04:57	DONE		12-OCT-11 07:14
288297006	SAMPLE	MXS2	1075	OCT-28-11 15:04:57	DONE		12-OCT-11 07:15
288297007	SAMPLE	MXS2	1076	OCT-28-11 15:04:57	DUSE		12-OCT-11 16:33
288297008	SAMPLE	MXS2	1089	OCT-28-11 15:04:59	DONE		12-OCT-11 07:21
288297009	SAMPLE	MXS2	1090	OCT-28-11 15:04:59	DONE		12-OCT-11 07:21
288297010	SAMPLE	MXS2	1091	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:22
288297011	SAMPLE	MXS2	1092	OCT-28-11 15:04:59	DONE		12-OCT-11 07:22
288297012	SAMPLE	MXS2	1093	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:22
288297013	SAMPLE	MXS2	1094	OCT-28-11 15:04:59	DUSE		12-OCT-11 07:23
288297014	SAMPLE	MXS2	1113	OCT-28-11 15:05:17	DUSE		19-OCT-11 14:52
288297015	SAMPLE	MXS2	1114	OCT-28-11 15:05:18	DONE		19-OCT-11 14:53
288297016	SAMPLE	MXS2	1115	OCT-28-11 15:05:21	DUSE		19-OCT-11 14:53
288297017	SAMPLE	MXS2	1116	OCT-28-11 15:05:22	DONE		19-OCT-11 14:54
288297018	SAMPLE	MXS2	1117	OCT-28-11 15:05:25	DONE		19-OCT-11 14:55
288297019	SAMPLE	MXS2	1118	OCT-28-11 15:05:26	DONE		19-OCT-11 14:55
288297020	SAMPLE	MXS2	1119	OCT-28-11 15:05:28	DONE		19-OCT-11 14:55
1202512206	MB	MXS2	1120	OCT-28-11 15:05:30	DONE		19-OCT-11 14:56
1202512208	MS	MXS2	1122	OCT-28-11 15:05:34	DONE		19-OCT-11 14:56
1202512209	LCS	MXS2	1127	OCT-28-11 15:05:36	DONE		19-OCT-11 14:58
288297004	SAMPLE	MXS2	1038	OCT-31-11 22:24:25	DONE		06-OCT-11 07:31
288297007	SAMPLE	MXS2	1039	OCT-31-11 22:24:25	DUSE		06-OCT-11 07:47
288297010	SAMPLE	MXS2	1040	OCT-31-11 22:24:25	DONE		06-OCT-11 07:32
288297012	SAMPLE	MXS2	1042	OCT-31-11 22:24:25	DONE		06-OCT-11 07:33
288297013	SAMPLE	MXS2	1108	NOV-01-11 08:37:51	DONE		12-OCT-11 07:27
288297014	SAMPLE	MXS2	1109	NOV-01-11 08:37:51	DONE		12-OCT-11 07:28
1202512207	DUP	MXS2	1110	NOV-01-11 08:37:51	DONE		12-OCT-11 07:28
288297016	SAMPLE	MXS2	1033	NOV-01-11 19:27:15	DONE		06-OCT-11 07:29
288297007	SAMPLE	MXS2	1036	NOV-01-11 19:27:15	DONE		06-OCT-11 07:30

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 1151775**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297024	SAMPLE	LYS1	1114	OCT-28-11 09:00:09	DONE		19-OCT-11 14:53
288297025	SAMPLE	LYS1	1115	OCT-28-11 09:00:12	DONE		19-OCT-11 14:53
288297026	SAMPLE	LYS1	1116	OCT-28-11 09:00:14	DONE		19-OCT-11 14:54
288297027	SAMPLE	LYS1	1117	OCT-28-11 09:00:16	DONE		19-OCT-11 14:55
288297029	SAMPLE	LYS1	1119	OCT-28-11 09:00:20	DONE		19-OCT-11 14:55
288297030	SAMPLE	LYS1	1120	OCT-28-11 09:00:22	DONE		19-OCT-11 14:56
288297031	SAMPLE	LYS1	1127	OCT-28-11 09:00:25	DONE		19-OCT-11 14:58
288297032	SAMPLE	LYS1	1128	OCT-28-11 09:00:27	DONE		19-OCT-11 14:58
288297033	SAMPLE	LYS1	1129	OCT-28-11 09:00:29	DONE		19-OCT-11 14:59
288297034	SAMPLE	LYS1	1130	OCT-28-11 09:00:31	DONE		19-OCT-11 14:59
288297021	SAMPLE	LYS1	1021	OCT-28-11 09:00:46	DONE		06-OCT-11 07:24
288297022	SAMPLE	LYS1	1022	OCT-28-11 09:00:46	DUSE		06-OCT-11 07:24
288297023	SAMPLE	LYS1	1024	OCT-28-11 09:00:46	DONE		06-OCT-11 07:26
288297028	SAMPLE	LYS1	1118	OCT-28-11 09:13:00	DONE		19-OCT-11 14:55
288297035	SAMPLE	LYS1	1026	OCT-28-11 15:04:54	DONE		06-OCT-11 07:26
288297036	SAMPLE	LYS1	1027	OCT-28-11 15:04:54	DONE		06-OCT-11 07:27
288297037	SAMPLE	LYS1	1028	OCT-28-11 15:04:54	DONE		06-OCT-11 07:27
288297038	SAMPLE	LYS1	1029	OCT-28-11 15:04:54	DONE		06-OCT-11 15:31
288297039	SAMPLE	LYS1	1030	OCT-28-11 15:04:54	DONE		06-OCT-11 07:28
288297040	SAMPLE	LYS1	1037	OCT-28-11 15:04:56	DONE		06-OCT-11 07:31
1202512210	MB	LYS1	1038	OCT-28-11 15:04:56	DONE		06-OCT-11 07:31
1202512212	MS	LYS1	1040	OCT-28-11 15:04:56	DONE		06-OCT-11 07:32
1202512213	LCS	LYS1	1042	OCT-28-11 15:04:56	DONE		06-OCT-11 07:33
288297022	SAMPLE	LYS1	1037	OCT-31-11 22:24:25	DONE		06-OCT-11 07:31
1202512211	DUP	LYS1	1029	NOV-01-11 14:37:19	DONE		06-OCT-11 15:31

Instrument Run Log

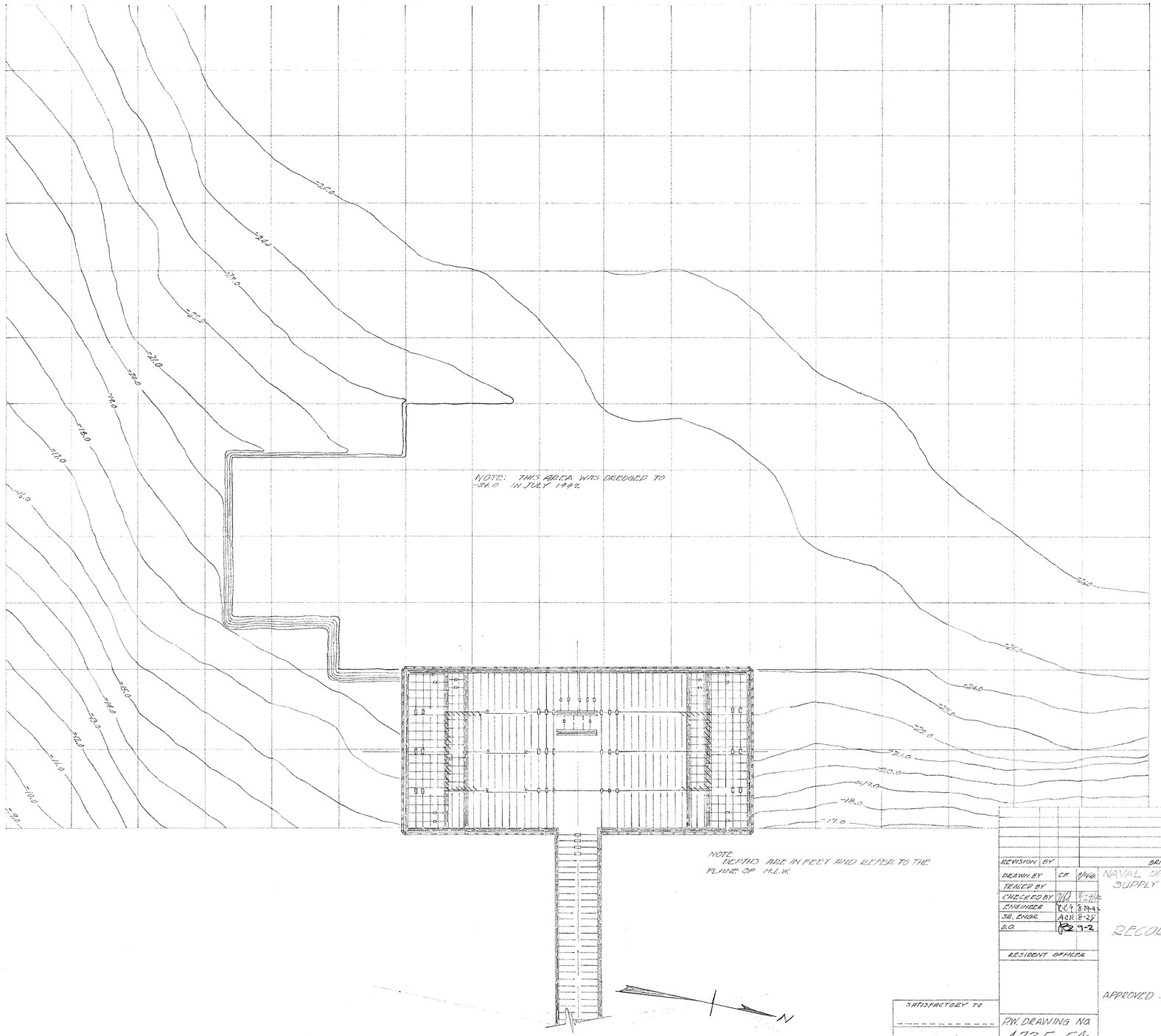
Instrument Type: ALPHA SPECTROMETER **Batch ID: 1156276**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
288297041	SAMPLE	HAKB	1123	NOV-03-11 08:10:51	DONE		19-OCT-11 14:58
288297042	SAMPLE	HAKB	1124	NOV-03-11 08:10:52	DONE		19-OCT-11 14:58
288297043	SAMPLE	HAKB	1125	NOV-03-11 08:10:54	DONE		19-OCT-11 14:58
288297044	SAMPLE	HAKB	1126	NOV-03-11 08:10:57	DONE		19-OCT-11 14:58
288297045	SAMPLE	HAKB	1127	NOV-03-11 08:10:58	DONE		19-OCT-11 14:58
288297046	SAMPLE	HAKB	1128	NOV-03-11 08:11:01	DONE		19-OCT-11 14:58
288297047	SAMPLE	HAKB	1129	NOV-03-11 08:11:02	DUSE		19-OCT-11 14:59
288297048	SAMPLE	HAKB	1130	NOV-03-11 08:11:05	DONE		19-OCT-11 14:59
288297049	SAMPLE	HAKB	1131	NOV-03-11 08:11:07	DONE		19-OCT-11 15:00
288297050	SAMPLE	HAKB	1132	NOV-03-11 08:11:09	DONE		19-OCT-11 15:00
1202523258	MB	HAKB	1133	NOV-03-11 08:11:11	DUSE		19-OCT-11 15:01
1202523259	DUP	HAKB	1134	NOV-03-11 08:11:13	DONE		19-OCT-11 15:01
1202523260	MS	HAKB	1135	NOV-03-11 08:11:15	DONE		19-OCT-11 15:01
1202523261	LCS	HAKB	1136	NOV-03-11 08:11:17	DONE		19-OCT-11 15:02
288297047	SAMPLE	HAKB	1127	NOV-03-11 13:33:02	DUSE		19-OCT-11 14:58
1202523258	MB	HAKB	1128	NOV-03-11 13:33:04	DONE		19-OCT-11 14:58
288297047	SAMPLE	HAKB	1135	NOV-04-11 10:59:49	DONE		19-OCT-11 15:01

APPENDIX C

BATHYMETRIC AND GEOPHYSICAL INFORMATION

C1 BATHYMETRY MAPS AND HISTORICAL DRAWINGS



REVISION	BY	BRIEF DESCRIPTION	APPROVED	BY
DRAWN BY	CB	8/46		
TRACED BY				
CHECKED BY	JHO	8-24-46		
ENGINEER	TCG	8-19-46		
SR. ENGR.	ACR	8-27		
P.O.	RS	9-2		
RESIDENT OFFICER				

SATISFACTORY TO

SCALE 1" = 40'-0"

P.W. DRAWING NO. 4735-54

NAVAL OPERATING BASE NEWPORT, R.I.
SUPPLY DEPOT CODDINGTON COVE

PIER
RECORD OF DREDGING

APPROVED SEPT. 9, 1946

J. Callahan
PUBLIC WORKS OFFICER

Depths are for mean M.L.W.

N22000 N21000 N20000

A Q U I D N E C K I S L A N D

N

RAPOSO (U.S.C.&G.S. 1934)

Sta.12

Sta.13

EAST LIMIT OF DREDGING

STILL BASIN

EAST LIMIT OF DREDGING

SOUTH LIMIT OF DREDGING

E13000

E14000

E15000

NOTES:

Soundings are in feet and tenths and are referred to the plane of Mean Low Water.

Hydrography from surveys of Sept. 15 to Oct. 6, 1942 by A.L. Reed.

Topography from previous surveys

B.M.A (1934) is a standard disk, stamped "No. 4 1934," set in a drill hole in the concrete walk, east of the road and perpendicular to the main dock of the Naval Training Station. It is located about 1 foot west of the east face of the bulkhead and 1 foot north of the northeast corner of a small red brick building that houses the motors for the marine railway. Elevation above M.L.W. 7.23 feet.

Origin of coordinates is U.S.C.&G.S. △ Dumplin No. 2 (1869). True meridian through ⊙ 7 (U.S.E.D.).

23-foot contour shown thus: ———————

Outer limit of dredging shown thus: .....

Field books: 2956, 3069, 3077, 3078, 3246, 3273, 3276, 3284, 3285, 3286, 3289, 3294, 4026.

Flood

Ebb

DRAWN BY: A.E.E.
TRACED BY: A.E.E
CHECKED BY: J.H.F.
IN CHARGE:

SURVEY MADE AND MAP PREPARED BY U.S. ENGINEER OFFICE, PROVIDENCE, R.I. U.S.E.D. FILE NO. Nor.B.194 DATED OCT. 9, 1942

F.W. DRAWING NO. 5936-66

U.S. NAVAL OPERATING BASE, NEWPORT, R.I.
NAVAL SUPPLY STATION CODDINGTON COVE, R.I.

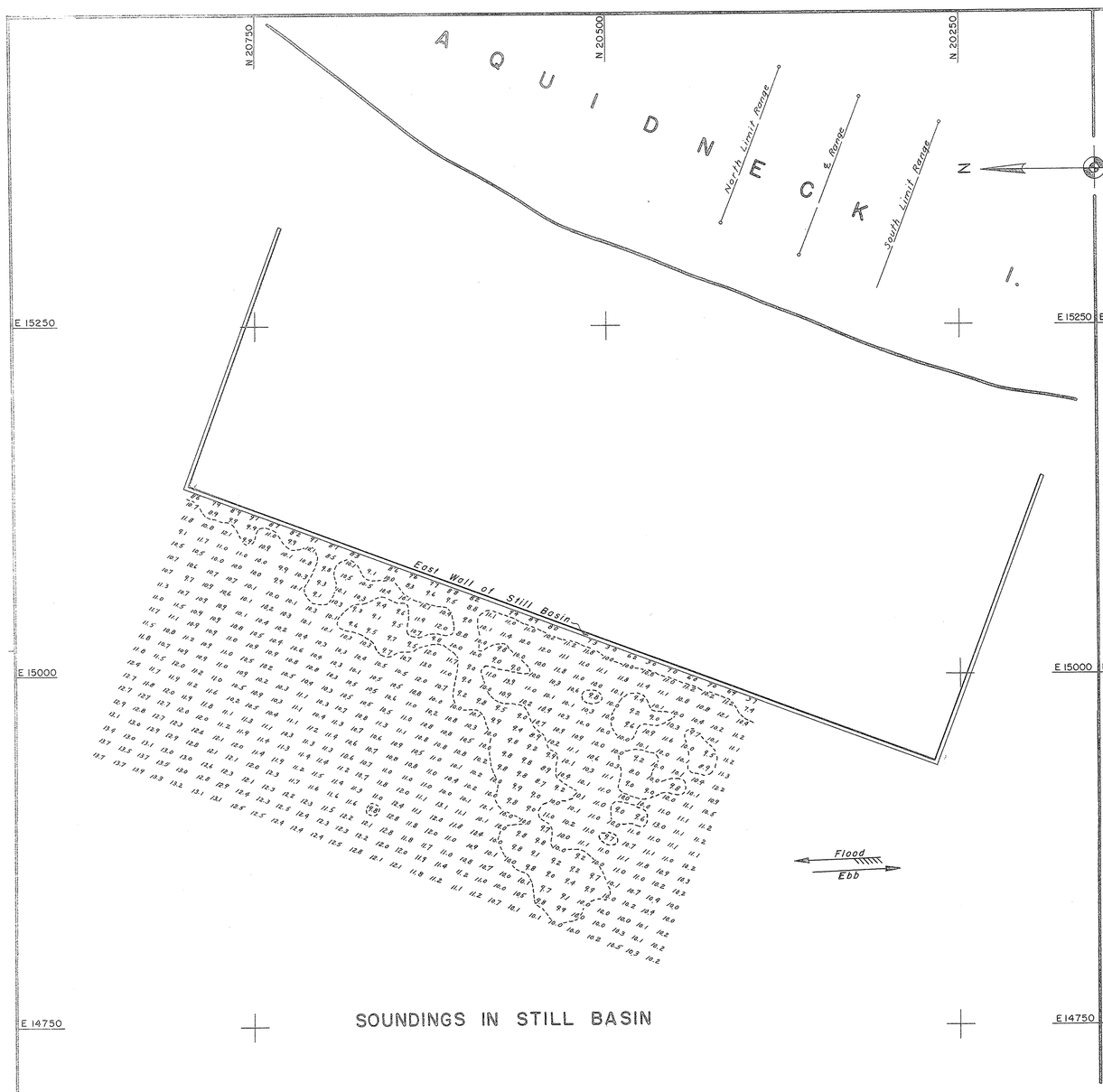
NARRAGANSETT BAY, R.I.
NORTH OF CODDINGTON PT.
EXAMINATION AFTER DREDGING
23-FOOT AREA

SCALE: 1 INCH = 100 FEET

50 0 100 200 300 400 FEET

APPROVED: _____

PUBLIC WORKS OFFICER



SOUNDINGS IN STILL BASIN

SWEEPINGS IN STILL BASIN

NOTES.

Soundings and sweepings are in feet and tenths and are referred to the plane of Mean Low Water.

Hydrography from survey of July 15 & 16, 1942 by A.L. Reed, Jr.

Topography from previous surveys.

B.M. 4 (1934) is a standard disk, stamped "No. 4 1934," set in a drill hole in the concrete walk, east of the road, and perpendicular to the main dock of the Naval Training Station. It is located about 1 foot west of the east face of the bulkhead and 1 foot north of the northeast corner of a small red brick building that houses the motors for the marine railway. Elevation above M.L.W. 7.29 feet.

Origin of coordinates is U.S.C. & G.S. Δ Dumplin 2 (1869). True meridian through Δ 7 (U.S.E.D.).

10 foot contour shown thus: ----------

Area shown thus: [hatched] was swept clear to 10 feet at M.L.W.

Area shown thus: [23] [32] denote shoal areas.

Sweepings were made using a 20 ft. sweep.

Field books: 3058 & 3276.

Ranges shown above are ranges used for dredging.

SURVEY MADE AND MAP PREPARED BY
U.S. ENGINEER OFFICE, PROVIDENCE, R.I.
U.S.E.D. FILE NO. Nor. B. 182 DATED JULY 20, 1942

DRAWN BY: R.L.H.
TRACED BY: R.L.H.
CHECKED BY: R.L.H.
IN CHARGE:

P.W. DRAWING NO. 6126-68

U.S. NAVAL OPERATING BASE, NEWPORT, R.I.
NAVAL SUPPLY STATION CODDINGTON COVE, R.I.

NARRAGANSETT BAY, R.I.

EXAMINATION AFTER DREDGING

NORTH OF CODDINGTON PT.

SCALE: 1 INCH = 40 FEET

40 0 40 80 120 160 FT

APPROVED: _____

PUBLIC WORKS OFFICER

N40000 N39000 N38000

A Q U I D N E C K I S L A N D

M E L V I L L E

N

Red Stack

NAVAL FUEL DEPOT

U.S.N. 6

NET U.S.E.D. (1942)

MAIN FUEL WHARF

NEW PIER (UNDER CONSTRUCTION)

E22000

E21000

Flood

Ebb

NOTES:

Soundings are in feet and tenths and are referred to the plane of Mean Low Water.

Hydrography from survey of Oct. 1-19, 1942 by A. L. Reed Jr.

Topography from this survey and from U.S.C.& G.S. Chart No. 262.

B.M.-A brass plug inside of a 6 inch diameter iron pipe and about 5 inches below the surface of the road, 7.14 feet from S.W. corner and 7.86 feet from S.E. corner of concrete stoop of Building No. 19. Elevation above M.L.W. 10.32 feet.

Origin of coordinates is U.S.C.& G.S. Δ Dumplin No. 2 (1869). True meridian through Δ 7 (U.S.E.D.)

16-foot contour shown thus: .....

20-foot contour shown thus: ———

36-foot contour shown thus: — — —

Field books: 3297, 3298, 3299 & 3300.

DRAWN BY: A.E.E
TRACED BY: A.E.E.
CHECKED BY: [illegible]
IN CHARGE

U.S. NAVAL OPERATING BASE, NEWPORT, R. I.
NAVAL FUEL DEPOT MELVILLE, R. I.

NARRAGANSETT BAY, R. I.
VICINITY OF NAVAL FUEL DEPOT

EXAMINATION AFTER DREDGING
UNDER PERMIT NO. N. B. 242

SCALE 1:1000

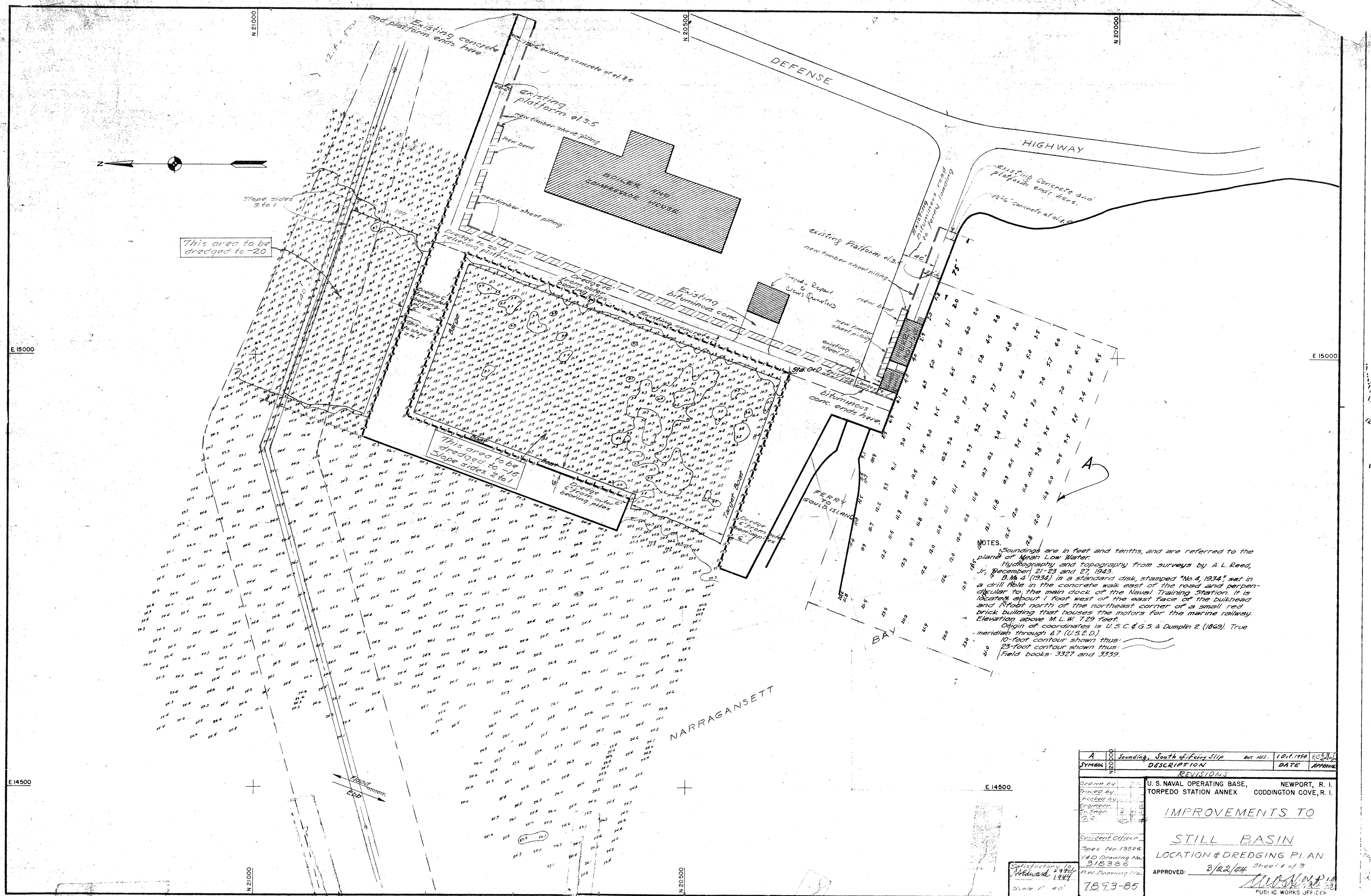
50 0 100 200 300 FT.

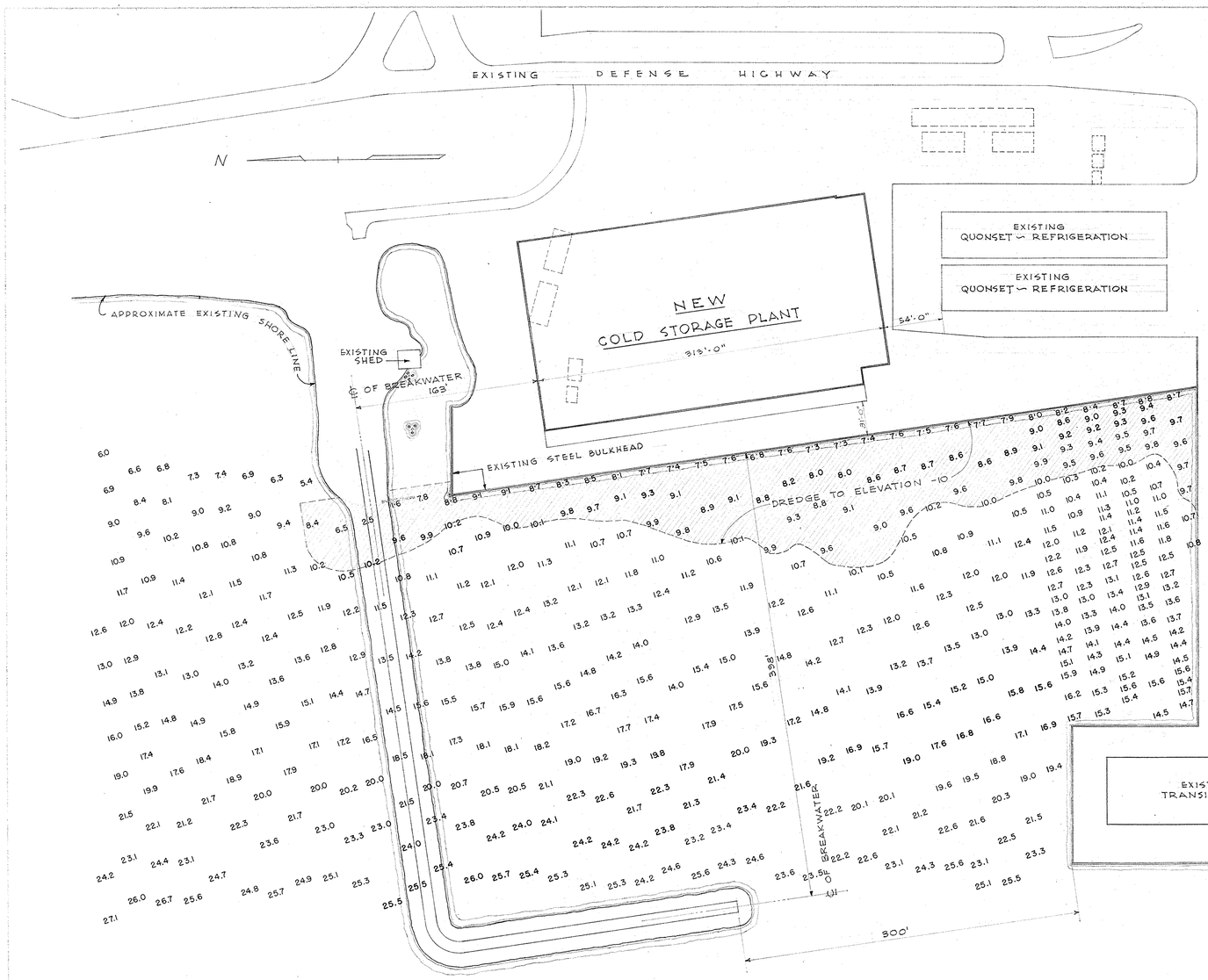
APPROVED

PUBLIC WORKS OFFICER

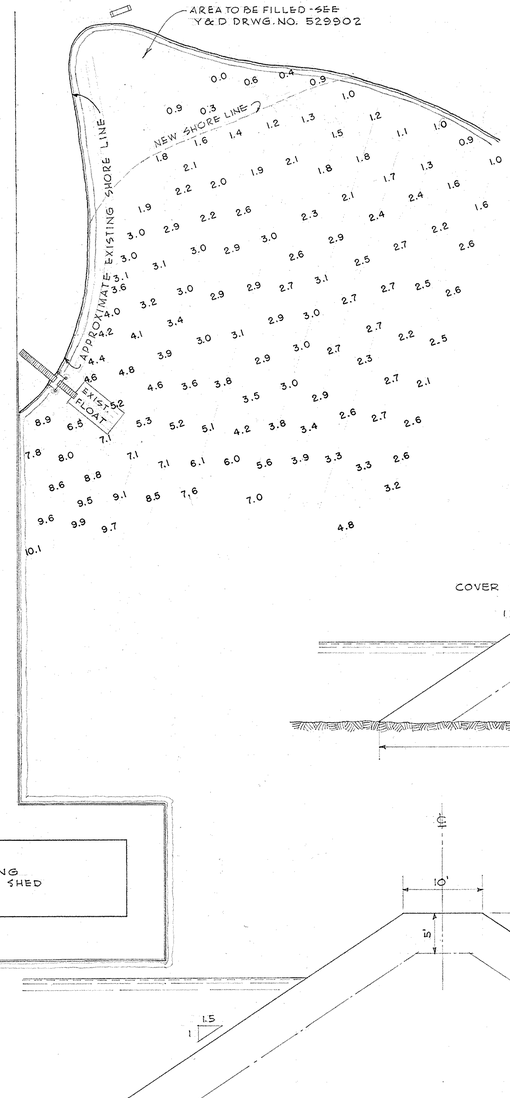
SURVEY MADE AND MAP PREPARED BY
U.S. ENGINEER OFFICE PROVIDENCE, R. I.,
U.S.E.D. FILE NO. Nor. B. 198, DATED OCT. 31, 1942

P.W. DRAWING NO.
6129-68


DEFENSE
HIGHWAY
NARRAGANSETT
BAY
Existing concrete and platform ends here
Existing platform el.3.5
new timber sheet piling
new bent
This area to be dredged to -20
Slope sides 3 to 1
Existing bituminous conc.
Existing concrete
Existing Platform el.3.5
bituminous conc. ends here.
This area to be dredged to -15 Slope sides 2 to 1
Target Boat
FERRY TO GOULD ISLAND
Flood
Ebb
A
N 21000
N 20500
N 20000
E 15000
E 14500
NOTES.
Soundings are in feet and tenths, and are referred to the plane of Mean Low Water.
Hydrography and topography from surveys by A. L. Reed, Jr., December 21-23 and 27, 1943.
B.M. 4 (1934) is a standard disk, stamped "No. 4, 1934," set in a drill hole in the concrete walk east of the road and perpendicular to the main dock of the Naval Training Station. It is located about 1 foot west of the east face of the bulkhead and 1 foot north of the northeast corner of a small red brick building that houses the motors for the marine railway. Elevation above M.L.W. 7.29 feet.
Origin of coordinates is U.S.C.&G.S. Δ Dumplin 2 (1869). True meridian through Δ7 (U.S.E.D.).
10-foot contour shown thus:
23-foot contour shown thus:
Field books: 3327 and 3339.
A | Sounding, South of Ferry Slip | AWC HES. | 1 Oct. 1954
SYMBOL | DESCRIPTION | DATE | APPROVAL
REVISIONS
U. S. NAVAL OPERATING BASE, NEWPORT, R. I.
TORPEDO STATION ANNEX CODDINGTON COVE, R. I.
IMPROVEMENTS TO
STILL BASIN
LOCATION & DREDGING PLAN
APPROVED: 3/22/44
Sheet 1 of 3
PUBLIC WORKS OFFICER
Drawn by
Traced by
Checked by
Engineer
Sr. Engr.
O.C.
Resident Officer
Spec No. 13526
Y&D Drawing No. 318386
P.W. Drawing No.
7893-85
Satisfactory to
1944
Scale 1" = 40'



HYDROGRAPHIC PLAN
SCALE: 1" = 50'-0"



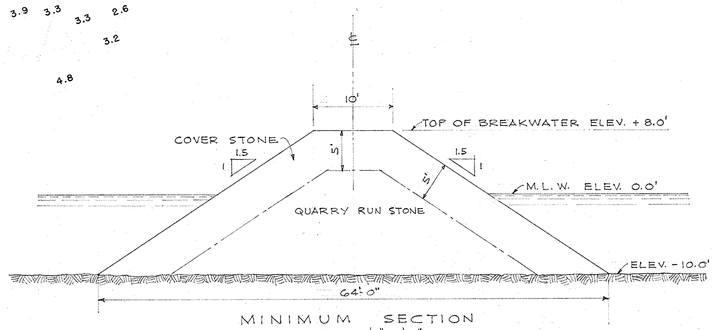
NOTES

SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE PLANE OF MEAN LOW WATER.

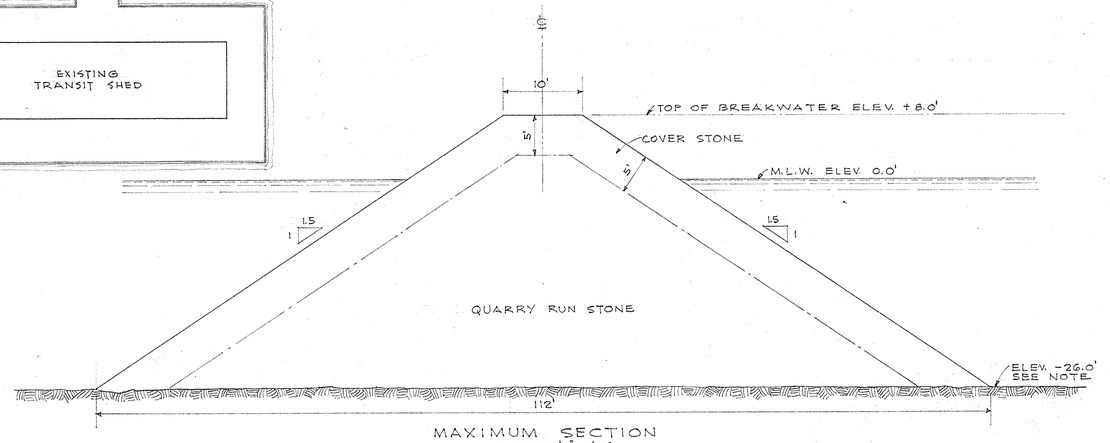
HYDROGRAPHY FROM SURVEY OF JUNE 25, 27, 28, 29, AND JULY 2, 3, 5 - 1951; BY GANTEAUME & McMULLEN-ENGR.

TOPOGRAPHY FROM SURVEY OF JULY, 1951; BY GANTEAUME & McMULLEN-ENGR.

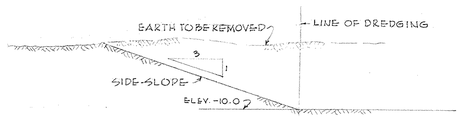
ELEV. -26.0' AT MAXIMUM BREAKWATER SECTION FROM SURVEY MADE BY U.S. ENGINEER OFFICE, PROVIDENCE, R.I.; U.S.E.D. FILE NO. Nar B. 155 DATED AUG. 7, 1941.



MINIMUM SECTION
SCALE 1/8" = 1'-0"



MAXIMUM SECTION
SCALE 1/8" = 1'-0"



SECTION SHOWING ALLOWABLE SIDE-SLOPE
N. T. S.

GRAPHIC SCALES

SCALE: 1/8"=1'-0" 0 5' 10' 15' 20' 25' 30' 35' 40' 45'

SCALE: 1"=50'-0" 0 10'20'30'40'50' 100' 150' 200' 250' 300'

NAVSTA # 11005-117

SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

ENGINEERS JOB NO. 2302	DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS DISTRICT PUBLIC WORKS OFFICE 1 ST ND BOSTON, MASS.
ENGINEERS DWG. NO. 6	GANTEAUME & McMULLEN ENGR. & ARCH. BOSTON 11, MASS.
DRAWN BY MEYER TRACED BY CHECKED BY KING	U. S. NAVAL SUPPLY DEPOT NEWPORT, R.I.
DPWO DWG. No. NBN-2 C-5	COLD STORAGE PLANT BREAKWATER & DREDGING PLAN & DETAILS
PROJ. ENGR. T.A.Q.	APPROVED A. J. Gallagher DATE 8 May 1952
DIRECTOR Sexton	
APPROVED FOR BUREAU OF YARDS & DOCKS A. J. Gallagher DPWO FOR CHIEF OF BUREAU DATE 8 May 1952	SCALE: GRAPHIC SPEC. 31223 SHEET 6 OF 51 NO. 29553 Y & D DRAWING NO. 529900

SATISFACTORY TO
DATE 7 May 1952

~~11005-117~~

N

A

Top of slope

SOUTH PIER

For details of wood platform over existing pipes see P.W. Dwg. No. 11081-119

Bottom of slope

Edge of Pier

-25.5	-22.5	-19.4	-17.5	-17.0	-16.6	-15.9	-15.0	-15.15	-14.0	-13.15	-12.3	-11.5	-10.4	-9.4	-9.0	-7.8	-7.9	-6.9	-6.0
-26.2	-24.7	-21.8	-19.5	-17.6	-17.4	-16.4	-16.4	-15.5	-15.0	-14.0	-12.7	-12.1	-11.1	-9.4	-9.3	-8.2	-8.2	-6.0	-7.1
-23.4	-23.7	-20.9	-19.1	-18.3	-17.1	-15.8	-15.8	-15.5	-14.8	-14.0	-12.8	-12.2	-11.4	-10.6	-9.5	-8.5	-8.2	-7.7	-7.4
-21.7	-21.7	-21.0	-19.9	-18.5	-17.6	-16.8	-15.3	-15.2	-14.6	-13.6	-13.1	-12.3	-11.6	-10.2	-9.9	-8.7	-8.6	-7.8	-8.0
-22.0	-21.4	-20.6	-19.3	-18.1	-17.0	-16.4	-16.2	-15.5	-14.8	-13.8	-13.0	-12.3	-11.8	-10.7	-10.4	-9.2	-8.5	-7.8	-7.9
-22.0	-21.3	-20.3	-19.7	-18.3	-17.5	-16.4	-16.3	-15.5	-14.8	-13.8	-13.1	-13.2	-12.0	-11.2	-10.7	-9.2	-8.9	-8.0	-8.1
-22.5	-21.5	-19.9	-19.3	-18.3	-17.6	-15.8	-15.5	-15.5	-14.2	-14.0	-13.1	-12.7	-11.9	-11.4	-10.5	-9.4	-9.2	-8.4	-8.1
-23.0	-21.5	-20.1	-19.0	-18.6	-17.2	-17.2	-15.5	-16.0	-15.2	-14.2	-13.2	-12.9	-12.2	-11.2	-10.9	-9.7	-9.4	-8.9	-8.5
-23.0	-21.3	-20.8	-18.5	-18.5	-17.7	-16.4	-15.8	-15.6	-15.0	-14.2	-13.6	-13.0	-12.2	-11.5	-11.1	-10.0	-9.3	-8.9	-8.7
-22.5	-21.3	-21.0	-17.3	-19.1	-17.6	-16.6	-15.8	-15.7	-15.1	-13.8	-13.5	-13.5	-12.4	-11.5	-11.2	-10.0	-9.7	-8.8	-8.2
-22.1	-21.9	-20.3	-17.3	-19.3	-18.9	-17.0	-16.0	-16.0	-15.3	-14.3	-13.9	-13.5	-13.6	-12.1	-11.0	-10.9	-9.6	-9.1	-7.9
-23.1	-21.6	-21.2	-20.5	-18.9	-18.6	-16.8	-16.2	-16.0	-15.0	-14.5	-14.1	-13.7	-12.8	-12.6	-11.1	-10.6	-9.3	-9.1	-8.4
-23.0	-22.0	-20.8	-20.8	-18.3	-18.3	-16.8	-15.8	-16.6	-14.8	-14.5	-13.7	-13.8	-13.4	-12.6	-11.0	-10.3	-9.6	-8.9	-8.9
-24.0	-22.0	-20.9	-20.1	-19.1	-18.9	-17.8	-15.8	-16.2	-14.8	-14.6	-13.9	-14.0	-12.8	-12.2	-11.2	-10.2	-10.2	-9.1	-8.9
-24.0	-22.2	-21.4	-19.7	-19.1	-18.9	-17.4	-15.8	-17.0	-15.2	-14.5	-13.5	-13.7	-12.8	-12.1	-11.3	-10.0	-11.0	-9.1	-9.4

270'-0" — To be dredged to Elev. -24.00

100'-0" — Dredge upward from -24.00 to -16.00

Elev. -16.00

Bottom of slope

Top of slope

Top of slope

Bottom of slope

Dredging to begin at -24 Contour Line

250'-0"

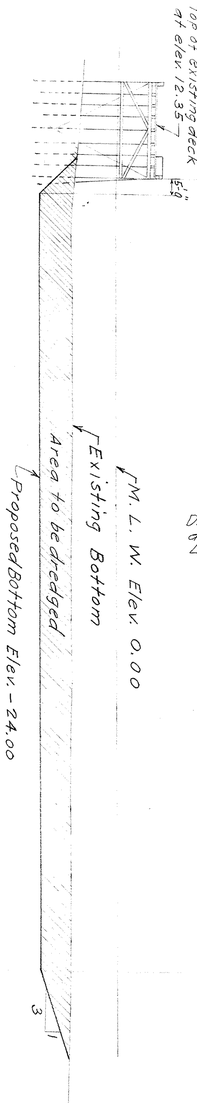
B

B

NOTE:
All elevations are to M.L.W. = 0.00

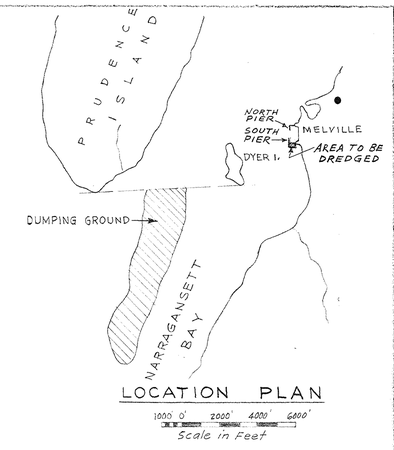
PLAN OF DREDGING

Elevations given are existing sounding elevations
Scale: 1"= 20'-0"



SECTION A-A

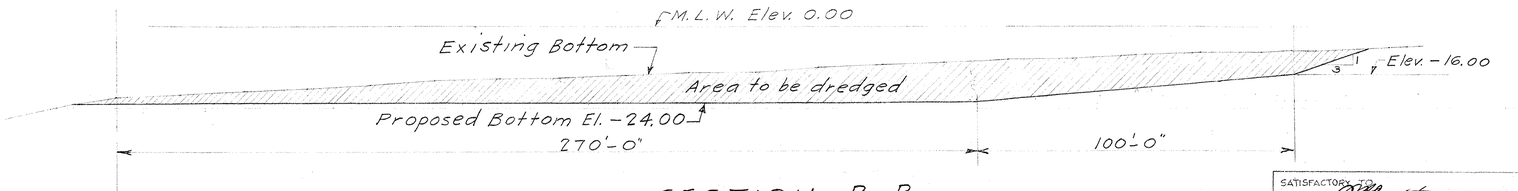
Scale: 1"= 20'-0"



LOCATION PLAN

1000' 0' 2000' 4000' 6000'
Scale in Feet

1"= 20'-0" 0' 5' 10' 15' 20' 40' 60' 80' 100' 120' 130' 140'
Scale in Feet



SECTION B-B

Scale: 1"= 20'-0"

SYMBOL	DESCRIPTION REVISIONS	DATE	APPROVAL

PWD DRAWING NO. 11280-119

DEPARTMENT OF THE NAVY — BUREAU OF YARDS & DOCKS
U.S. NAVAL STATION NEWPORT R.I.
PUBLIC WORKS DEPARTMENT

DRAWN BY: A. YURDIN 10-52
SUBMITTED: 10-52
APPROVED: 4/15/53

U.S. NAVAL SUPPLY DEPOT - NEWPORT, R.I.
FUEL DIVISION - MELVILLE
DREDGING FOR ALONGSIDE BERTHING
SOUTH PIER
PLANS & SECTIONS

APPROVED _____ PUBLIC WORKS OFFICER — DATE 5-15-53

SATISFACTORY TO: _____ DATE 5/10/53

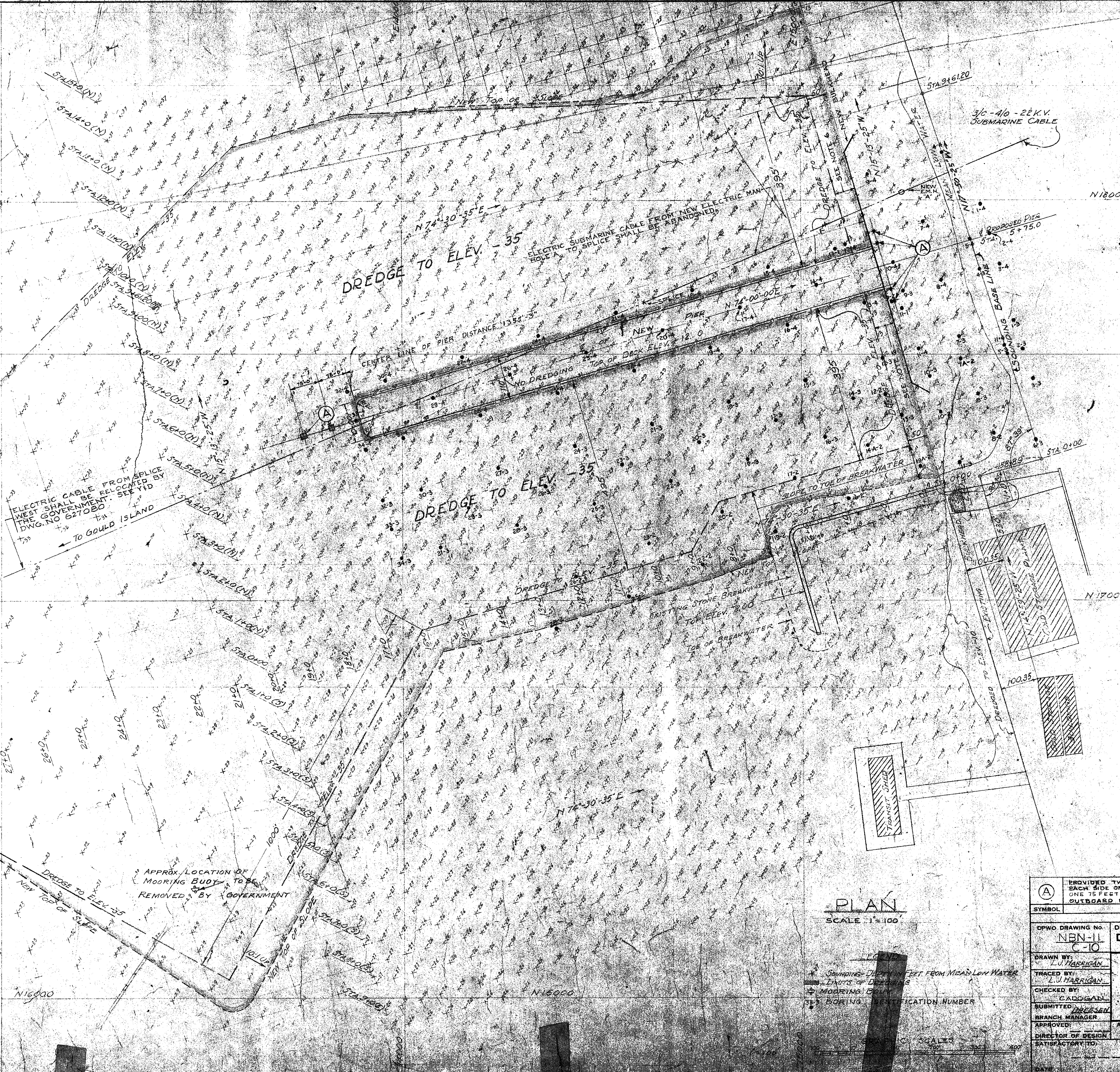
APPROVED FOR BUREAU OF YARDS & DOCKS: _____ DPWO FOR CHIEF OF BUREAU — DATE 22 May 1953

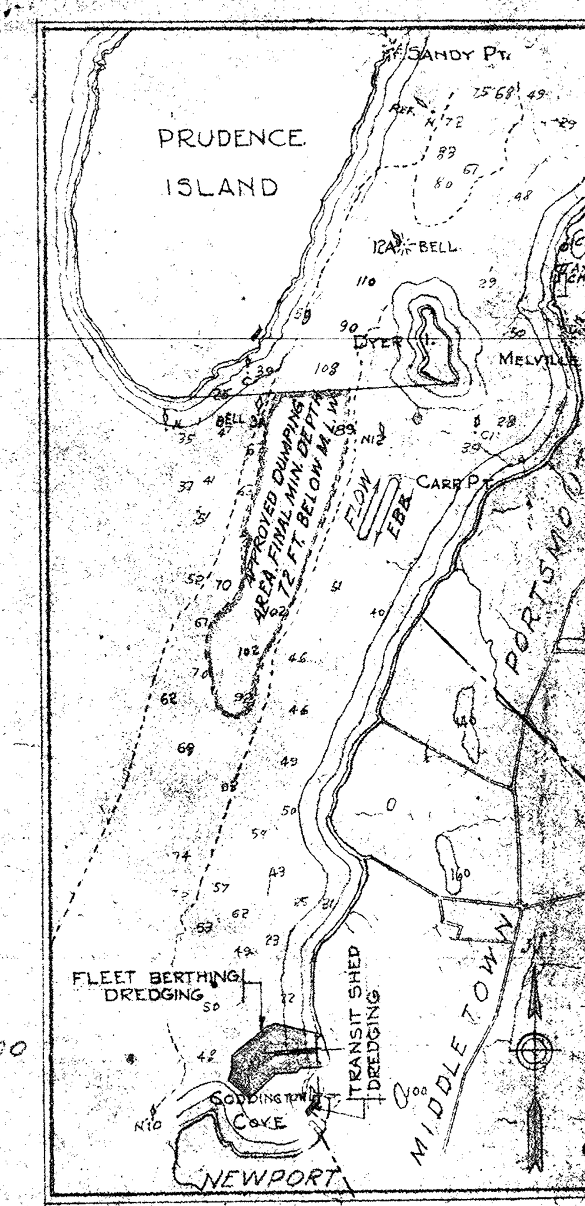
SCALE As Noted — SPEC. 36705
SHEET 1 of 2 — NO. 77770
Y&D DRAWING NO. 614016

NOTES - CONTINUED -

5. SOUNDINGS 50' O.C. WERE OBTAINED BY GORDON E AINSWORTH SEPT. & OCT 1952. SOUNDINGS 100' O.C. WERE OBTAINED BY U.S. ENGINEERS OFFICE PROVIDENCE R.I. JULY & AUG. 1941

6. SLOPE UP TO ANGLE OF REPOSE. NO ROCK EXCAVATION THIS SECTION.





VICINITY PLAN

GRAPHIC SCALE

NOTE:

(1) ALL SOUNDINGS ARE IN FEET AND REFER TO MEAN LOW WATER DATUM.

(2) SOUNDINGS WITHIN THE AREA TO BE DREDGED WERE OBTAINED DURING AUG. TO OCT. 1952 BY G.E. AINSWORTH EXCEPT SOUNDINGS 100 FEET ON CENTERS, WHICH WERE OBTAINED FROM SURVEY AND MAP PREPARED BY U.S. ENGINEERS OFFICE, FILE NO. Nor. B 155, DATED AUG. 7, 1941.

(3) MEAN HIGH WATER AT NEWPORT IS 3.5 FT., AND MEAN SEA LEVEL IS 1.8 FT.

(4) BELOW IS TABULATED THE HIGHEST TIDES OBSERVED AT NEWPORT, R.I. BY U.S. COAST AND GEODETIC SURVEY:

HIGHEST ABOVE M.L.W.	DATE
13.8	SEPT. 21, 1938
8.3	SEPT. 14, 1944
7.2	NOV. 30, 1944
6.7	MAR. 3, 1947
6.5	MAR. 3, 1942
6.5	NOV. 12, 1947
6.3	JAN. 27, 1933
6.3	MAR. 6, 1943
6.1	DEC. 2, 1942
6.1	OCT. 31, 1947

PLAN

SCALE 1" = 100'

LEGEND

- Sounding - Depth in Feet from Mean Low Water
- Limits of Dredging
- Mooring Buoy
- 33-3 Boring Identification Number

GRAPHIC SCALES

11838-125

SYMBOL	DESCRIPTION	DATE	APPROVAL
A	PROVIDED TWO BOLLADS ON PAVED AREA ON EACH SIDE OF PIER; INSTALLED TWO DOLPHINS ONE 75 FEET & THE OTHER 150 FEET BEYOND OUTBOARD END OF PIER. AMEND. NO. 6	9/16/55	Santos

REVISIONS

DPWO DRAWING No. NBN-11 C-10

DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
FIRST NAVAL DISTRICT, BOSTON, MASS.

U.S. NAVAL BASE
NEWPORT, R.I.

FLEET BERTHING FACILITIES
SOUNDING & DREDGING PLAN

DRAWN BY: L.J. HARRIGAN
TRACED BY: L.J. HARRIGAN
CHECKED BY: CADOGAN
SUBMITTED: DRESSEN, BRANCH MANAGER
APPROVED: DIRECTOR OF DESIGN
SATISFACTORY TO:
DATE

APPROVED: [signature] DPWO FOR CHIEF OF BUREAU — DATE 6 APR. 1954

SCALE: AS NOTED — SPEC. No. 34589
SHEET No. 10 OF 46 — NOy 73788
Y & D DRAWING No. 627050

11838-125

PRINTED BY SPAULDING-MOSS CO., BOSTON, MASS.

CODDINGTON COVE, R.I.
NEWPORT NAVAL BASE

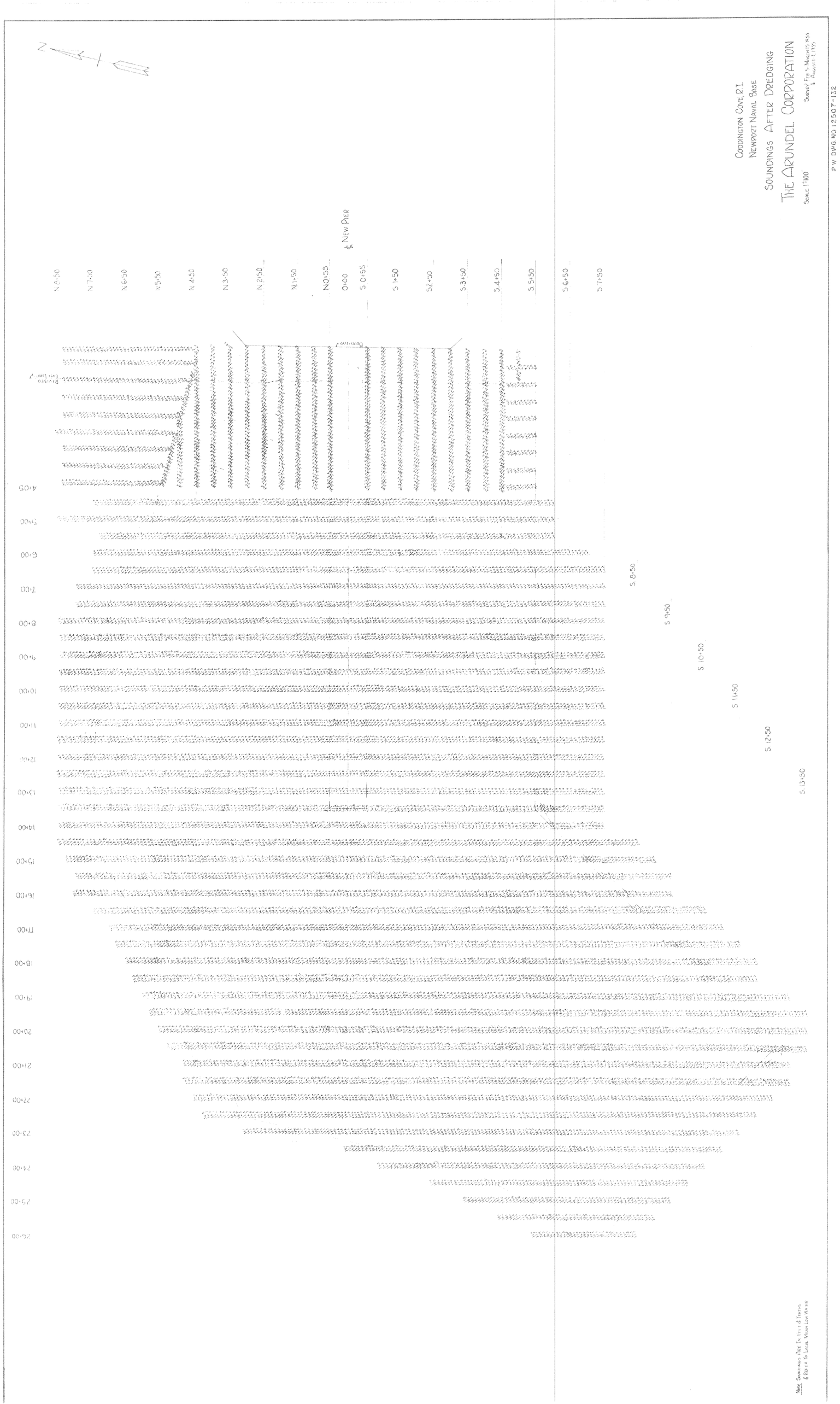
SOUNDINGS AFTER DREDGING

THE ARUNDEL CORPORATION

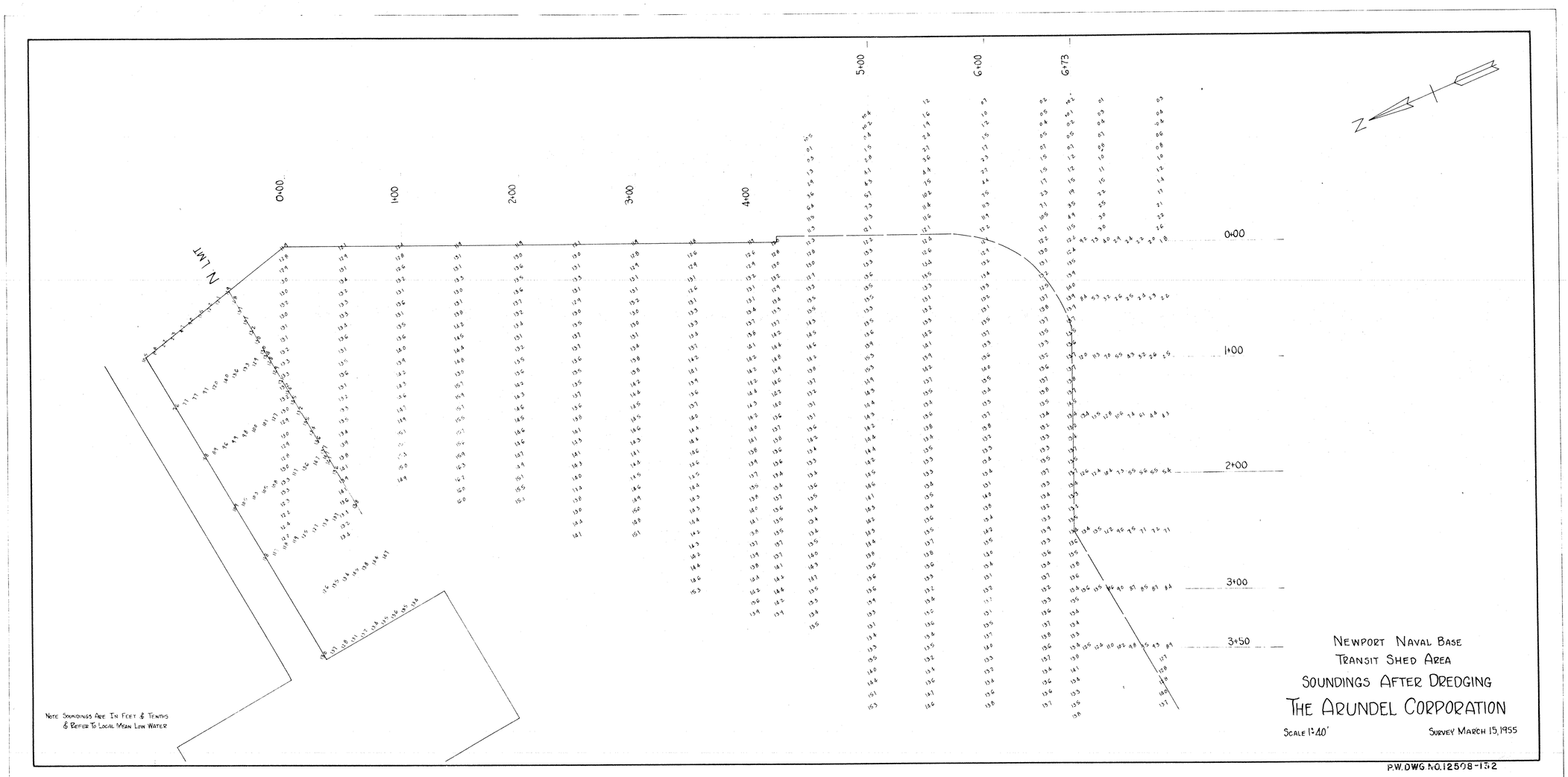
SCALE 1"=100'

SOUNDED FEB 5, MARCH 15 1955 & AUGUST 7, 1955

P.W. DWG NO 12507-132



Note: Soundings Are In Feet & Tenths
& Referred To Local Mean Low Water



P.W. DWG NO. 12508-152

AREA TO BE DREDGED TO ELEV. -35.0

BORING SP-17

900'

1572'-8"

AREA TO BE DREDGED TO ELEV. -35.0

680'-0"

400'-0"

750'-0"

TOP OF SLOPE

ELEV. -35.0

70°

APPROX. CABLE AREA

EXISTING 8" WATER MAIN

24" SEWER

TIMBER GROINS

HIGHWAY

DEFENSE

FACE OF APRON

STA. 10+00 BASE LINE = STA. 7+27.6 PIER 2

EXIST. PUBLIC WORKS PIER

90°

91°-00'-35"

TO DREDGING

ELEV. -35.0

AREA TO BE DREDGED TO ELEV. -35.0

M.L.W.

1000.00

BASE LINE

10" SEWER

FACE OF EXISTING STEEL BULKHEAD

88°-59'-25"

90°

90°

STA. 0+00

332.88'

170.17'

349.51'

D.H.

C.B.

C.B.

℄ EXISTING PIER 1

D.H.

N

SANDY PT.

PRUDENCE ISLAND

12A BELL

DYER

MELVILLE

CARR PT.

PORTSMOUTH

APPROVED SAILING AREA (SMALL MIN. DEPTH 12 FEET BELOW M.L.W.)

FLOW

288

FLEET BERTHING DREDGING

EXISTING PIER 1

PIER 2 CODDINGTON COVE

NEWPORT

MIDDLETOWN

VICINITY PLAN

SCALE: 1/40,000

NOTES

SOUNDINGS COMPILED FROM:-
"SURVEY MADE AND MAP PREPARED BY U.S. ENGINEER OFFICE, PROVIDENCE, R.I. U.S.E.D. FILE NO. NAR-B. 155, AUG. 7, 1941"
AND
"SOUNDINGS AFTER DREDGING THE ARUNDEL CORPORATION FEB. 1, MARCH 15 & AUG. 1, 1955"
F.S. & T. INC. Tn-17.

B.M. 4 (1934)
STANDARD DISK, SET IN DRILL HOLE IN CONCRETE WALK, EAST OF ROAD AND PERPENDICULAR TO MAIN DOCK OF NAVAL TRAINING STATION.
IT IS LOCATED ABOUT 1 FOOT WEST OF EAST FACE OF BULKHEAD AND 1 FOOT NORTH OF NORTHEAST CORNER OF SMALL RED BRICK BUILDING THAT HOUSES MOTORS OF MARINE RAILWAY.
ELEVATION ABOVE MEAN LOW WATER 7.29 FEET.

SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE PLANE OF MEAN LOW WATER.
FOR BORING LOG OF SP-17 SEE Y & D DWG. NO. 717704

GRAPHIC SCALES

1/40,000 0' 4000' 8000' 12000

1"=100'-0" 0' 100' 200' 300' 400'

CONTRACTOR'S PROJECT NO. Tn-17
CONTRACTOR'S DRAWING NO.

SATISFACTORY TO _____ DATE _____

SATISFACTORY TO _____ DATE _____

13072-137

SYMBOL	DESCRIPTION	DATE	APPROVAL

REVISIONS

DPWO DRAWING NO. NBN-60 C-2

A & E

DR. BY U.G.M.
TR. BY R.G.McC.
CHK. BY H.D.H.

DPWO 1ST IND

SAFETY PICCIO
FIRE PROT. GLEASON
PROJ. ENGR. PREZIOSI
DIRECTOR SADDAY

APPROVED FOR BUREAU OF YARDS & DOCKS

DEPARTMENT OF THE NAVY — BUREAU OF YARDS & DOCKS
DISTRICT PUBLIC WORKS OFFICE — 1st ND BOSTON, MASS.
FAY, SPOFFORD & THORNDIKE, INC. – CHARLES A. MAGUIRE & ASSOCIATES
BOSTON, MASS. — ARCHITECT-ENGINEER — PROVIDENCE, R.I.

U.S. NAVAL BASE NEWPORT, R.I.

PIER NO. 2, BULKHEAD AND DREDGING

SOUNDING AND DREDGING PLAN

APPROVED _____ OFFICER IN CHARGE DATE _____

SCALE AS NOTED | SPEC. 1756

SHEET 12 OF 136 sheets | NBN

BU. DRAWING NO. 717702

CORPS OF ENGINEERS

U. S. ARMY

PIER #2

(A) AREAS TO BE DREDGED TO -35
MATERIAL CONSIDERED TO BE
SAND & SILT

PIER #1

PIER 1

Sta 0+00

Sta 8+75

Baseline

45°

Flood

Ebb

FORMER LOCATION OF
3/0 - 4/0 - 22 K.V.
Submarine Cable

NEW BULKHEAD

2 EXIST. STRUCTURE

BREAKWATER

PROVIDENCE
ISLAND

DREDGING
AREA

VICINITY PLAN

SCALE 1" = 4000'

NOTES:

Survey of January 12 to February 8, 1961 by H.A. Fishlock. B.M. H3 (1943) At Coddington Cove set on the south end of an iron fence running on the west side of building No. 6, about 0.1 mile east of the Naval Supply Depot Shed, 69 feet north of center line of the road to the shed, 30 feet northwest of the southwest corner of building, 7 feet north of the south end of the island. A B.M. disc. Elev. above M.L.W. is 8.35 feet.

35 — foot contour shown thus: ————————

40 — foot contour shown thus: — — — — —

Field Data: B.S.H. 1656, 1057, 1658, & 1924.

All soundings are referred to the datum of Mean Low Water (0.0')

GRAPHIC SCALE

1"=100' 100' 0 200 400 600' 1000'

SURVEY MADE AND MAP
PREPARED BY U.S. ARMY ENG. DIV.
NEW ENGLAND CORPS OF ENGR'S.
WALTHAM, MASS.
DWG. NO. N.P. 204 MARCH 6, 1961

REVISION	DATE	DESCRIPTION	BY
A	5-16-62	ESTIMATED OVERALL SWEEPING. ADDED EXACT AREAS TO BE DREDGED	FITZ

DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
FIRST NAVAL DISTRICT, BOSTON, MASS.

U.S. NAVAL BASE
NEWPORT, R.I.

DREDGING
PIER 1 & 2 AREA
(SOUTH & EAST OF PIER 2)

DPW DRAWING NO. N.B.N-131 C-1

DRAWN BY: FITZ

TRACED BY:

CHECKED BY:

SUBMITTED:

BRANCH MANAGER

APPROVED: SEDDON
DIRECTOR OF DESIGN

APPROVED: DATE 3/19/62
DEPUTY DISTRICT PUBLIC WORKS OFFICER

SATISFACTORY TO:

DATE 3/28/62

SCALE: 1"=100' SPEC. NO. B-270(Rev.)

SHEET NO 1 OF 2 NOV 22 20

Y & D DRAWING NO. 92484

P.W.C. DWG. NO. 15225-159

10-22-63

BUILDING MOSS CO. BOSTON, MASS.

IND-DPWO-8

CORPS OF ENGINEERS

U. S. ARMY

E 13,000

E 14,000

E 15,000

N 19,000

N 20,000

N 21,000

BREAKWATER

M.L.W.-EL 0.0

TIMBER GROINS

DEFENSE HIGHWAY

EXISTING 8" WATER MAIN

24" SEWER

EXISTING 4"FWM

SDG. PT. 257

STA. 0+00 PIER 2 BASE LINE PIER NO. 2 STA. 15+25 SLIP APRON

(A) AREAS TO BE DREDGED TO (-)35
MATERIAL CONSIDERED TO BE
SAND AND SILT

(B) ROCK OR LEDGE.
ON OR ABOUT 28 AUG 62, PWC AGREED TO REMOVE
THIS ROCK OR LEDGE

GRAPHIC SCALE
1" = 100'
100' 0 200' 400' 600' 800' 100'

SURVEY MADE AND MAP PREPARED BY
U.S. ARMY ENG. DIV. NEW ENGLAND
CORPS OF ENG. WALTHAM, MASS.
DWG. NO. N.P. 204. MARCH 6, 1961

RECORD DRAWING
DATE 10-22-63

REVISION	DATE	DESCRIPTION	BY
B	9 AUG 63	REVISED TO AS BUILT CONDITIONS	GMC
A	5 JUNE 62	ELIMINATED OVERALL SWEEPING. ADDED EXACT AREAS TO BE DREDGED	TYE

DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
FIRST NAVAL DISTRICT, BOSTON, MASS.

DPW DRAWING No MRN-61 C-2

DRAWN BY: TYE
TRACED BY:
CHECKED BY:
SUBMITTED:
BRANCH MANAGER
APPROVED:
DIRECTOR OF DESIGN
SATISFACTORY TO:
DATE 2/23/62

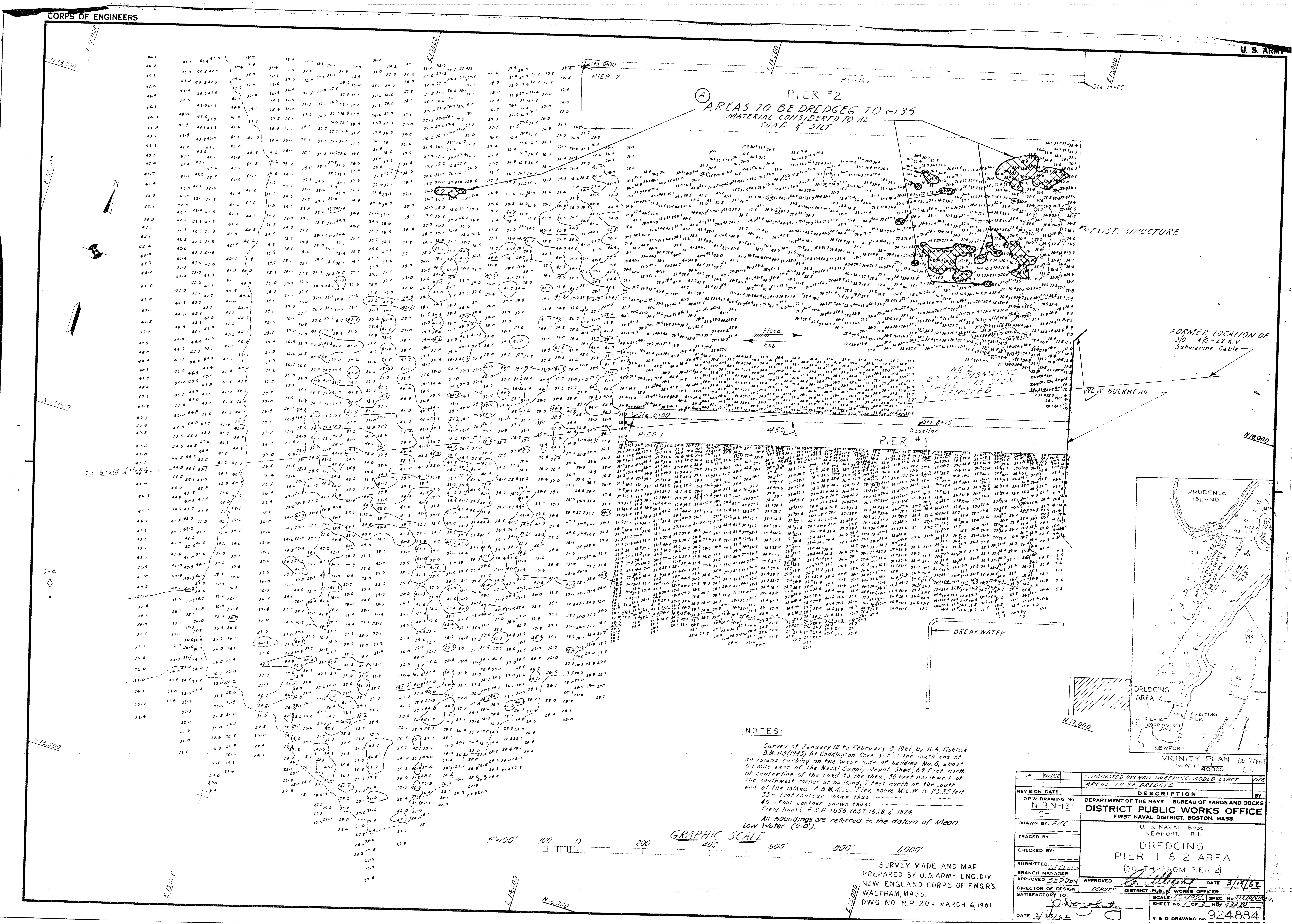
U.S. NAVAL BASE NEWPORT, R.I.
DREDGING
PIER 1 & 2 AREA
(NORTH SIDE FROM PIER 2)

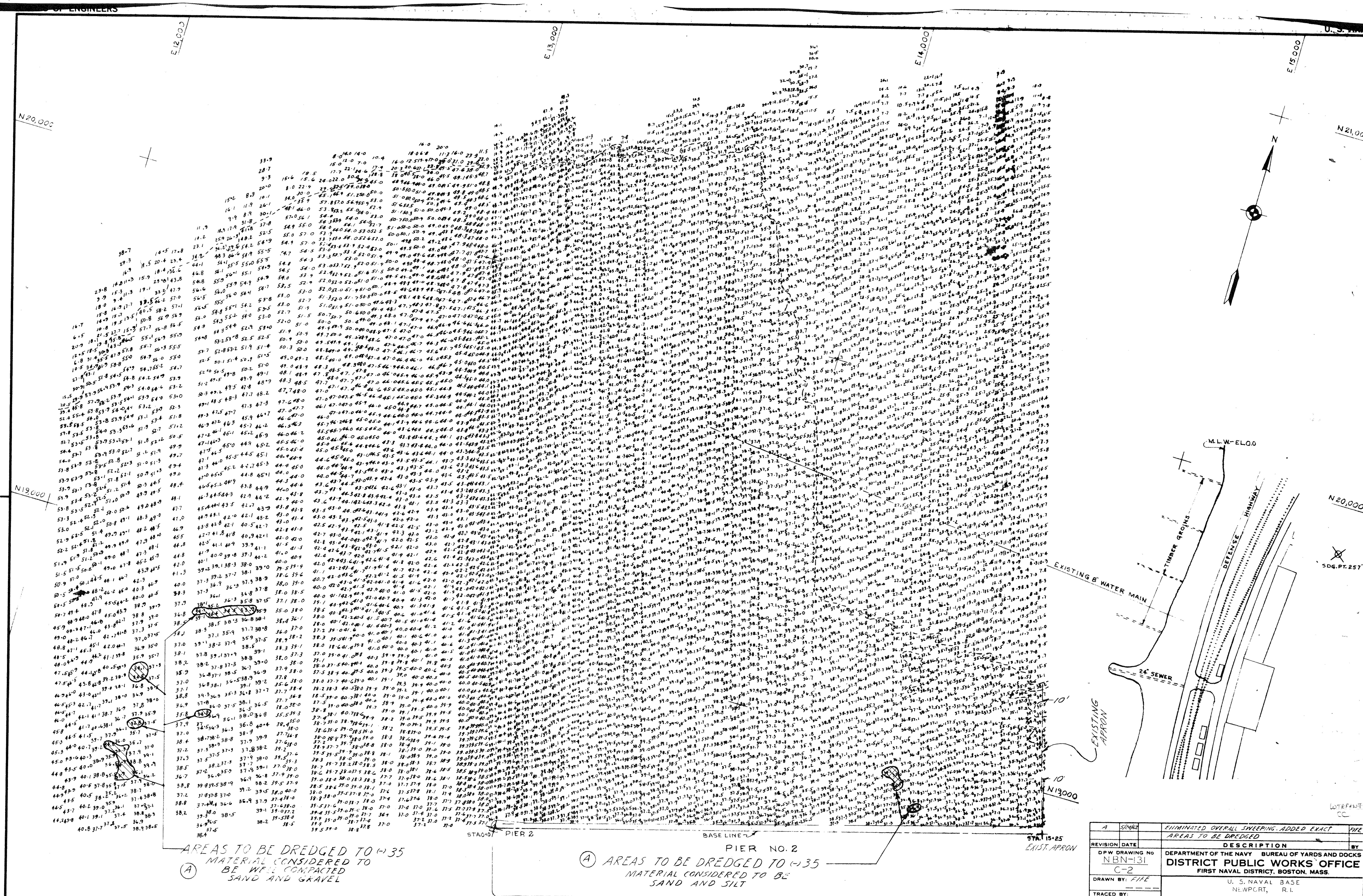
APPROVED: DATE 3/14/62
DEPUTY DISTRICT PUBLIC WORKS OFFICER

SCALE: 1"=100' SPEC. No. 3220/ALR Rev.
SHEET No. 2 OF 2 SHTS. NO. 3220
Y & D DRAWING No. 924285

IND-DPWO-8

PWC DWG NO 15226-159


CORPS OF ENGINEERS
U. S. ARMY
PIER 2
PIER #2
Baseline
Sta. 0+00
Sta. 15+25
(A) AREAS TO BE DREDGEG TO (-) 35
MATERIAL CONSIDERED TO BE SAND & SILT
EXIST. STRUCTURE
Flood
Ebb
FORMER LOCATION OF 3/0 - 4/0 - 22 K.V. Submarine Cable
NEW BULKHEAD
PIER 1
PIER #1
Sta. 8+75
45°
To Gould Island
BREAKWATER
N 18,000
N 17,000
N 16,000
E 13,000
E 14,000
E 15,000
PRUDENCE ISLAND
DREDGING AREA
EXISTING PIER 1
PIER 2
CODDINGTON COVE
NEWPORT
MIDDLETOWN
N
VICINITY PLAN
SCALE: 1/40,000
NOTES:
Survey of January 12 to February 8, 1961, by H.A. Fishlock.
B.M. H3(1943) At Coddington Cove set at the south end of an island curbing on the west side of building No. 6, about 0.1 mile east of the Naval Supply Depot Shed, 69 feet north of centerline of the road to the shed, 30 feet northwest of the southwest corner of building, 7 feet north of the south end of the island. A B.M. disc. Elev. above M.L.W. is 25.35 feet.
35-foot contour shown thus: - - - - - - - -
40-foot contour shown thus: — — — — — —
Field books R.& H. 1656, 1657, 1658, & 1824.
All soundings are referred to the datum of Mean Low Water (0.0').
GRAPHIC SCALE
1"=100'
100' 0 200 400 600' 800' 1,000'
SURVEY MADE AND MAP
PREPARED BY U.S. ARMY ENG. DIV.
NEW ENGLAND CORPS OF ENGRS.
WALTHAM, MASS.
DWG. NO. N.P. 204 MARCH 6, 1961
A 24/5/62 ELIMINATED OVERALL SWEEPING. ADDED EXACT AREAS TO BE DREDGED FIFE
REVISION DATE DESCRIPTION BY
DPW DRAWING No N BN-131 C-1
DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
FIRST NAVAL DISTRICT, BOSTON, MASS.
DRAWN BY: FIFE
TRACED BY:
CHECKED BY:
SUBMITTED:
BRANCH MANAGER
APPROVED: SEDDON
DIRECTOR OF DESIGN
SATISFACTORY TO:
DATE 2/23/62
U. S. NAVAL BASE
NEWPORT, R.I.
DREDGING
PIER 1 & 2 AREA
(SOUTH FROM PIER 2)
APPROVED:
DATE 3/19/62
DEPUTY DISTRICT PUBLIC WORKS OFFICER
SCALE: 1"=100'
SPEC. No. 43270/61 Rev.
SHEET No. 1 OF 2 NBy 43270
Y & D DRAWING No. 924884



SURVEY MADE AND MAP PREPARED BY U. S. ARMY ENG. DIV. NEW ENGLAND CORPS OF ENG. WALTHAM, MASS. DWG. NO. N.P. 204, MARCH 6, 1961

WTRFRNT CC

REVISION	DATE	DESCRIPTION	BY
A	5/24/62	ELIMINATED OVERALL SWEEPING. ADDED EXACT AREAS TO BE DREDGED	FIFE

DPW DRAWING No NBN-131 C-2

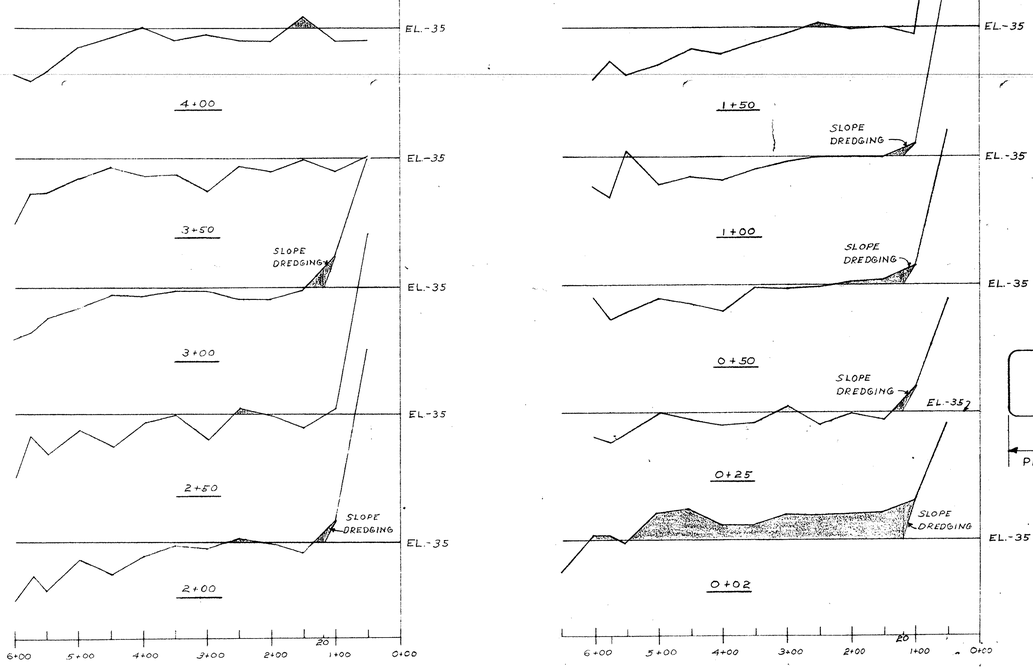
DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
FIRST NAVAL DISTRICT, BOSTON, MASS.

U. S. NAVAL BASE
NEWPORT, R. I.

DREDGING
PIER 1 & 2 AREA
(NORTH FROM PIER 2)

DRAWN BY: FIFE
TRACED BY:
CHECKED BY:
SUBMITTED: [signature] BRANCH MANAGER
APPROVED: SEDDON DIRECTOR OF DESIGN
APPROVED: [signature] DATE 3/19/62 DEPUTY DISTRICT PUBLIC WORKS OFFICER
SATISFACTORY TO: [signature] DATE 2/23/62
SCALE: 1"=100' SPEC. No. 43270/61 Rev.
SHEET No. 2 OF 2 NBy 43270
Y & D DRAWING No. 924885

REVISION				
SYM	DESCRIPTION	PREP'D BY	DATE	APPROVED

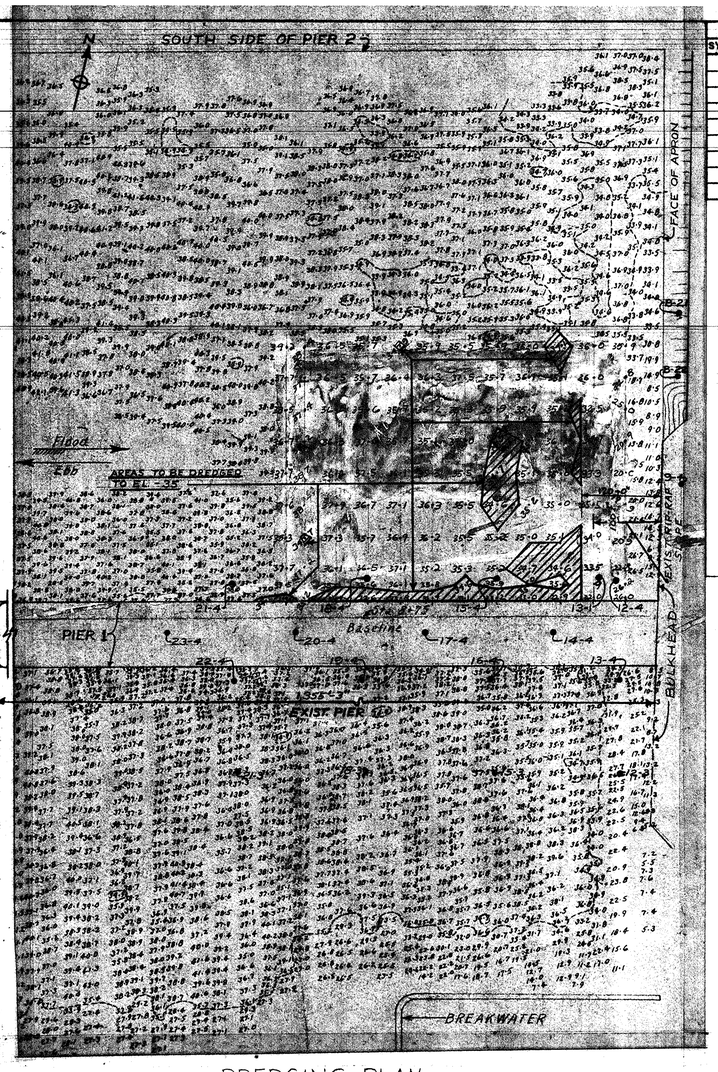


EXISTING CROSS-SECTIONS

SCALES: HOR 1"=100'-0"
VERT 1"= 5'-0"

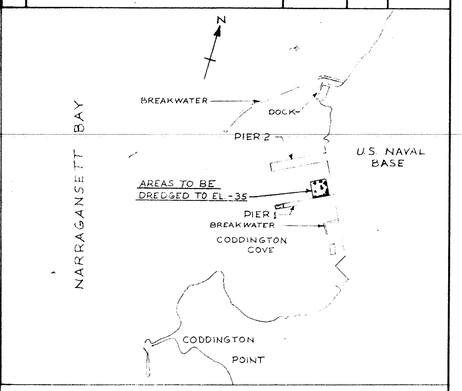
NOTES:

1. CROSS-SECTIONS TAKEN PARALLEL TO THE NORTH SIDE OF PIER 1. THE NORTH SIDE OF THE PIER IS STATION 0+00.
2. STATION 0+00 ALONG THE CROSS-SECTIONS IS AT THE BULKHEAD.
3. NO DREDGING SHALL BE DONE WITHIN 120 FEET OF THE BULKHEAD EXCEPT SLOPE DREDGING INDICATED.
4. SHADING INDICATES MATERIAL TO BE DREDGED TO ELEVATION -35.



DREDGING PLAN

SCALE: 1"=100'-0"

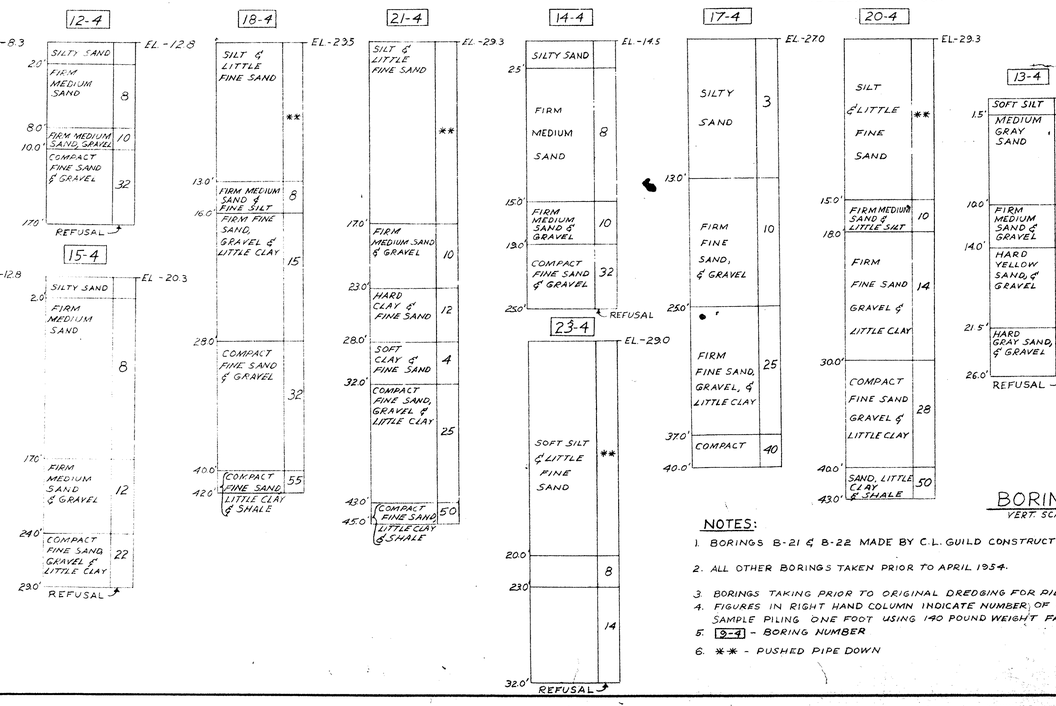


LOCATION PLAN

SCALE: NONE

NOTES:

1. ALL SOUNDINGS ARE REFERRED TO THE DATUM OF MEAN LOW WATER (D.O.).
2. ALL SOUNDINGS, WITHIN STATION 0+25 TO 5+75 ALONG THE NORTH SIDE OF PIER 1 AND STATION 0+02 TO 4+01 PERPENDICULAR TO THE NORTH SIDE OF PIER 1, WERE TAKEN BY THE PUBLIC WORKS CENTER, NEWPORT MARCH 1965. ALL OTHER SOUNDINGS TAKEN BY US ARMY CORPS OF ENGINEERS, WALTHAM MASS. MARCH, 1961.
3. ALL AREAS SHOWN HATCHED ON THE DREDGING PLAN ARE TO BE DREDGED TO ELEVATION -35.
4. ●12-4, INDICATES BORING LOCATION AND LOG NUMBER.



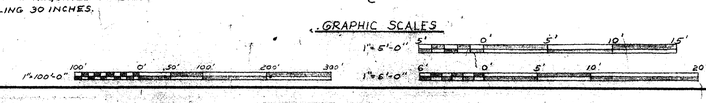
BORING DATA

VERT. SCALE: 1"=6'-0"

NOTES:

1. BORINGS B-21 & B-22 MADE BY C.L. GUILD CONSTRUCTION CO., INC. MAY-JUNE 1956
2. ALL OTHER BORINGS TAKEN PRIOR TO APRIL 1954.
3. BORINGS TAKING PRIOR TO ORIGINAL DREDGING FOR PIER 1. (1954-1955)
4. FIGURES IN RIGHT HAND COLUMN INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE SAMPLE PILING ONE FOOT USING 140 POUND WEIGHT FALLING 30 INCHES.
5. 9-4 - BORING NUMBER
6. ** - PUSHED PIPE DOWN

GRAPHIC SCALES



PWC DWG NO. 17582-182

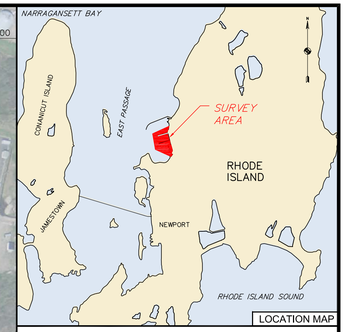
EFD NO. NBN-233/S-2		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NORTHEAST DIVISION BOSTON, MASS.	
DES BREEN	FIRE PROT		
DR BREEN	SAF ENGR		
CHK BREEN	SAN ENGR		
SUP CADIGAN		PUBLIC WORKS CENTER NEWPORT, R.I.	
PROJ ENGR Santos		PIER NO.1 EXTENSION DREDGING PIER 1 AREA	
DIRECTOR SEDDON			
APPROVED 4/10/64 DATE		CODE IDENT NO 80091	SIZE F
EFD FOR COMMANDER NFEC		FEC DRAWING NO. 121,902	
		SCALE GRAPHIC	CONST. CONT. NO. N62464-67-C-0311
		SPEC 83565/67 NBY 3.3565	SHEET 2 OF 17

17582-182

N 164,000
E 376,000
E 378,000
E 380,000
N 162,000
N 160,000

CODDINGTON COVE,
NARRAGANSETT BAY

NAVAL STATION NEWPORT,
RHODE ISLAND



LOCATION MAP

LEGEND

29 MINOR CONTOUR

30 MAJOR CONTOUR

DEPTH (MLLW)

FEET: 0, 10, 20, 30, 40

DATUM INFORMATION:

MHW = 3.60'
NAVD 88 = 2.05'
NGVD 29 = 1.18'
MLLW

DISPLAYED TIDAL DATUMS, MEAN HIGH WATER (MHW), NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29), AND MEAN LOWER LOW WATER (MLLW) WERE PROVIDED BY THE NATIONAL GEODETIC SURVEY.

NOTES

1. GRID SYSTEM IS IN FEET AND IS THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM, NAD 83.
2. DEPTHS ARE IN FEET AND ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW) BASED ON BENCHMARK "560" WHICH HAS AN ELEVATION OF 13.12 FEET NGVD 29 AS PROVIDED BY LOUIS FREDERICI ASSOCIATES. THE PLANE OF NGVD 29 IS 1.18 FEET ABOVE THE PLANE OF MLLW. DEPTHS WERE DEVELOPED FROM ONE FOOT BY ONE FOOT BINNED DATA WITH THE AVERAGE DEPTH WITHIN EACH BIN POSTED IN THE CENTER OF THE BIN.
3. CONTOURS ARE IN FEET AND WERE GENERATED USING "QUICKSURF" OPERATING WITHIN AUTODESK "AUTOCAD".
4. SHORELINE AND ONSHORE FEATURES ARE APPROXIMATE AND WERE TAKEN FROM DIGITAL ORTHOPHOTO QUADRANGLES FLOWN IN 2009 AND OBTAINED FROM THE USGS SEAMLESS DATA WAREHOUSE.
5. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A MULTIBEAM SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 25-27 MAY AND 3 JUNE 2011 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

SURVEY VESSEL:	ECHOSOUNDER:
R/V ABLE	RESON SEABAT 8125

NAVIGATION SYSTEMS: APPLANIX POS MV IN REAL TIME KINEMATIC MODE

SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 2010

SURVEY PROCESSING SOFTWARE: HYPACK MULTIBEAM EDITOR VERSION 2010

SCALE: 1"=200'

200 0 200 400 600

CHECK GRAPHIC SCALE BEFORE USING

OCEAN SURVEYS, INC.
OLD SAYBROOK, CONNECTICUT
(860) 388-4631
www.oceansurveys.com

PREPARED FOR: TETRA TECH NUS, INC.

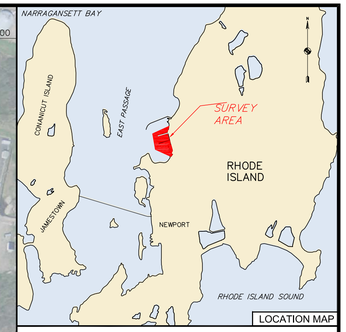
DEPTH CONTOURS
MULTIBEAM HYDROGRAPHY
CODDINGTON COVE
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

PROJECT MANAGER:	SURVEY DATE:	PROJECT NUMBER:	
J. WETMUR	25-27 MAY, 3 JUNE 2011	11ES036	
DRAFTED BY:	DATE:	DRAWING:	SHEET:
A. RIZZO	23 JUNE 2011	1	1 OF 1

N 164,000
E 376,000
E 378,000
E 380,000
N 162,000
N 160,000

NAVAL STATION NEWPORT,
RHODE ISLAND

CODDINGTON COVE,
NARRAGANSETT BAY

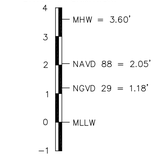


LOCATION MAP

DEPTH (MLLW)
FEET
0
10
20
30
40

SHADED RELIEF INFORMATION:
SUN
SUN POSITION
ALTITUDE: 45°
AZIMUTH: 10°

DATUM INFORMATION:



DISPLAYED TIDAL DATUMS, MEAN HIGH WATER (MHW), NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29), AND MEAN LOWER LOW WATER (MLLW) WERE PROVIDED BY THE NATIONAL GEODETIC SURVEY.

NOTES

1. GRID SYSTEM IS IN FEET AND IS THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM, NAD 83.
2. DEPTHS ARE IN FEET AND ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW) BASED ON BENCHMARK "560" WHICH HAS AN ELEVATION OF 13.12 FEET NGVD 29 AS PROVIDED BY LOUIS FREDERICI ASSOCIATES. THE PLANE OF NGVD 29 IS 1.18 FEET ABOVE THE PLANE OF MLLW. DEPTHS WERE DEVELOPED FROM ONE FOOT BY ONE FOOT BINNED DATA WITH THE AVERAGE DEPTH WITHIN EACH BIN POSTED IN THE CENTER OF THE BIN.
3. SHORELINE AND ONSHORE FEATURES ARE APPROXIMATE AND WERE TAKEN FROM DIGITAL ORTHOPHOTO QUADRANGLES FLOWN IN 2009 AND OBTAINED FROM THE USGS SEAMLESS DATA WAREHOUSE.
4. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A MULTIBEAM SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 25–27 MAY AND 3 JUNE 2011 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

SURVEY VESSEL:	ECHOSOUNDER:
R/V ABLE	RESON SEABAT 8125
NAVIGATION SYSTEMS:	
APPLANIX POS MV IN REAL TIME KINEMATIC MODE	
SURVEY ACQUISITION SOFTWARE:	
HYPACK VERSION 2010	
SURVEY PROCESSING SOFTWARE:	
HYPACK MULTIBEAM EDITOR VERSION 2010	

SCALE: 1"=200'
200 0 200 400 600
CHECK GRAPHIC SCALE BEFORE USING

OCEAN SURVEYS, INC.
OLD SAYBROOK, CONNECTICUT
(860) 388-4631
www.oceansurveys.com

PREPARED FOR: TETRA TECH NUS, INC.

SHADED RELIEF MAP
MULTIBEAM HYDROGRAPHY
CODDINGTON COVE
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

PROJECT MANAGER:	SURVEY DATE:	PROJECT NUMBER:	
J. WETMUR	25–27 MAY, 3 JUNE 2011	11ES036	
DRAFTED BY:	DATE:	DRAWING:	SHEET:
A. RIZZO	23 JUNE 2011	2	1 OF 1

MARINE AND FRESHWATER
SURVEY SERVICES

OCEAN SURVEYS, INC.
129 MILL ROCK ROAD EAST
OLD SAYBROOK, CT 06475
TEL. (860) 388-4631 FAX (860) 388-5879
www.oceansurveys.com

23 June 2011

Mr. Stephen S. Parker
Tetra Tech NUS, Inc.
250 Andover Street
Wilmington, MA 01887

SUBJECT: OPERATIONS REPORT (OSI REPORT NO. 11ES036)
MULTIBEAM HYDROGRAPHIC SURVEY
CODDINGTON COVE
NAVAL STATION NEWPORT, NEWPORT, RI

Dear Mr. Parker:

During the period 25-27 May and 3 June 2011, Ocean Surveys, Inc. (OSI) conducted a multibeam hydrographic survey within Coddington Cove, Naval Station Newport, Newport, RI. The objective of this investigation was to develop full bottom coverage of the harbor floor within the study area to generate bottom contours and surficial imagery. This letter report outlines the procedures and instrumentation employed during the survey.

SUMMARY OF FIELD INVESTIGATION & EQUIPMENT

Upon arrival on site, a Trimble MS 750 Real Time Kinematic Global Positioning System (RTK GPS) base station was established over the control point "Log 1, Base 2" which is a drill hole set into a concrete foundation situated on the north side of a small, ruined pier in the southeast corner of Coddington Cove. The coordinates of 'Log 1, Base 2" were derived by Louis Federici Associates and provided to OSI by Tetra Tech. Based on the known and the measured position of the RTK GPS base station reference antenna, the base unit generates correctors for each GPS satellite in view and transmits these values via radio modem to the shipboard RTK GPS unit. The shipboard RTK GPS unit employs the correctors in calculating position data with a manufacturers stated 1 cm horizontal and 2 cm vertical accuracy.

The coordinates of "Log 1, Base 2" as well as supplementary project control, also provided by Tetra Tech, were referenced horizontally to the Rhode Island State Plane Coordinate System, NAD 27, US Survey Feet. Project control was referenced vertically to the National Geodetic Vertical Datum of 1929 (NGVD29), Feet. The control point positions were converted to the horizontal and vertical datums used during data acquisition: Rhode Island State Plane Coordinate System, NAD 83, US Survey Feet and North American Vertical Datum of 1988 (NAVD88), Feet. The control point coordinates and elevations are provided in Tables 1 and 2 below.

Table 1
Project Control XYZ

STATION	NORTHING	EASTING	ELEVATION
	RI State Plane, NAD27, Feet		NGVD29, Feet
Log 1, Base 1, Nail	160768.87	551465.00	10.12
Log 1, Base 2, DH	160875.11	551435.44	13.12

Table 2
Converted Project Control XYZ

STATION	NORTHING	EASTING	ELEVATION
	RI State Plane, NAD83, Feet		NAVD88, Feet
Log 1, Base 1, Nail	160808.86	379685.06	9.24
Log 1, Base 2, DH	160915.11	379655.50	12.24

Survey operations were conducted from OSI's *R/V Able*, a 25-foot boat equipped with an array of survey and support equipment. A Real Time Kinematic Global Positioning System (RTK GPS) receiver, integral to the internal navigation electronics, was installed on the survey vessel. Communications between the vessel RTK GPS and the reference station GPS were made possible via radio link. This integrated 3-dimensional precision positioning system provided the field team with the ability to navigate the survey vessel precisely along pre-plotted tracklines throughout the survey area and the ability to correct soundings for water level variation. The vertical and horizontal accuracy of the positioning system was verified daily by comparing the observed position of the positioning system with the known coordinates of a control point provided by Tetra Tech.

A summary of the primary equipment installed on the survey vessel and employed to complete this investigation follows:

- Applanix POS MV, Version 4, Position and Orientation System (heave, pitch, roll, heading)
- Trimble RTK-GPS integral to the POS MV (vessel navigation)
- Trimble MS750 RTK-GPS interfaced to a Pacific Crest radio link (base station)
- HYPACK 2010 PC-based navigation and data-logging software package
- Reson SeaBat 8125 ultra high resolution multibeam echosounder
- Sea-Bird SBE19 CTD profiler for water mass speed of sound determination (water column)
- Sea-Bird SBE37 MicroCat sound velocity sensor (sound velocity determination at multibeam transducer face)

Before commencement of multibeam sounding operations, the sound velocity profile of the local water mass speed of sound was determined by means of a CTD cast. In addition to developing sound velocity profile information, real-time sound velocity determination at the transducer face was accomplished by means of the velocity sensor affixed directly to the multibeam transducer.

A sensor alignment test or "patch test" was preformed prior to survey operations. Initially, the precise vertical and horizontal offsets between multibeam system components (echosounder transducer, position-orientation system) were physically measured. Once the physical offsets were stored in the data collection platform, the required patch test data were acquired and analyzed to determine the system roll, pitch, and heading biases along with any navigation timing errors. The angular and timing values, along with water level (discussed below) and water column sound velocity profile information, were subsequently used during data processing to determine the final depth and position of each sounding.

Upon determination of all physical, angular, and timing offsets by means of the various methods described above, a "QA Performance Test" was carried out per specifications in the U.S. Army Corps of Engineers (ACOE) Hydrographic Surveying Manual "EM 1110-2-1003." Per the ACOE manual, "The performance test is used to evaluate the quality and confidence of multibeam data being collected. This test typically compares overlapping data sets from two different multibeam surveys, performed by either the same or different vessels."

The test consists of two phases. First, a "performance surface" is created by means of executing a small survey run over a flat area. Multiple runs (~400% overlap) are performed during development of the performance surface. The performance surface data are cleaned and bin-averaged into 1-foot by 1-foot cells resulting in an accurate (free from sensor alignment bias artifacts due to data density and averaging) and dense XYZ data set describing seafloor elevations. Next, a series of "multibeam check lines" is run over the performance surface. These data are input to the HYPACK Beam Angle Test program, which compares multibeam check lines to the performance surface and estimates the depth accuracy of the multibeam system at different beam angle limits. The estimated accuracy is used to determine if the multibeam system meets project requirements.

In the case of this survey, a performance surface was established on 25 May 2011 and a set of performance test values was derived the same day. On 3 June 2011 a second set of multibeam check lines were compared to the performance surface generated on 25 May and performance test values were derived. The 3 June check lines were collected at a time when the water level and water column sound velocity profile were different than during acquisition of the 25 May performance surface data. In both test cases each of the ACOE test parameters; depth outliers, mean bias, and standard deviation were considered. The quality of the data tested exceeded the most stringent accuracy requirements specified in the ACOE manual. Table 3 below presents the results of the QA performance tests as well as the ACOE standards for these QA/QC criteria.

Table 3
Performance Surface Beam Angle Test Results

Statistical Quantity Per Beam Angle Group	25 May Result	3 June Result	ACOE Maximum Allowed
Mean Difference (Reference Surface – Check Line)	0.01-0.04 ft.	0.02-0.03 ft.	0.1 ft.
Depth Standard Deviation (1-σ)	±0.08 ft.	±0.10 ft.	------
Depth Accuracy At 95% Confidence	±0.17 ft.	±0.19 ft.	±0.5 ft – 1.0 ft.

The depth measuring accuracy of the echosounder was confirmed by means of a daily "bar check". The bar check procedure consists of lowering an acoustical target on a graduated sounding line to the deepest practical depth. The target is then raised to successively shallower depths and the displayed digital depths noted.

During the course of the survey, the water column velocity profile was monitored by means of additional CTD casts and all observed changes in sound speed (as a result of changing tidal currents and temperature, etc.) recorded. During post processing, sound velocity profile data were applied to the multibeam soundings yielding maximum accuracy in the resulting depth data.

Sounding data were reduced to the NAVD 88 vertical datum based on RTK GPS water levels. The vertical accuracy afforded by the RTK GPS system (2 cm manufacturers' stated accuracy) allows for the collection of precise water level information. Water level values were recorded at the location of the survey platform as the vessel was maneuvered along each survey transect.

The data collection and processing software package HYPACK 2010 allows the surveyor to record the vertical component of the vessel RTK GPS solution by placing this value in the project raw data file while bathymetric data are being recorded. Procedurally, a measured vertical offset (height of the antenna over the water surface) is applied to the RTK GPS solution during data collection. Thus the elevation of the water surface is derived based on the vessel's RTK GPS antenna height.

Vessel RTK GPS water level values were compared to a physically measured water level value at least twice daily. Procedurally the vertical distance from the water surface to a control point provided by Tetra Tech was measured and the water level calculated. The calculated water level value was compared to a simultaneously observed RTK GPS water level to confirm the accuracy of the RTK GPS-derived value.

The survey site was centered on Pier 1 in Coddington Cove and extended approximately 300 feet north of Pier 2 and 2,000 feet south of Pier 1 (see Figure 1). Multibeam soundings were collected along a set of parallel tracklines oriented roughly parallel to Piers 1 and 2 and the coastline. The trackline plan consisted of lines offset at intervals intended to result in over 100% ensonification of the harbor floor. Additionally, shoreline features and near-shore shallow areas were mapped with the multibeam transducer oriented in a "side-looking" configuration. Multiple vessels were tied up alongside Piers 1 and 2 limiting the full coverage of the seafloor below these vessels. A large gap in multibeam coverage on the north side of Pier 1 is attributed to the *USS Saratoga*, an aircraft carrier permanently moored at the Newport Navy Base. A small gap in multibeam coverage along the north side of Pier 2, located approximately at 41-31-51 N, 71-18-55.5 W, denotes the location of the NOAA Ship *Henry B. Bigelow*, which was tied to the pier for the duration of data acquisition.

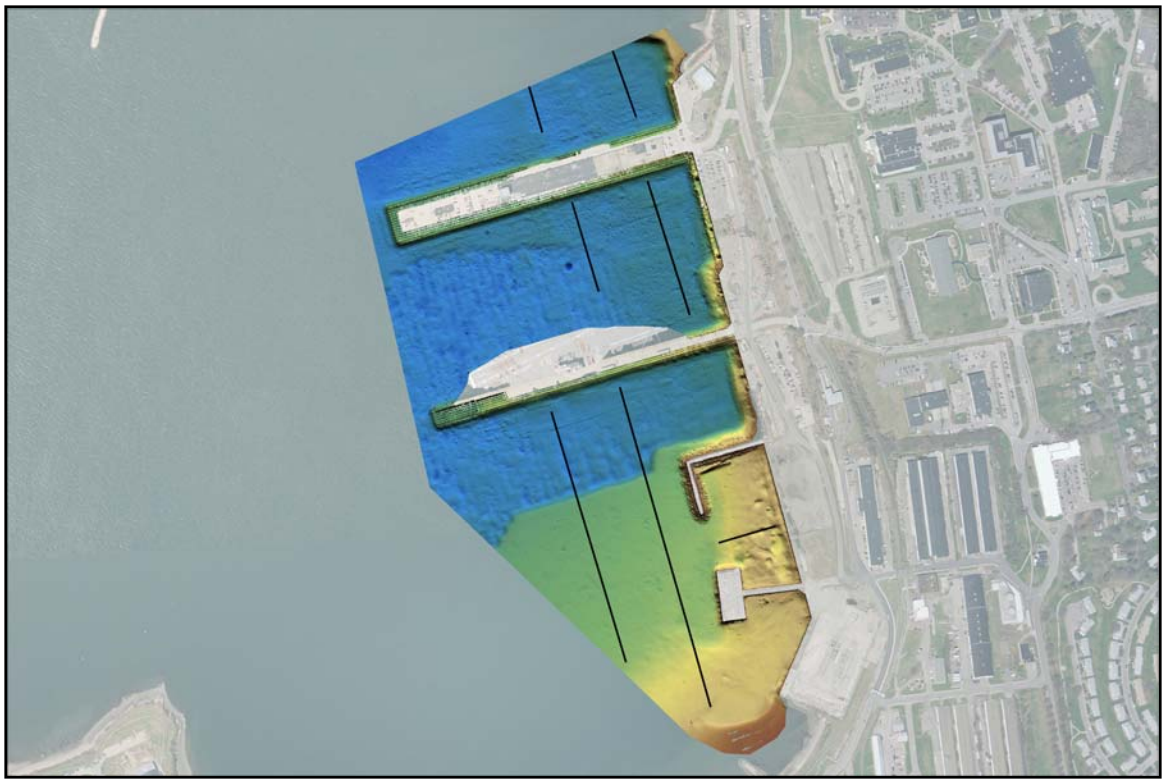


Figure 1. Coddington Cove Coverage Area. A 1-foot x 1-foot surface colored by depth is shown with an aerial photo of the survey area in the background. The location of the QA cross check lines are overlain on the surface in black.

To further evaluate the data quality and multibeam system setup, seven (7) QA cross check lines, "tie" lines, were acquired on a line plan perpendicular to the mainscheme multibeam survey lines (see Figure 1). Data from each tie line were compared to an XYZ data set generated from the mainscheme survey lines using the HYPACK Beam Angle Test program. Table 4 presents the results of the QA cross check line tests as well as the ACOE standards for these QA/QC criteria.

Table 4
Cross Check Line Beam Angle Test Results

Statistical Quantity Per Beam Angle Group	Tie Line 1636_1	Tie Line 1639_2	Tie Line 1657_5	Tie Line 1702_3	Tie Line 1708_5	Tie Line 1713_6	Tie Line 1854_7	ACOE Maximum Allowed
Mean Difference (Reference Surface – Check Line)	(-0.01) - 0.01 ft.	0.00 - 0.01 ft.	(-0.03) - (-0.07) ft.	(-0.03) - 0.02 ft.	(-0.09) - (-0.07) ft.	(-0.08) - (-0.05) ft.	(-0.04) - (-0.01) ft.	0.1 ft.
Depth Standard Deviation (1-σ)	±0.10 ft.	±0.11 ft.	±0.11 ft	±0.11 ft	±0.09 ft	±0.10 ft	±0.11 ft	------
Depth Accuracy At 95% Confidence	±0.19 ft.	±0.20 ft.	±0.21 ft.	±0.21 ft.	±0.17 ft.	±0.19 ft.	±0.21 ft.	±0.5 ft. – 1.0 ft.

DATA PROCESSING

Following completion of the field surveys, raw data files and records were returned to OSI's headquarters in Old Saybrook, Connecticut where data processing tasks were completed.

Procedurally, the raw multibeam data files for each trackline were sequentially loaded into the HYPACK 2010 MB Max multibeam editor. Within the editor, raw data files, consisting of multibeam range and beam information, water level, water column velocity profile, vessel position and attitude information, were "cleaned" (edited) to eliminate invalid sensor data or "fliers" using automated and manual editing tools. After the sensor data were cleaned datum-corrected X, Y, Z data points were computed. Final data products are horizontally referenced to Rhode Island State Plane, NAD 83, US Survey Feet, and vertically referenced to local Mean Lower Low Water (MLLW), feet. The plane of vertical datum NGVD29 is 1.18 feet above the plane of MLLW.

Sounding X, Y, Z data points were contoured using the QUICKSURF TIN Model program. Plan view depth contours with a 1-foot interval are presented on Drawing 1. Bottom contours were developed from 1-foot by 1-foot binned data with the average depth within each bin posted in the center of the bin. A shaded relief map colored by depth with a cell resolution of 1 foot by 1 foot is presented on Drawing 2. Drawings are provided as paper copies as well as AutoCAD DWG files, which are included with a sounding X, Y, Z file on a project DVD.

OSI appreciates the opportunity to support Tetra Tech on this project and we look forward to continuing this working relationship in the future. If you have any questions regarding any aspect of this survey, or we can be of service on other survey efforts, please do not hesitate to contact me.

Sincerely,

Bonnie L. Johnston
Hydrographer, Ocean Surveys, Inc.

BLJ/lf
Enclosures

C2 CURRENT, WAVE, AND TIDAL ANALYSIS – NOVEMBER 2011

Coddington Cove, Narragansett Bay RI
Current, Wave and Tidal Analysis
September, 2011

ROGUE WAVE FIELD SERVICES AND OCEAN DATA TECHNOLOGIES
NOVEMBER, 2011

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Introduction

Acoustic Doppler current profilers (ADCPs) were installed within Coddington Cove (Figure 1) for an approximate 17-day period in early September 2011. Ten (10) locations were instrumented (Figure 2), each ADCP was mounted in a fixed frame on the seabed, and with few exceptions measured tidal elevation, water temperature, current profiles, and surface waves. The units were deployed September 1 and recovered about September 17. One station (GP05) was maintained until September 30. Station GP07 failed after 7 days of operation; however near-bottom data collected by this unit during these seven days appeared suspect and was therefore ignored.

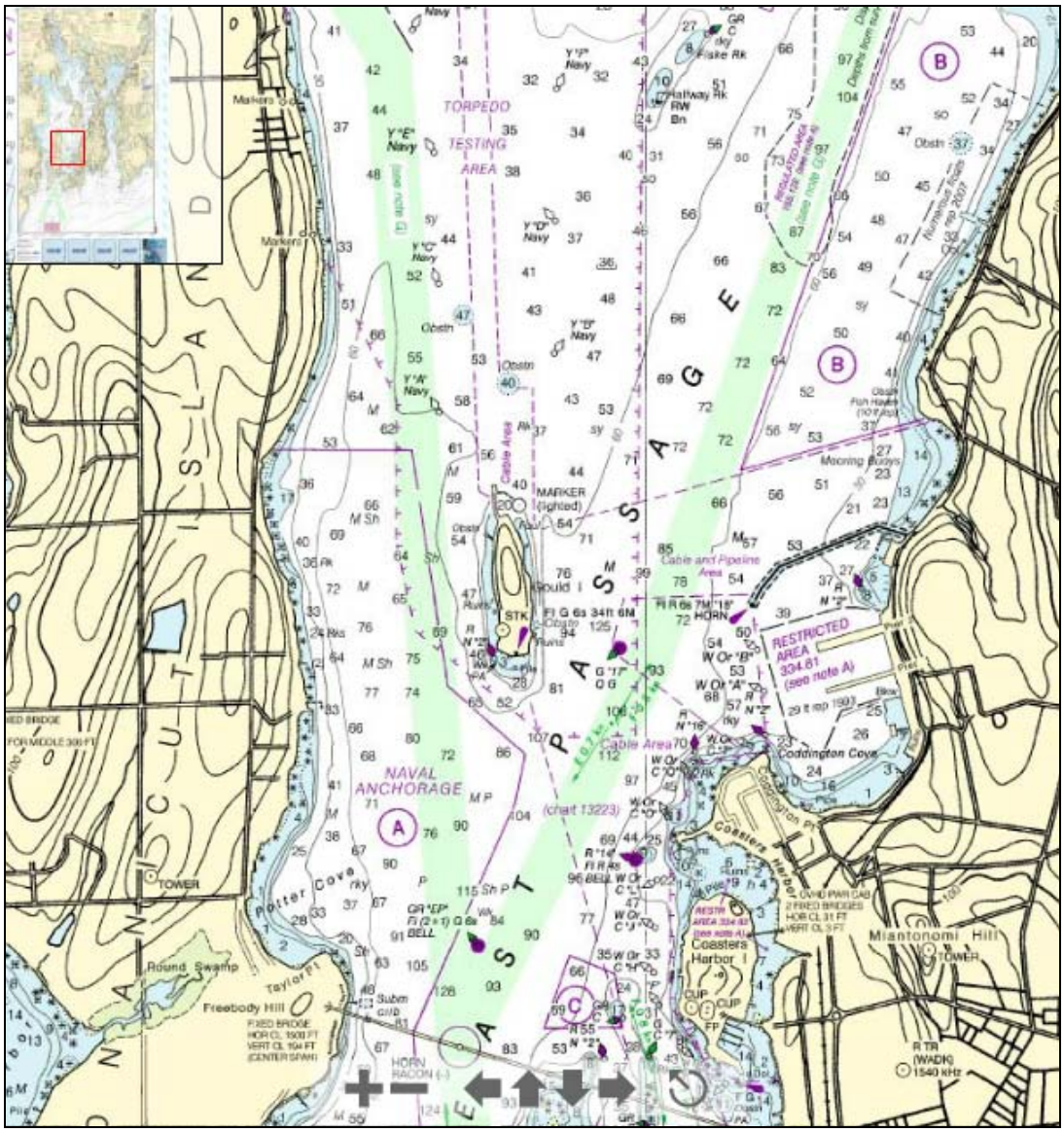

Figure 1: Nautical chart of the East Passage in Narragansett Bay and Coddington Cove on the eastern shore. The Cove's geometry and northern breakwater provides shelter from most directions, steering circulation and limiting wave energy.

The collected data are presented in this section. Because tides dominate circulation processes, tidal elevation data are presented initially, followed by currents and general circulation, then wind and waves. Finally, an analysis of the acoustic backscatter data and comparison to suspended sediment samples is presented. All data are presented graphically as well as summarized in tables of calculated statistics.

In general, there was little energy found within Coddington Cove; currents were weak and wave heights small. Tides dominated the circulation. Few wind events occurred during the deployment to induce mixing or other non-tidal responses. This is unsurprising given the Cove's geometry and physical barriers such as the breakwater to the north, which serves to shelter the Cove from physical processes occurring in the more energetic Narragansett Bay. Turbidity – as estimated by ADCP backscatter – appeared to be relatively low during this time period, with some evidence of elevated turbidity during wind events.

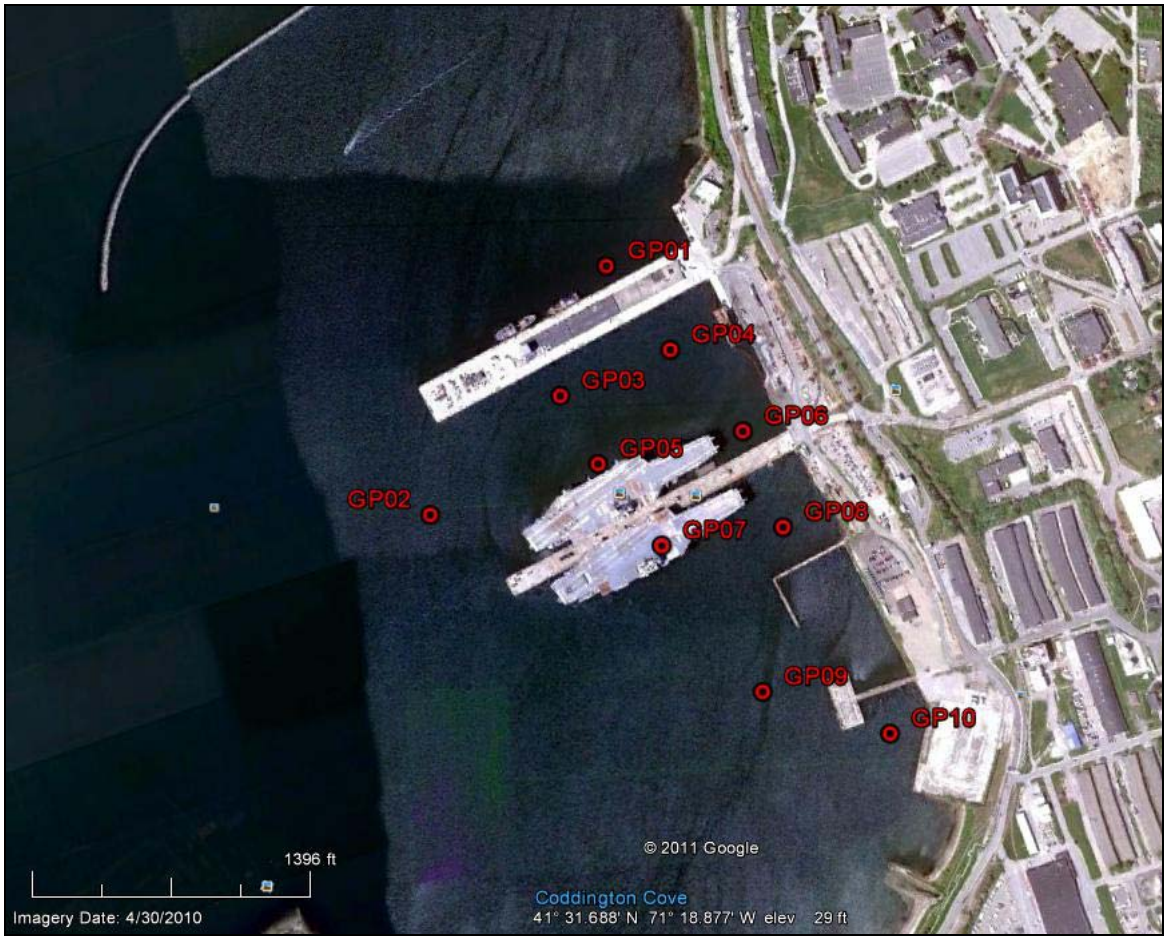

Figure 2: Location of the ten (1) ADCP stations, deployed from September 1 to September 17. Location GP05 was deployed for 30 days. The aircraft carriers shown in this photograph were not present during the deployment.

Methods

On September 1, 2011, Rogue Wave Field Services (RWFS) and TG&B deployed 10 bottom mounted RDI Acoustic Doppler Current Profilers (ADCP) at several locations in the vicinity of the former Director's Shipyard in Coddington Cove, RI. The instruments were deployed for 16 days prior to being recovered. All the instruments except for 1 (GP03) were able to measure water column profiles of both current speed and direction, and wave height and direction. Because of the difficulty in obtaining 10 wave ADCPS during that time of year we obtained permission from the client and were authorized to deploy 1 non wave ADCP which only measures currents. Two frequencies of ADCPs were used, (1200 and 600 kHz), both with high enough resolution for the measurements that were being obtained in that depth of water. Figure 2 shows the ADCP deployment locations and Table 1 provides the station coordinates as well as the water depth at each station.

On September 17th 9 of the 10 instruments were recovered using SCUBA divers without any difficulty. Station GP05 which was deployed just north of the USS Saratoga eluded the divers despite there being 4 dives to recover the instrument. Station GP05 was recovered September 30th.

Station Number	North	West	Water Depth (ft.)
GP01	41 31.8677	71 18.9297	30
GP02	41 31.6998	71 19.1749	42.5
GP03	41 31.7728	71 19.0088	38
GP04	41 31.7899	71 18.8808	39
GP05	41 31.7110	71 18.9723	42
GP06	41 31.7123	71 18.8222	38
GP07	41 31.6346	71 18.9351	40
GP08	41 31.6286	71 18.8013	39
GP09	41 31.5002	71 18.8610	28
GP10	41 31.4449	71 18.7346	19

Table 1: ADCP Station Locations

Tidal Elevations

Tides dominate circulation processes within Coddington Cove. The tide range was about 1.4 meters during spring tides; the neap tide range was approximately 0.8 meters (Figure 3).

Based on the 30+ day tide record from station 05 we were able to calculate the following constituent amplitudes (Table 2). The largest contributor to tidal variability is the lunar semi-diurnal (M2) tide with an amplitude of 0.51 meters. Surrounding semi-diurnal tides have lesser amplitudes, the solar S2 and lunar elliptic (N2), about 0.13-0.14 m. Diurnal tides K1 and O1 have amplitudes about an order of magnitude less than the lunar semidiurnal. Frictional overtides of the lunar semi-diurnal, the M4 tide, had an amplitude about twice the diurnal constituents (0.07m).

Table 2: Tidal Constituents in Coddington Cove (Location 5, 29+ day record)

Constituent	Symbol	Period (hours)	Amplitude (m)
Lunar Semi-diurnal	M2	12.42	0.51
Solar Semi-diurnal	S2	12.00	0.13
Larger lunar elliptic semi-diurnal	N2	12.66	0.14
Lunisolar Diurnal	K1	23.93	0.04
Principal lunar diurnal	O1	25.82	0.05
Shallow-water overtide of principal lunar	M4	6.21	0.07

Tidal modulation is the interaction/combination of the various constituents. The diurnal tidal inequality, which is manifest as one high tide being greater than the next high tide (i.e. the high-high tide and low-high tide each day), and the fortnightly spring-neap cycle are two examples of such tidal modulation. The semi-diurnal tide was an order of magnitude larger than the diurnal constituents, so the diurnal inequality therefore would be relatively small. At Coddington Cove, the diurnal inequality results with one high tide – on average – about 0.1-0.2 m higher than the succeeding high tide. Fortnightly spring-neap cycles result from modulation of neighboring semi-diurnal tides; tide range was about 1.4m during spring tide phase in early September and about 0.8m during the neap phase a week later.

Distortion of the tidal signal results from fictional effects as the tide propagates through the system. The frictional overtides such the M4 constituent will tend to shorten one phase of the tide cycle and elongate the next cycle. At Coddington Cove, the falling (ebb) tide was - on average - about 5.6 hours in duration. The rising (or flood) tide was much longer, approximately 6.8 hours in duration. The relative durations of the flood versus ebb cycles at Coddington Cove is in marked contrast to most estuarine tides in this region. Most estuaries have a longer falling/ebb tide, due largely to the longer time

required to drain water from marshes and other tidal areas, and a shorter rising/flood tide. As a consequence, flood tides normally feature much faster speeds than ebb tides since the same volume of water must be transported in/out of the embayment but over a shorter time period, hence a slightly faster flow. Estuarine systems with faster flood tides are referred to as 'flood-dominant' systems. In this case however the ebb tides are shorter and therefore faster, so based on this calculus Coddington Cove might be considered an 'ebb-dominant' system. The upshot of tidal distortion is that ebb-dominant estuaries will tend to flush particles/sediments from the system more readily since the faster ebb current speeds are more capable of initiating particle transport. Flood-dominant estuaries on the other hand tend to be a net trap for sediments.

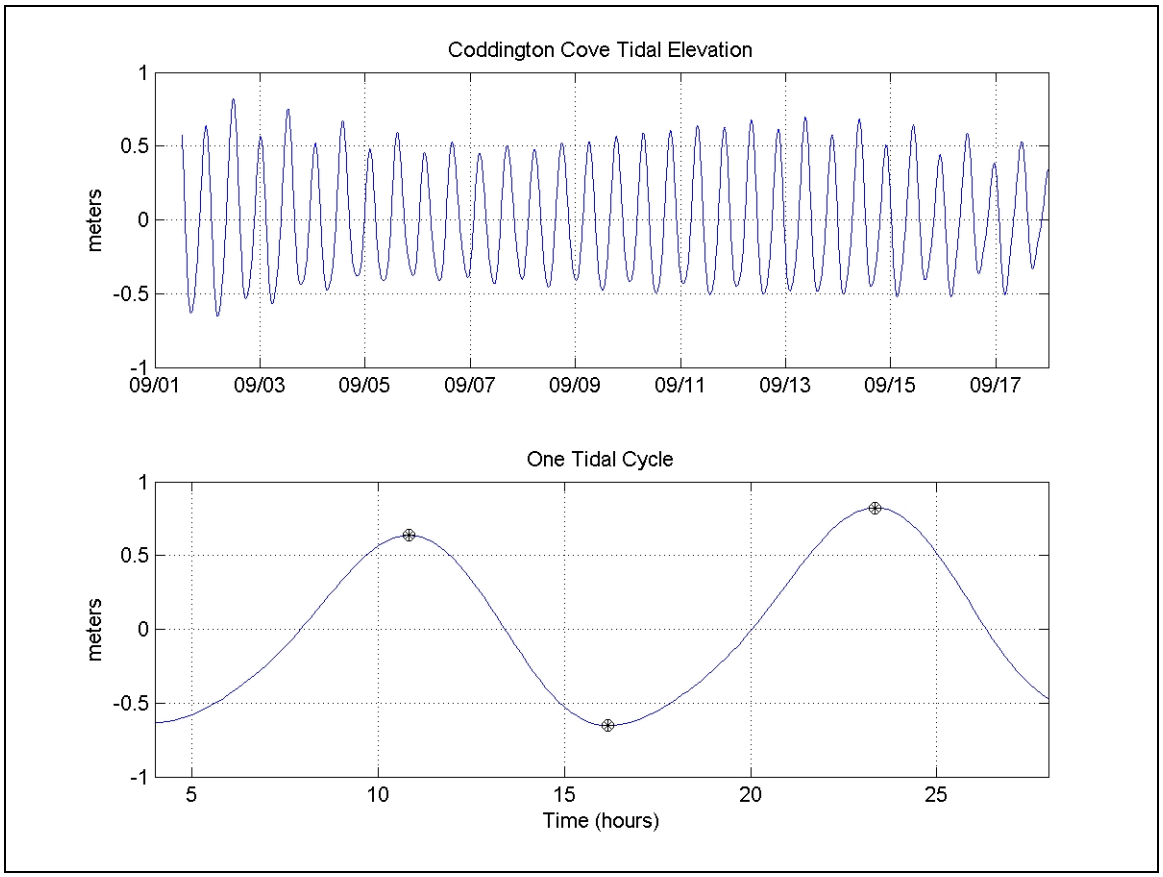

Figure 3: Tidal elevations in Coddington Cove from September 1 to September 17, 2011 (top plot). The bottom plot shows one (typical) tidal cycle distorted by shallow-water frictional processes. Markers show the top and bottom of the tide. The falling/ebb tide, about 5.6 hours in duration on average, was shorter than the rising/flood tide, which was about 6.8 hours in duration.

Currents and Circulation

Currents in Coddington Cove were dominated by tides, but due to Cove geometry and sheltering from the northern breakwater current speeds were quite weak throughout the deployment, never exceeding 40 cm/sec (about 0.8 knots). Wind effects on overall circulation were small during this time since few storms occurred during the deployment.

Current data are presented in total in Figures 4 through Figure 23. The graphics include color-contoured plots of current speed and direction, a high-resolution presentation at 10-minute samples and 0.25-m depth resolution. To the right of the color-contour plots are vertical profiles, the speed profile to the upper right and the current direction profile to the lower right. Both mean speed/direction and maximum speed /direction of the maximum speed profiles are presented. In addition, time series of the (averaged) near-surface and near-bottom layer speeds and directions are plotted. To the right of the time series graphs are simple scatterplots. These graphics provide a relatively complete view of the flow measurements at each location.

Table 3 and Table 4 present current statistics for each of the ten ADCP locations. The measurements were separated into two layers, the near-surface or upper half of the water column and the near-bottom (or lower half of the water column). The mean speed and direction for these layers at each station were calculated (as a true vector average), along with a reporting of the peak speed, direction of the peak speed, and the overall signal variance. The variance provides an indication of the overall current energy at each location.

A few details regarding the data processing should be noted. The ADCPs were mounted on the bottom, looking upward, and configured for small bins, generally about 0.25m bin sizes (i.e. vertical resolution). The ADCPs cannot measure very close to reflective boundaries – such as the sea surface – due to acoustic interference and associated side lobe reflections which overwhelm the current-measuring acoustic pulse. So the bins close to the surface become biased and therefore discarded. When this near-boundary bias is coupled with tidal elevation changes of ~0.8m to 1.4m, the uppermost bins that were measured reliably under all conditions were roughly ~2m below the mean sea surface. So the resulting near-surface layer – after discarding upper bins biased by interference and tidal variability – was centered roughly ~4m below the mean sea surface. The near-bottom measurements were centered roughly ~8m below mean water, or about 3m above the bottom. Each site was slightly different based on the actual water depth. For the shallow-water stations, 09 and 10, the near-surface means were centered 2.8m and 1.9m, respectively, and the near-bottom means centered 2.3 and 1.5m above the bottom.

The peak measured speed –after layer averaging was performed - within Coddington Cove was 29.3 cm/sec (about 0.57 knots), observed near the surface at Station 02. This maximum speed was towards the north-northeast (33°). Station 03, located northeast of Station 02, recorded a peak speed of 22 cm/sec toward the east-northeast. Station 2 had the greatest mean velocity (~3 cm/sec) and also the highest variance (energy). Station 3 was found to be the next most energetic, with variance about one-half that at Station 2. Station 9 was also relatively energetic, with a mean velocity of 2.3 cm/sec, and a variance measure about one-third of Station 02.

Station 02 also recorded the strongest bottom flows, 17.3 cm/sec, but this maximum current was oriented to the south-southeast, opposite the peak surface flow. Opposing surface and bottom flows were found at several locations. For example, the mean surface flow at Station 01 was westward while the mean bottom flow was ~northeastward. The same was true for Stations 03 and 05, the mean flows were opposite. This change of the mean flow directions between surface and bottom layers are highlighted in the color-contoured graphics. The right-hand plots are the maximum and mean current profiles, current speed shown as the top plot and current direction shown as the lower plot.

The direction and speed of currents measured at the various locations appeared dependent upon the particulars of each site. Unlike tidal elevations, which vary little between stations within the Cove, currents can vary significantly from one location to the next, primarily due to the presence of nearby structures and other flow barriers which steer the flow accordingly. Some sites were located near the piers, and hence observed flow was parallel to those pier structures. Other locations were closer to the shoreline, with flow generally parallel to that boundary.

In an attempt to visualize the general circulation patterns within the Cove, velocities at each location were sectioned, averaged, then overlaid as geo-referenced vectors on the shoreline and pier structures. Since tides were the dominant physical process, and tides are conveniently periodic, we sectioned the time series into discrete tidal cycles. A total of 30 tidal cycles occurred during the deployment. Each cycle was then divided into finite time periods: 1 hour after high water, 2 hours after high water, 3 hours after high water, then 3 hours before low water, 2 hours before low water, etc. Velocities measured at each location for these cycle sub-sections were grouped together and averaged, such that the ‘mean’ flow 1 hour after high water, 2 hours after high water, etc., could be visualized. This calculation was done for both the near-surface layer and the near-bottom layer. The mean tidal circulation patterns emerged from this analysis.

Figures 24 through 36 show the mean flow vectors at hourly increments of the tidal cycle. The left-hand plot depicts the surface layer circulation; the right-hand plots are the near-bottom vectors. The first increment, Figure 24, is for the time period 0-to-1 hour after low water and shows relatively strong flow eastward into the Cove. As the eastward flows meet the bulkheads on the shoreline it appears to split, most flowing southward parallel to shore but a small amount flowing northward (at Station 1). This general circulation pattern holds until 3-to-4 hours after low water (Figure 27), when the flow weakens about 2-to-3 hours before high water (Figure 28). As high water approaches the circulation

appears to turn westward, or drain from the Cove, continuing a westward trend 2 hours before high water until about 2 hours after high water. Currents appear to rotate northward about 1-to-2 hours before low water, then northeastward, then eastward to complete the cycle. Bottom currents follow the same general trends, albeit weaker than surface flow and – at times –in an opposite direction.

An interesting issue is the relative phase of tidal elevations and tidal velocities, particularly at Station 02 in the center of the Cove. Typically, high and low water are associated with slack currents, and peak tidal velocities are usually found at the half tides. Tidal velocities are generally a quarter cycle, or 90 degrees, out of phase with tidal heights. However it appeared surface velocity and height were 180 degrees out of phase, in other words, highest incoming velocities were found surrounding the time of low water. The greatest ebb velocities were observed during high water (Figure 37). Vertical stratification – differences between near-surface and near-bottom flow - may also play a role in this observation, as near-bottom flood/ebb velocities appeared to be in phase with tidal elevations.

The relative phase between tidal elevation and surface flood/ebb velocities seemingly contradicts the previous statement that Coddington Cove appeared to be an 'ebb-dominant' system. This assessment stemmed from the asymmetry of the tidal curve, noting that the flood tide duration was relatively longer than the ebb tide duration, and infers that higher outgoing ebb velocities will tend to flush particles from the system. A flood-dominant system would tend to be a net trap of particles. But Figure 37 – at Station 02 - shows that the incoming flood velocities were much greater than the ebb flows, at least in the near-surface layer at that one location. The explanation for this seemingly contradictory evidence must lie in spatial variability of the flow field. If Station 02 is experiencing strong incoming flow around low water – even as the water level continues to drop – then flow at other locations must be exiting the system. Outbound flow must be occurring at the edges of the entrance – Coddington Point or the corner of the northern breakwater– to balance the tidal elevation curve with overall velocities.

The complexity of the tidal wave traveling through the East Passage of Narragansett Bay – and the frictional characteristics affecting tidal asymmetry - must also be considered. Tidal energy at the entrance to the Cove is the forcing function governing responses within the cove. The East Passage is relatively deep compared with the tidal range, an approximate tidal amplitude/channel depth ratio of 1:10; estuaries with this ratio are nearly always ebb-dominant, and so the characteristics of Coddington Cove can be traced directly to tidal forcing in the East Passage which, unfortunately, was not monitored during this program.

Another useful tool for assessing sediment transport tendencies at various locations is progressive vector diagrams. These diagrams show the (theoretical) net drift path taken by an in situ particle based on bottom current speeds/directions. If the bottom speed was 10 cm/sec to the west, and samples were obtained every 10 minutes, a particle would travel – theoretically– 6000 centimeters westward over the sample interval. If the next measurement were 5 cm/sec to the north, then the particle would travel 3000 cm

northward from the previous point. Progressive vector diagrams therefore provide an indication of the net drift over the course of the deployment. These diagrams are shown for all stations as Figures 38 through 40. Figure 38 presents stations 01, 04, 06, and 08, all located in the northern nearshore areas. The net drift for 01, 06, and 08 is essentially southeastward parallel to the shoreline. Station 04 is eastward, into the shore. Station 02 (Figure 39) was southeastward also, but meandered in what appear to be tidal ellipses. Station 05 was eastward, along the pier, while Station 03 was westward, also parallel to the pier but in the opposite direction. This may suggest a counterclockwise circulation pattern between the two piers. Progressive drift at Station 09 was southwestward, parallel to the shoreline in that area, while Station 10 was northward, also roughly parallel to the shoreline.

Table 3: Near-Surface Flow Statistics

Station	Mean depth of Measurement	Mean speed (cm/sec)	Mean Direction (degrees)	Maximum speed (cm/sec)	Direction of Peak Speed	Variance $(cm/sec)^2$
01	3.9	0.6	270	9.6	358	9.28
02	4.0	2.9	32	29.3	33	62.13
03	3.9	1.6	80	22.2	61	34.65
04	4.1	0.3	111	16.9	339	18.79
05	4.4	0.4	257	12.9	83	13.58
06	3.8	0.2	82	13.7	17	17.48
07**	4.0	0.6	162	16.0	109	19.20
08	3.8	0.5	192	11.8	49	9.84
09	2.8	2.3	159	15.4	177	22.04
10	1.9	0.7	12	8.0	356	5.47

***Only 7 days of valid data were recorded*

Table 4: Near-Bottom Flow Statistics

Station	Mean depth of Measurement	Mean speed (cm/sec)	Mean Direction (degrees)	Maximum speed (cm/sec)	Direction of Peak Speed	Variance $(cm/sec)^2$
01	7.4	0.2	51	9.7	132	9.96
02	7.8	1.0	55	17.3	160	42.61
03	7.9	0.3	227	14.2	73	22.01
04	8.2	0.3	132	8.5	117	7.97
05	8.9	0.6	79	14.6	89	16.79
06	7.6	0.1	96	8.5	204	7.33
07**	7.3	1.1	245	12.3	102	14.36
08	7.8	0.3	203	7.3	77	4.59
09	5.6	1.4	172	12.6	177	19.46
10	3.2	0.8	5	8.6	28	4.95

***Only 7 days of valid data were recorded*

Table 5: Near-Bottom Temperature Statistics

Station	Depth of Measurement	Mean Temperature (deg C)	Minimum Temperature	Maximum Temperature
01	11.1	20.09	19.21	21.50
02	11.4	19.60	18.74	20.58
03	10.9	20.12	19.16	21.49
04	11.1	19.94	19.01	21.27
05	12.0	19.94	19.08	20.99
06	10.4	19.97	18.93	21.44
07**	11.0	20.29	19.42	21.12
08	10.7	20.14	19.15	21.48
09	7.9	20.46	19.34	21.88
10	4.7	20.78	19.63	22.13

***Only 7 days of valid data were recorded*

Waves and Wind

The shoreline and north breakwater shelter Coddington Cove from long-fetch waves from nearly every direction; the exception the western entrance open to the East Passage. Yet westerly fetch is also limited to a few miles by Gould and Conanicut Islands (Jamestown), which limits wave field development. The Cove geometry, coupled with the lack of significant wind events over the two-week measurement period, resulted in very low-amplitude wave observations. Low signal energy resulted in variable/noisy wave period and wave direction calculations, which is common in low signal-to-noise environments. Maximum significant wave heights were less than 0.4 meters; rarely did the significant wave height exceed 20 cm. Wave time series are shown as fFigures 42 through 50.

Sites 09 and 10 featured the largest waves, occurring September 16 when winds shifted from the southwest to the north (Figure 41) and increased to approximately 10 m/s (~20 knots). Wave period were about 3 seconds – locally generated wind waves – from the west and northwest. These northerly winds must have created south-propagating waves in Narragansett Bay which bent around the breakwater and impacted the southern nearshore sites. This event appeared to be the only notable wave event.

Table 6 (below) tallies various statistics for each site: peak Hs, most common wave period, mean wave direction, and total wave variance. Peak Hs is the maximum significant wave height observed during the deployment, 0.37m, at location 09. Wave period mode refers to the most common wave period (after filtering out data when wave heights were less than 5 cm); generally waves were very short, typical of sheltered areas. The mean wave direction was calculated (correctly) as a vector-mean. Total variance was calculated as the sum of all waves, using the relationship Hs=4*sqrt(Variance), and represents the summed energy of all waves during the deployment. This value suggests Site #5 was the most energetic location, followed by Sites 3, 4, and 9.

Table 6: Wave statistics

Site	Peak Hs (meters)	Wave Period Mode (most frequent occurrence, seconds)	Mean Wave Direction (vector mean)	Total Variance (sum of all waves)	Percent Hs>5 cm	Percent Hs>10 cm
01	0.27	7.7	196	0.09	24.7	8.6
02	0.23	1.8	304	0.06	19.2	6.0
04	0.19	2.3	234	0.11	40.1	10.7
05	0.32	2.4	235	0.18	37.5	10.3
06	0.23	8.2	16	0.06	26.4	4.4
07	0.16	2.2	269	0.10	94.4	11.7
08	0.19	8.2	83	0.05	22.5	3.4
09	0.37	2.3	300	0.11	36.2	8.8
10	0.24	8.2	134	0.06	23.5	3.1

Turbidity and Backscatter

ADCPs record echo amplitude as well as current information, where echo amplitude is a measure of the loudness of the returning acoustic pulse. A louder echo, or higher echo amplitude, generally indicates the presence of a higher concentration of sound scatterers within the water column. Once adjusted for sound absorption, attenuation, distance and other factors, echo amplitude is used to calculate relative acoustic backscatter, which when calibrated properly can be used as a proxy indication of suspended sediment. Figure 51 and Figure 52 present the near-bottom average backscatter time series for all locations. There does appear to be some dependence of backscatter on wind events during the deployment, particularly at Stations 09 and 10 where wave heights were elevated on September 16.

Water samples were obtained at each of the ten ADCP stations in an attempt to calibrate ADCP backscatter data with total suspended solids (TSS). Sampling was performed on three occasions: September 1, September 6, and September 17. Each water sample was obtained approximately 1 meter above the seabed. The purpose of this comparison was to determine how well backscatter can be used as an indicator of absolute suspended sediment concentrations to provide quantitative measures of concentrations where/when water samples were not obtained. It should be noted that the backscatter data from one specific ADCP cannot be compared directly to backscatter from another, different ADCP unit, even if the units operate at the same frequencies. For this reason, each ADCP was calibrated using the three bottle sample points; three points are considered the minimum required for a reasonable calibration. Some problems were encountered during the calibration. In many cases, the depth of the bottle sample was deeper than the first ADCP bin, so the first ADCP bin was chosen for. These depth errors were as small as 20 cm in some cases but as large as 3 meters in others, always with the ADCP backscatter estimate at the shallower depth. Secondly, on a few occasions the time of the bottle sample was either before the ADCP was deployed on September 1 or after the ADCP had been recovered on September 17, so an exact match in time was impossible. In these cases, the closest valid ADCP measurement was used for comparison.

Physical conditions on these sampling days were mild. Bottom currents were less than 10 cm/sec, except for locations 02 and 03 where currents were slightly greater than 10 cm/sec. Wave heights were less than 10 cm. Conditions did not appear sufficient to initiate sediment suspension in the water column. As a result, both measured TSS and backscatter signals were relatively low, indicating little suspended material in the water column at the time of sampling.

Water samples collected at all stations were linked to the respective ADCP backscatter data to identify the precise ADCP time/ensemble/depth for each water sample. One ADCP backscatter value was determined for each water sample. For each water sample, the average ADCP backscatter values across all four acoustic beams were calculated. Because backscatter measurements are dependent upon the volume/size of sound scatters (i.e. the combination of suspended sediments, fish, plankton, detritus, vegetation, even air bubbles), the data can be biased significantly by non-sediment sources. As a quality

assurance indicator the standard deviation of average value of backscatter values was determined. Low variance indicated the average value was valid. High variance within the sample neighborhood indicated backscatter values varied considerably in both time and space, and that the sample may not be suitable for inclusion into the calibration procedure. No samples were discarded due to high variance, although variations of ~20 dB were found for some units, which is an unusually high spread. These high spreads were caused by high counts on individual beams, perhaps due to interference with nearby structures or inherent differences in the individual transducers.

Since ADCP backscatter is a logarithmic function of echo amplitude, backscatter data were plotted against the natural log of TSS for comparison at each site. This log-linear plotting procedure follows that of Battisto and Freidrichs (2002). Regression coefficients were determined between ADCP backscatter and log(TSS) to gauge the goodness-of-fit between the two quantities. Regression values of 1 indicate the calibration fit accurately predicts 100% of the true TSS signal. Regression values less than about 0.6 indicate poor calibration results. Only three stations: 01, 02, and 06 had regression coefficients indicating reasonable calibration.
TSS estimates from the two sites with the best calibration results, stations 02 and 06 with R^2 values better than 90%, are presented as Figure 53. These estimates were obtained from the backscatter-water sample calibration coefficients (after transforming TSS back from the natural log values). These estimates suggest TSS values ranging from near zero to ~20 mg/L. TSS values at Station 02 were relatively constant throughout the deployment, about 7 mg/L, not surprising given the lack of strong currents and/or wave events that might cause sediment transport. Station 06 showed much more variability, particularly brief, abrupt spikes (which suggest noise or passing fish), although there was some correlation to wind/wave events such as the increase in TSS on September 16 when wave heights were greatest. TSS values spiked above 20 mg/L during this event.

Table 7: Total Suspended Solids versus ADCP backscatter

Station	Depth of sample (m)	ADCP Backscatter (dB)			TSS Water Sample (mg/L)			Regression Fit (R^2)
		Sept-01	Sept-06	Sept-17	Sept-01	Sept-06	Sept-17	
01	10.7	70.42	72.30	71.21	8.0	2.0	9.0	0.77
02	12.2	71.93	69.32	67.79	6.4	6.8	7.6	0.90
03	11.0	65.69	63.52	60.12	9.6	7.6	7.6	0.63
04	11.0	81.63	73.13	78.89	26.0	6.4	6.4	0.56
05	11.9	77.27	73.80	75.85	19.0	5.6	36.0	0.52
06	10.7	76.59	74.36	76.77	7.6	4.4	8.0	1.00
07**	11.3	-	-	-	13.0	8.4	18.0	-
08	10.7	80.92	78.24	81.69	12.0	9.2	7.6	0.01
09	7.9	77.82	72.07	72.83	12.0	35.0	8.0	0.14
10	4.9	77.05	75.27	90.86	4.4	8.0	6.0	0.01

*** Instrument malfunction prevented backscatter comparisons at Station 07*

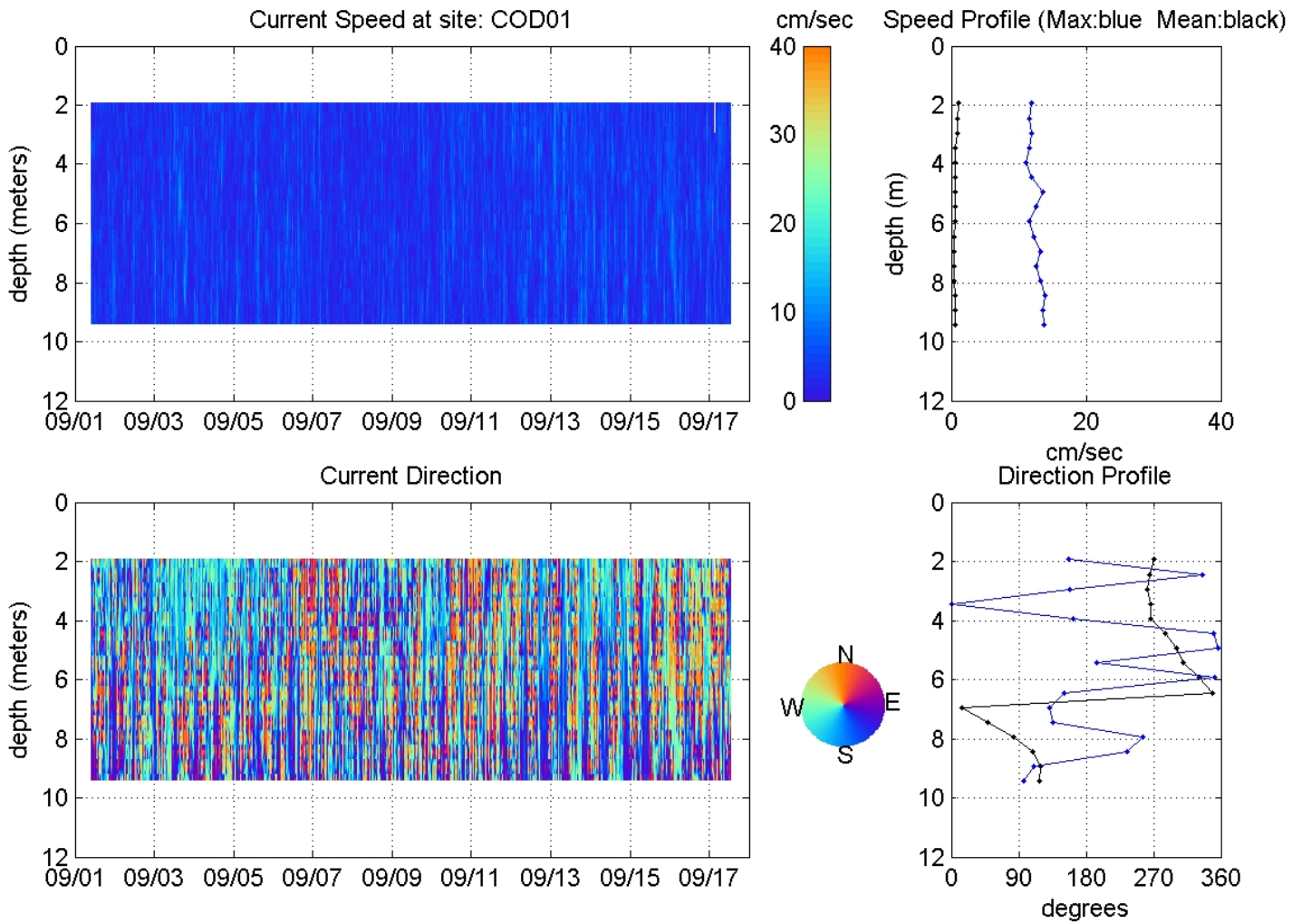

Figure 4: (Right) Color panels of current speed and direction at site COD01. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

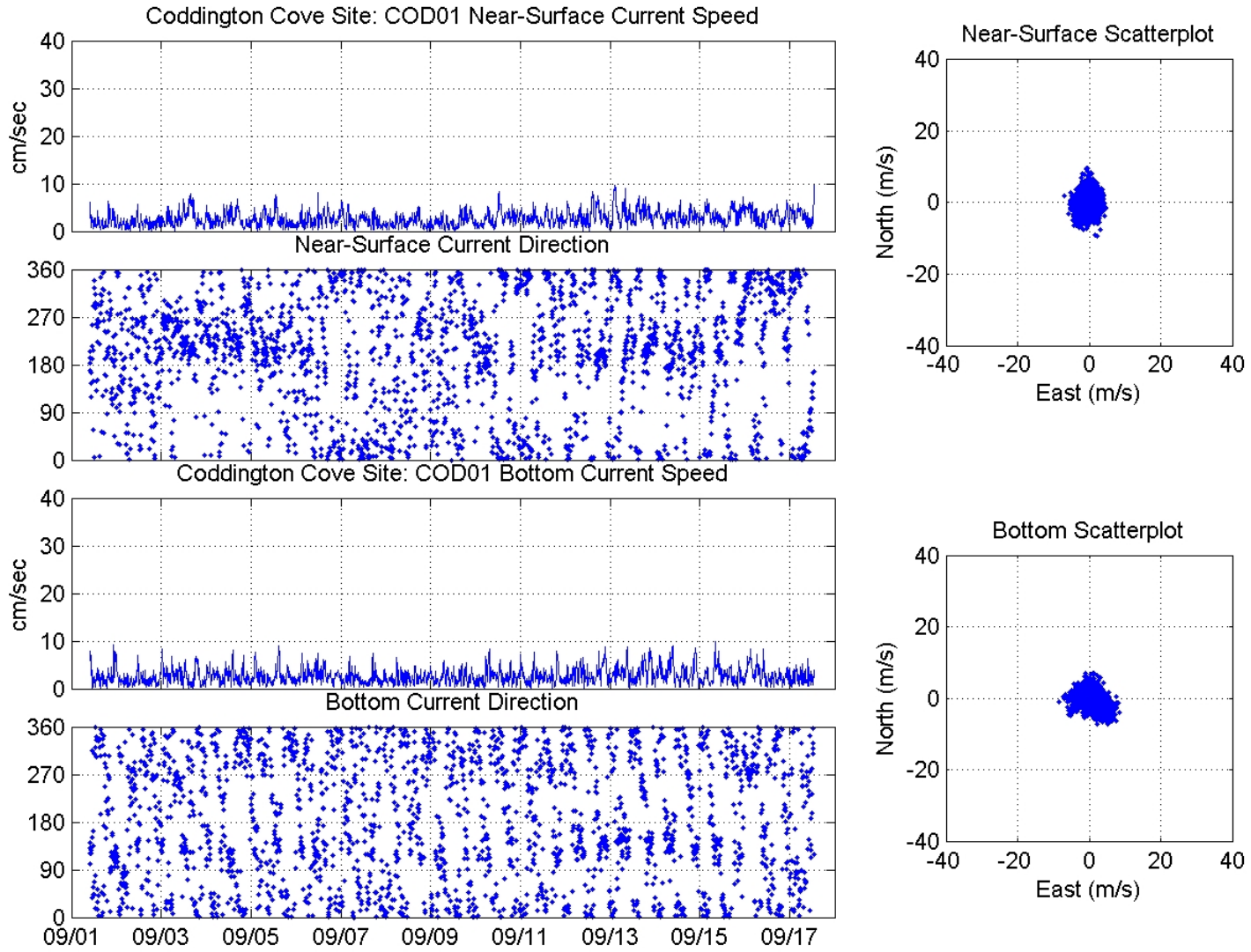

Figure 5: (Right) Time series of current speed and direction at site COD01. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

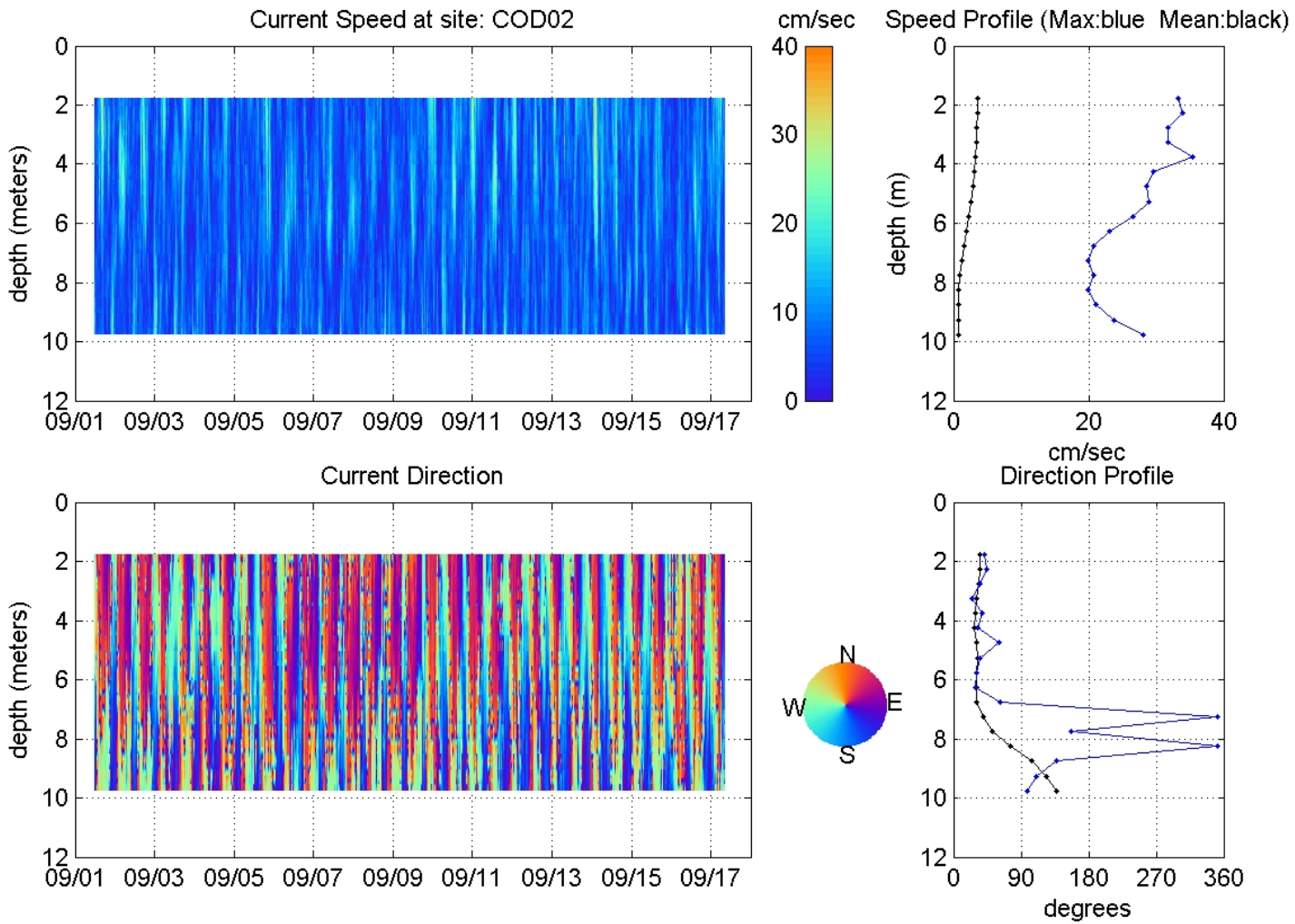

Figure 6: (Right) Color panels of current speed and direction at site COD02. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

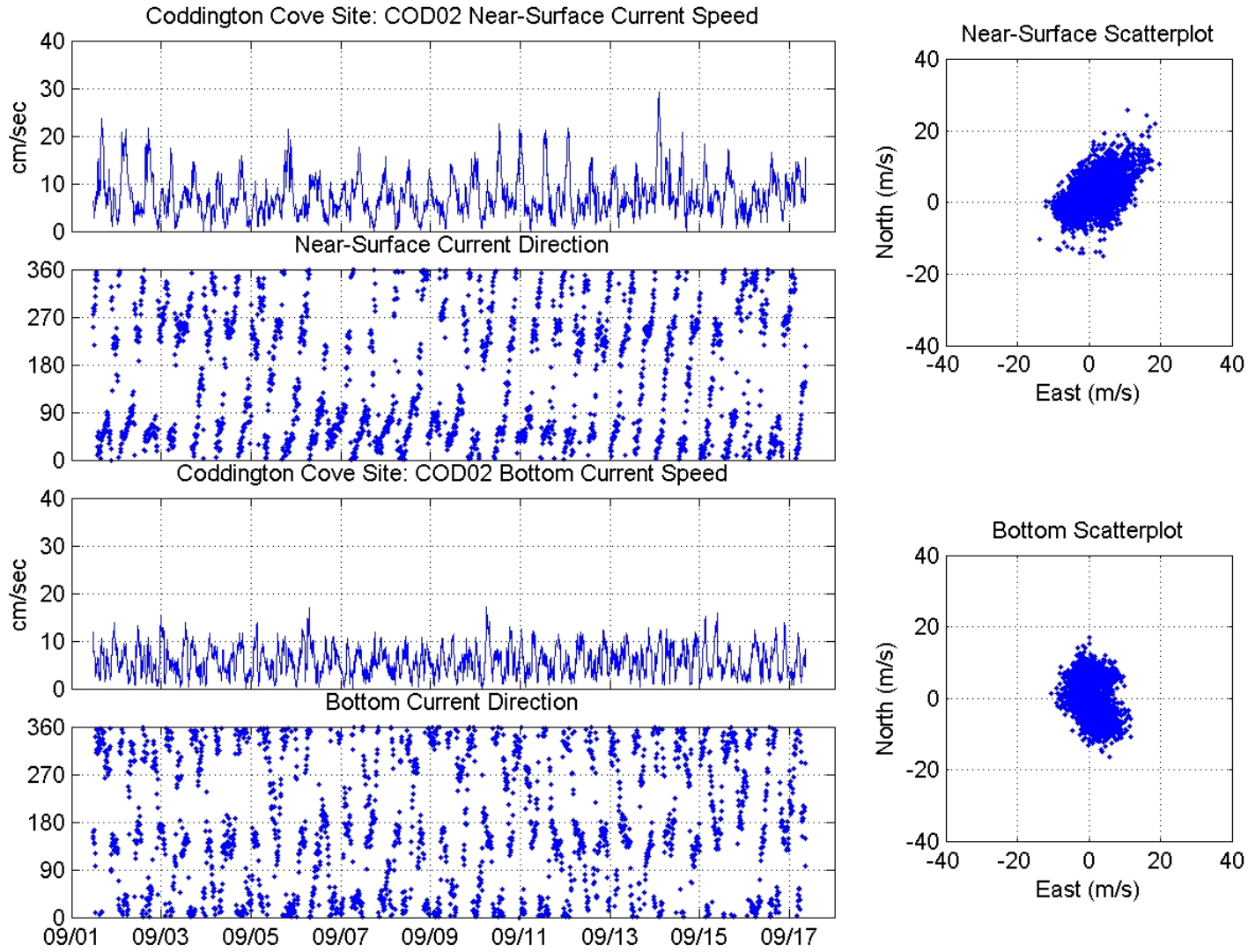

Figure 7: (Right) Time series of current speed and direction at site COD02. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

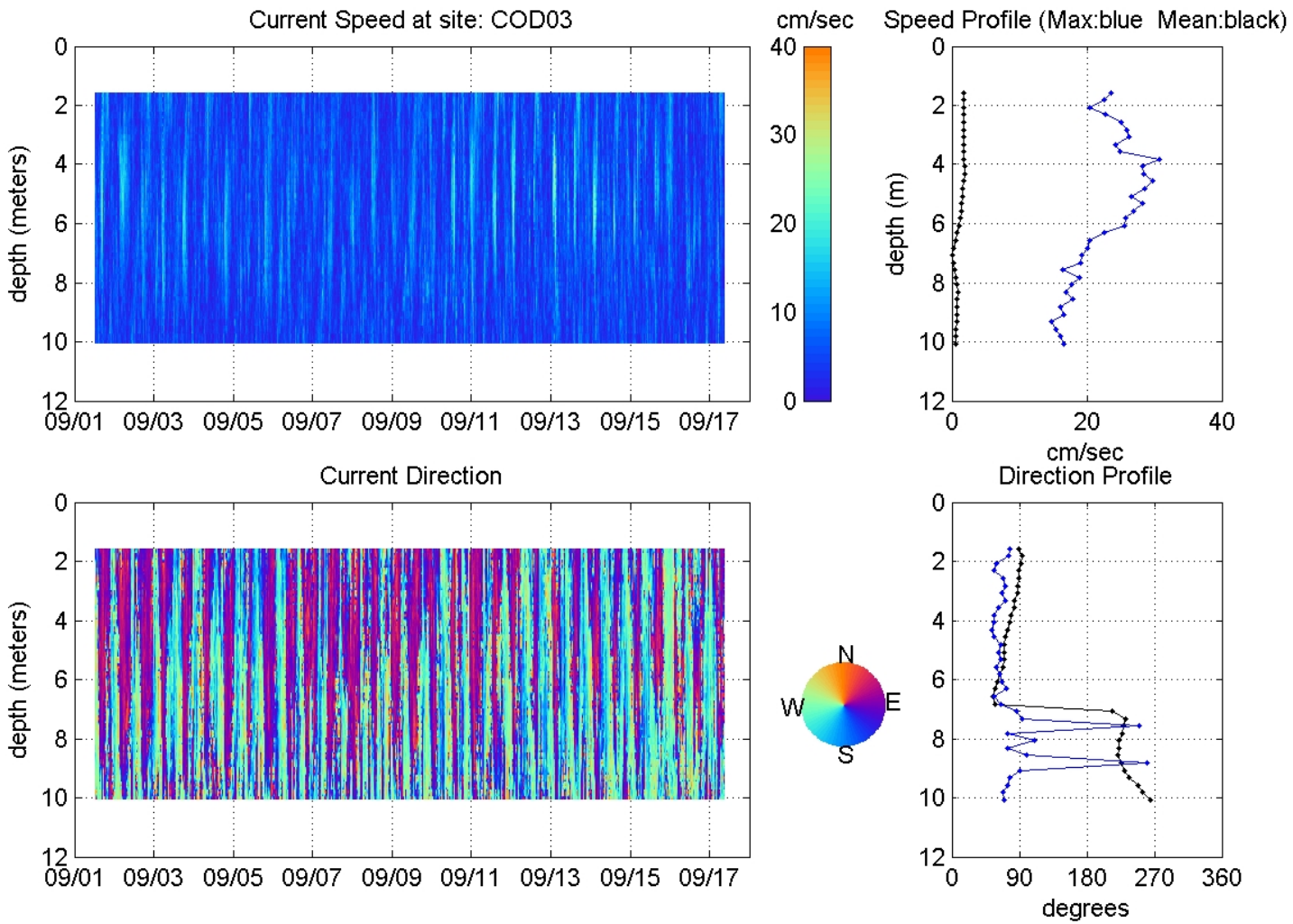

Figure 8: (Right) Color panels of current speed and direction at site COD03. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

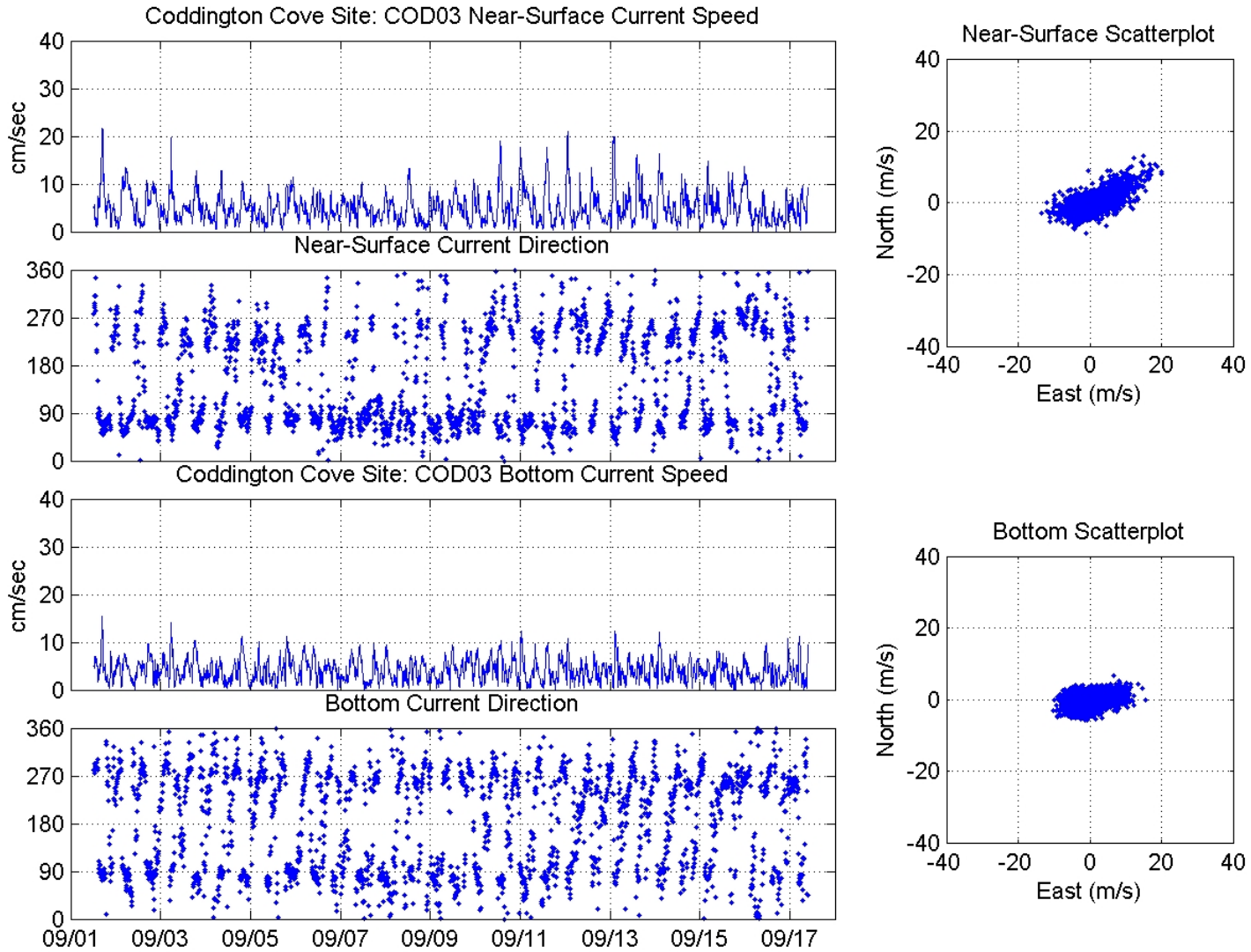

Figure 9: (Right) Time series of current speed and direction at site COD03. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

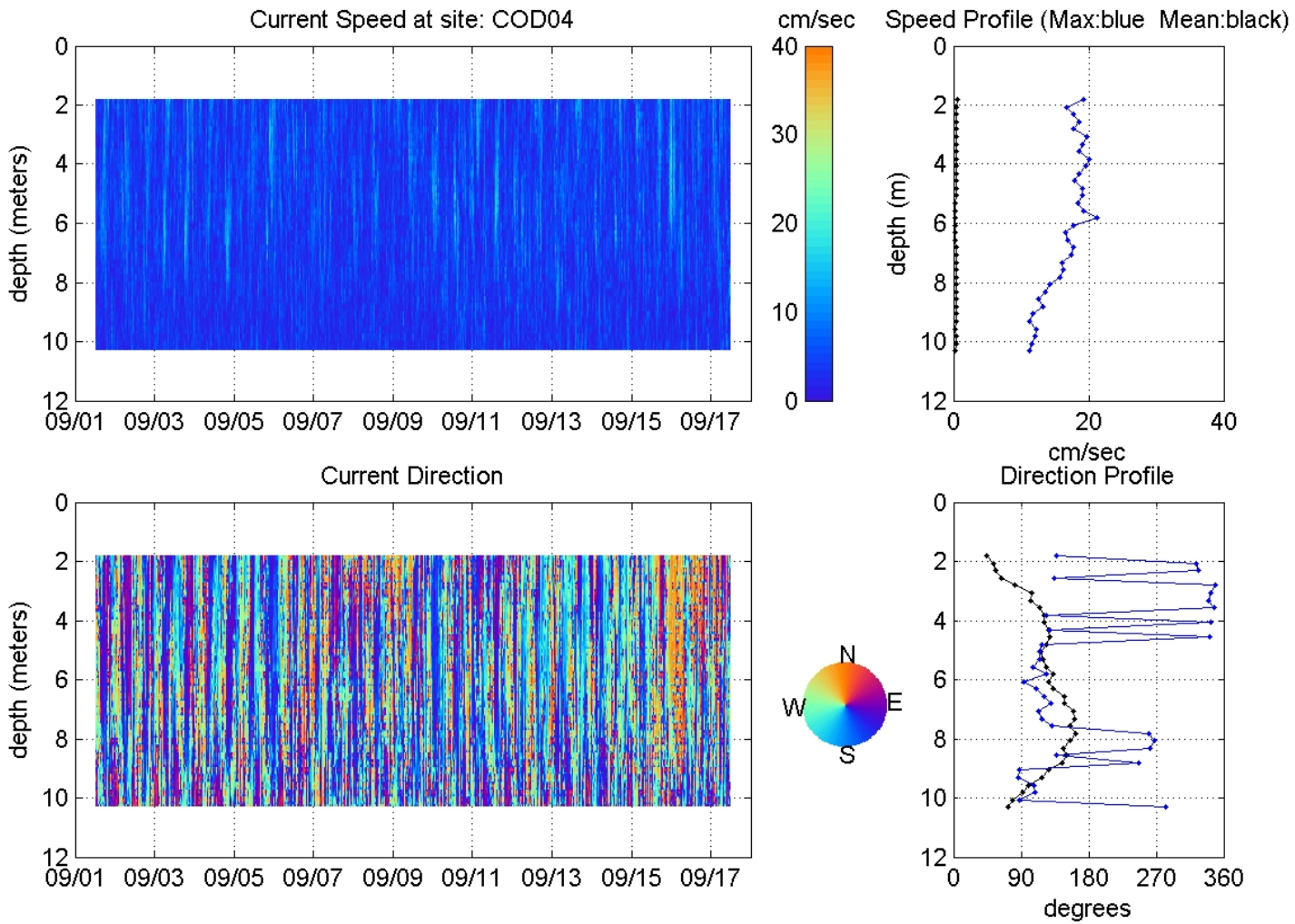

Figure 10: (Right) Color panels of current speed and direction at site COD04. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

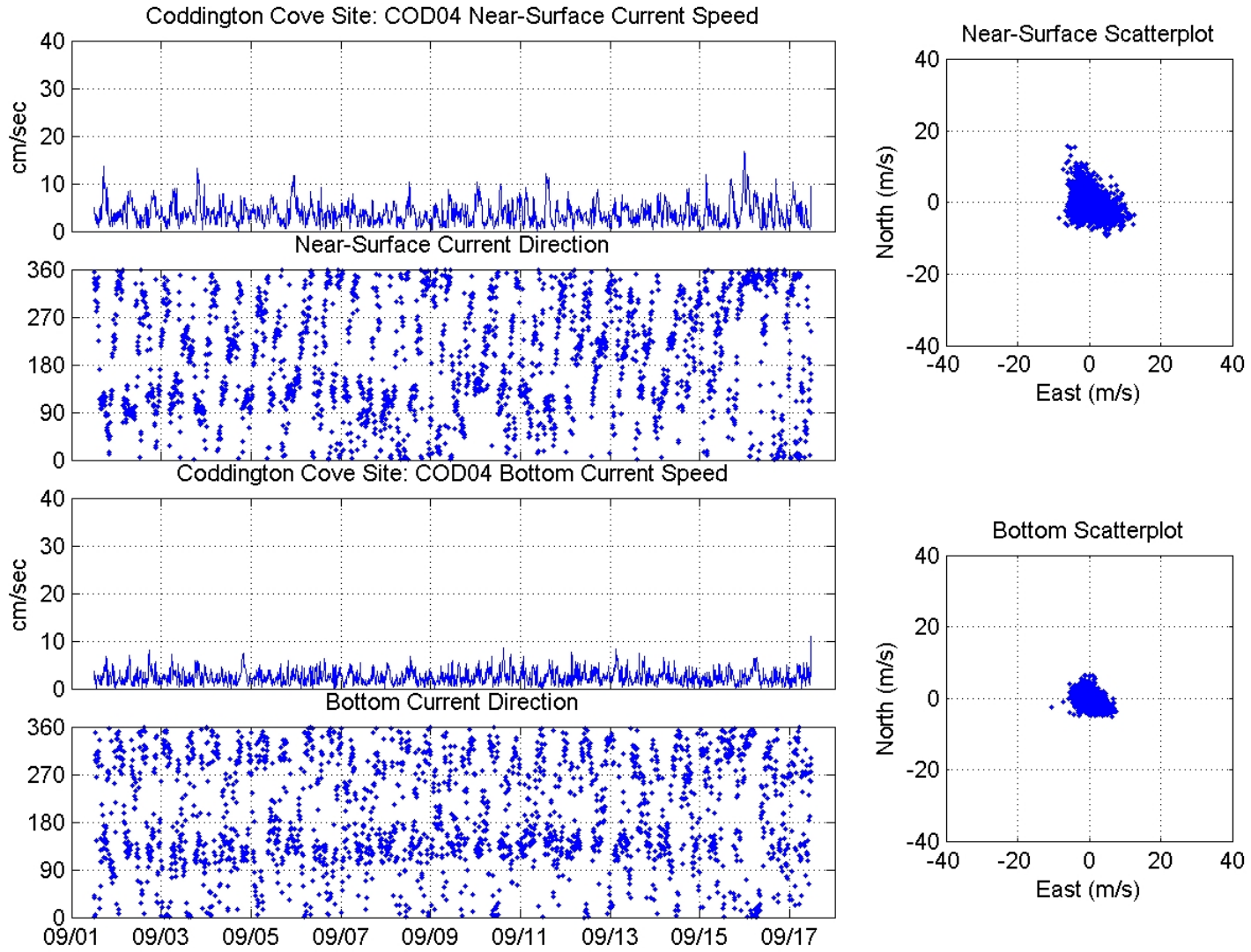

Figure 11: (Right) Time series of current speed and direction at site COD04. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

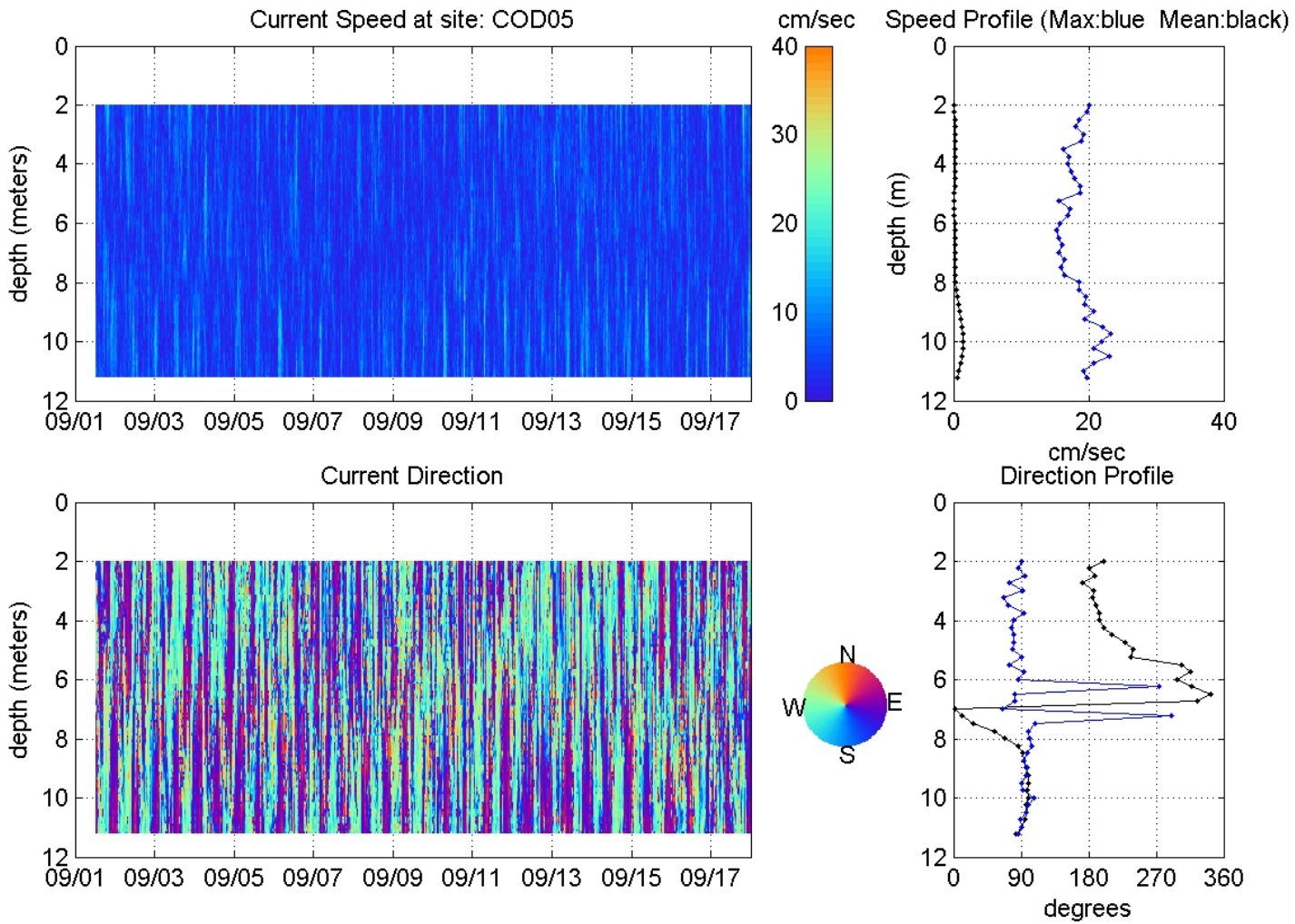

Figure 12: (Right) Color panels of current speed and direction at site COD05. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

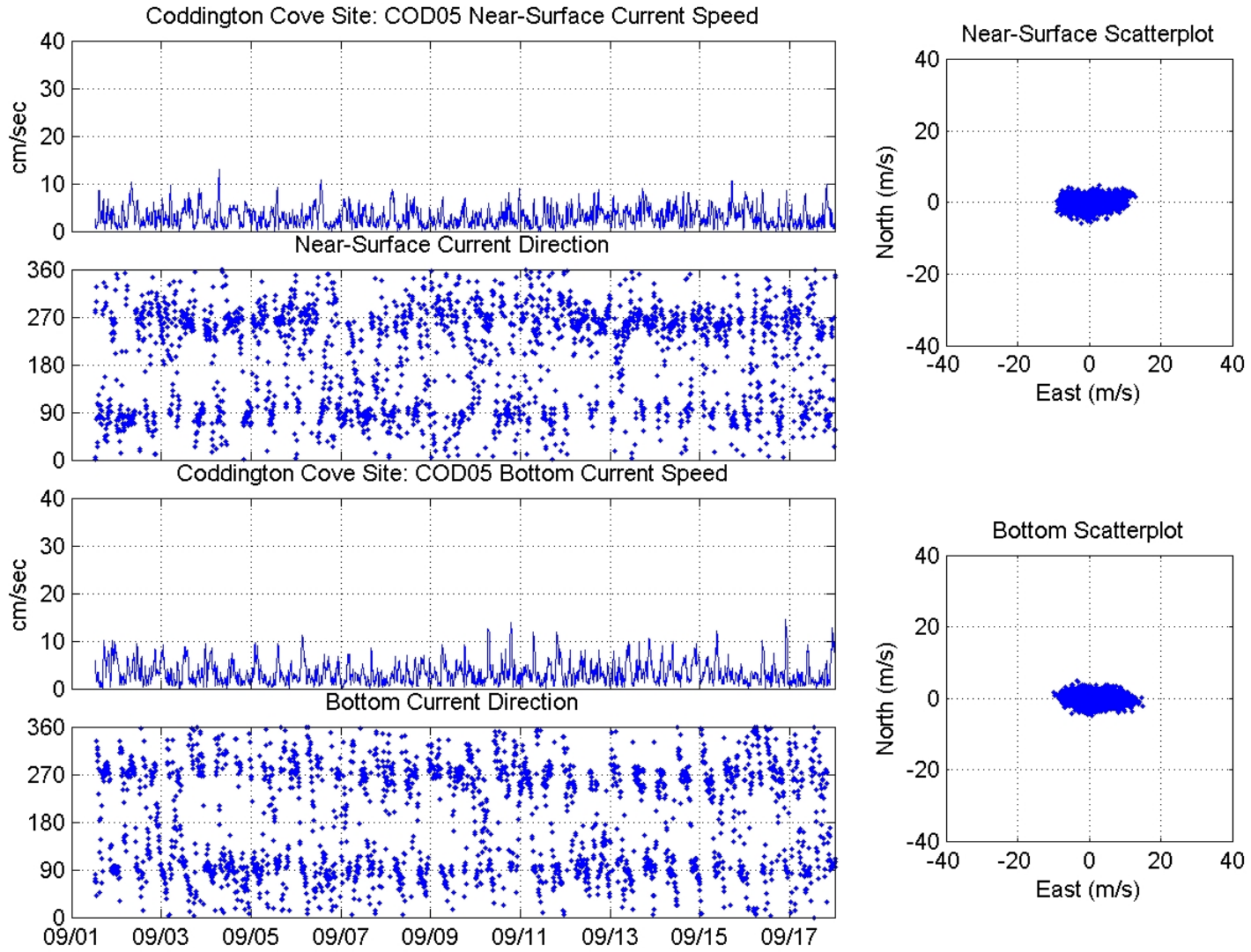

Figure 13: (Right) Time series of current speed and direction at site COD05. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

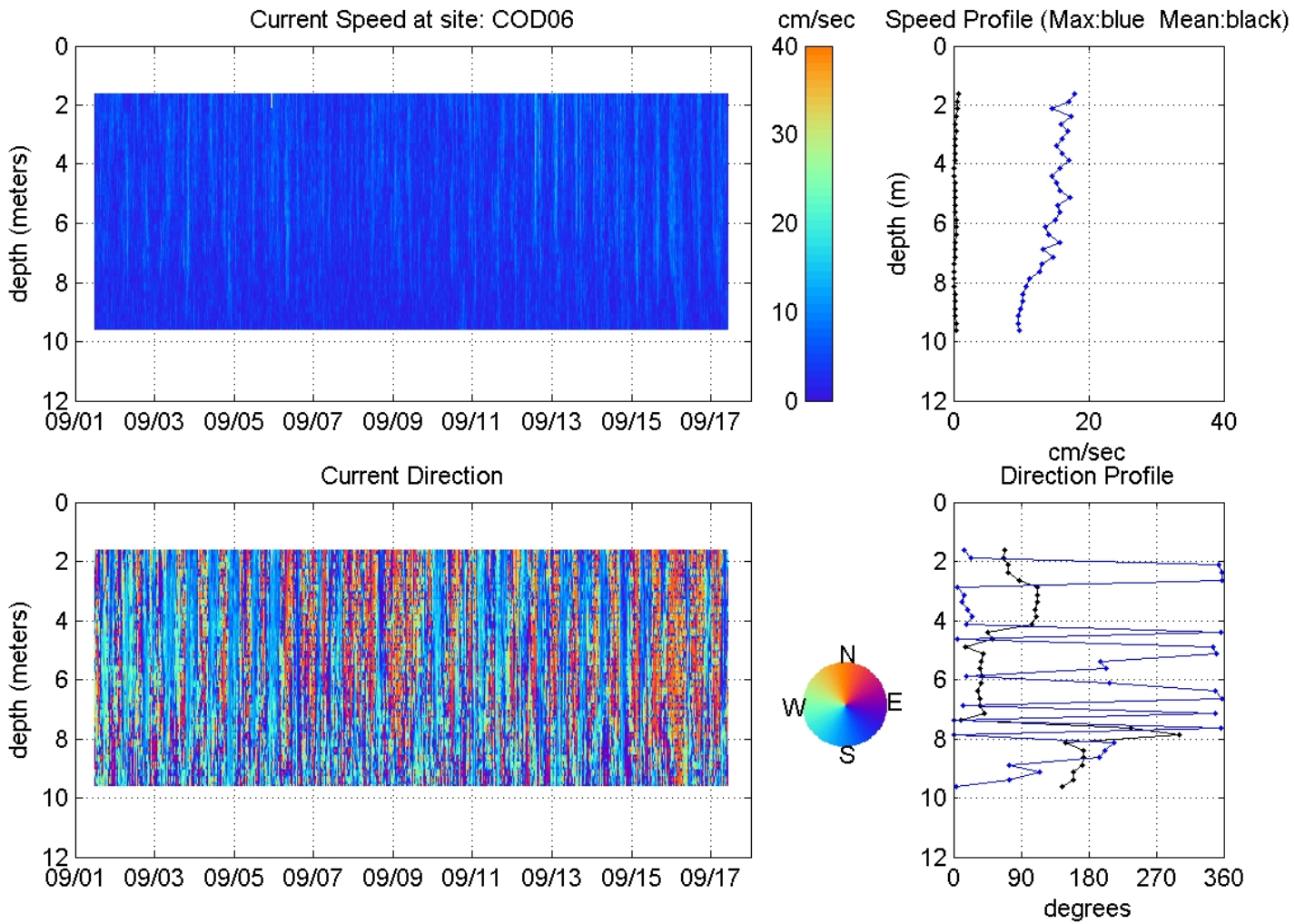

Figure 14: (Right) Color panels of current speed and direction at site COD06. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

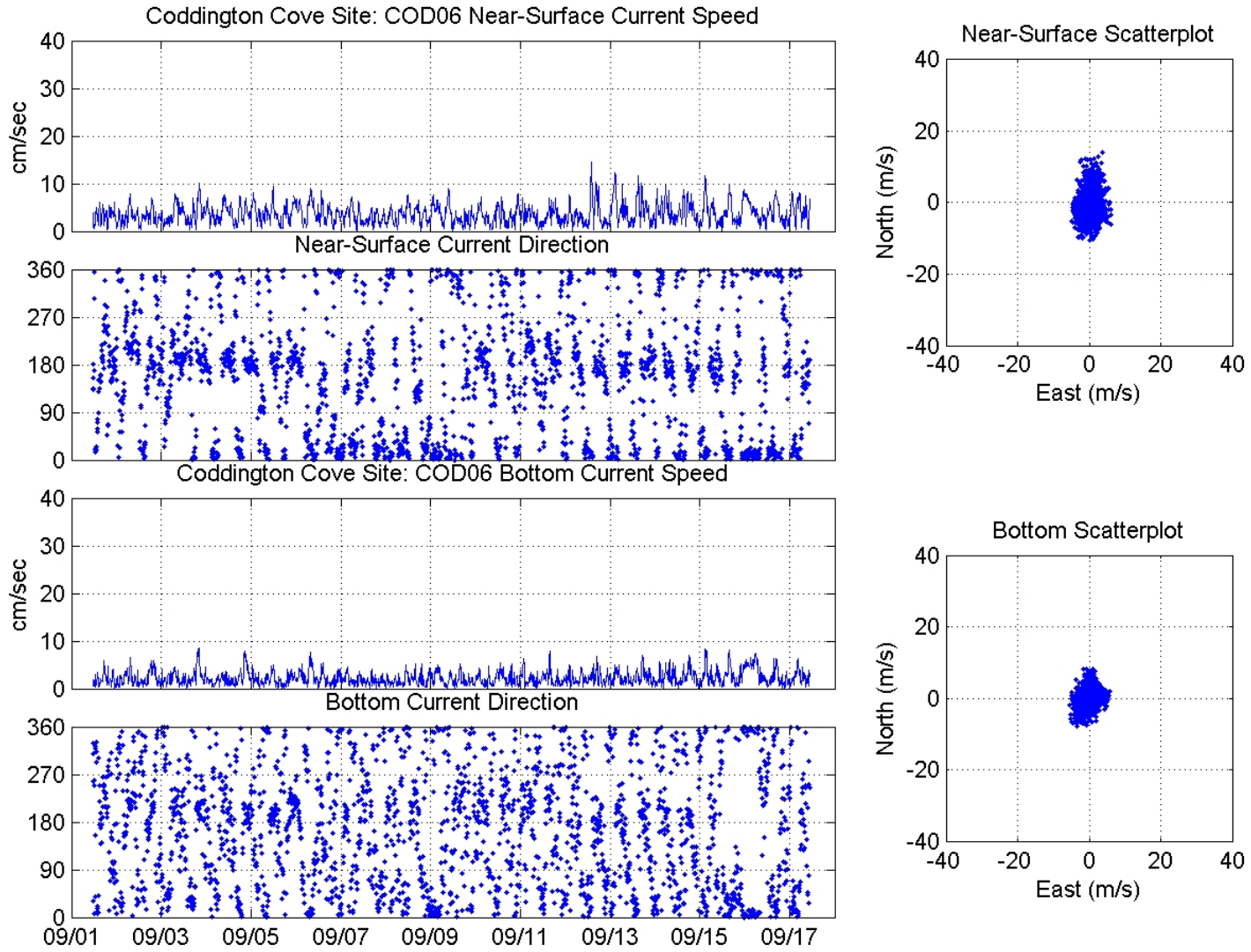

Figure 15: (Right) Time series of current speed and direction at site COD06. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

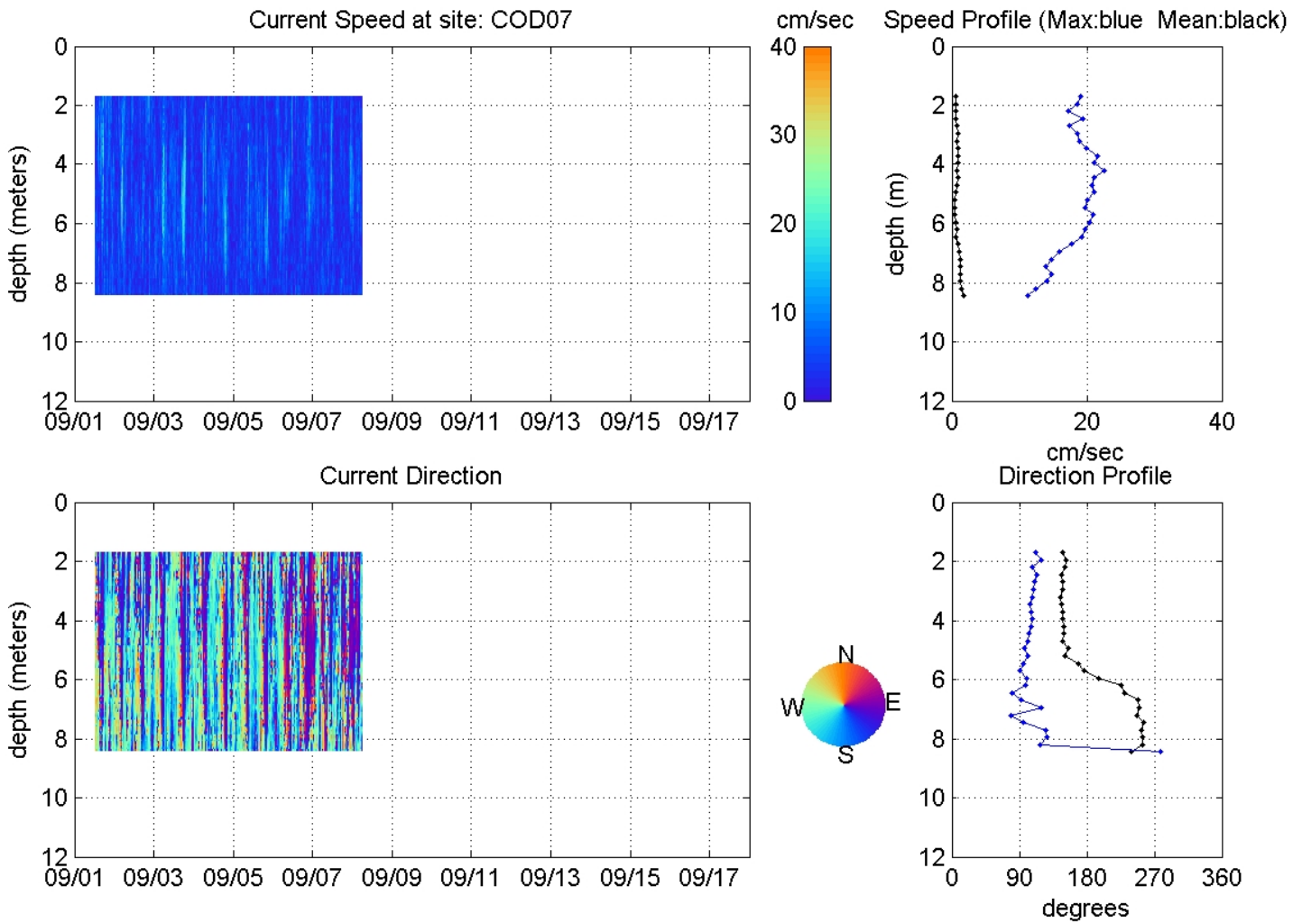

Figure 16: (Right) Color panels of current speed and direction at site COD07. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction. **NOTE** near-bottom bins were found invalid; these data were removed from the analysis.

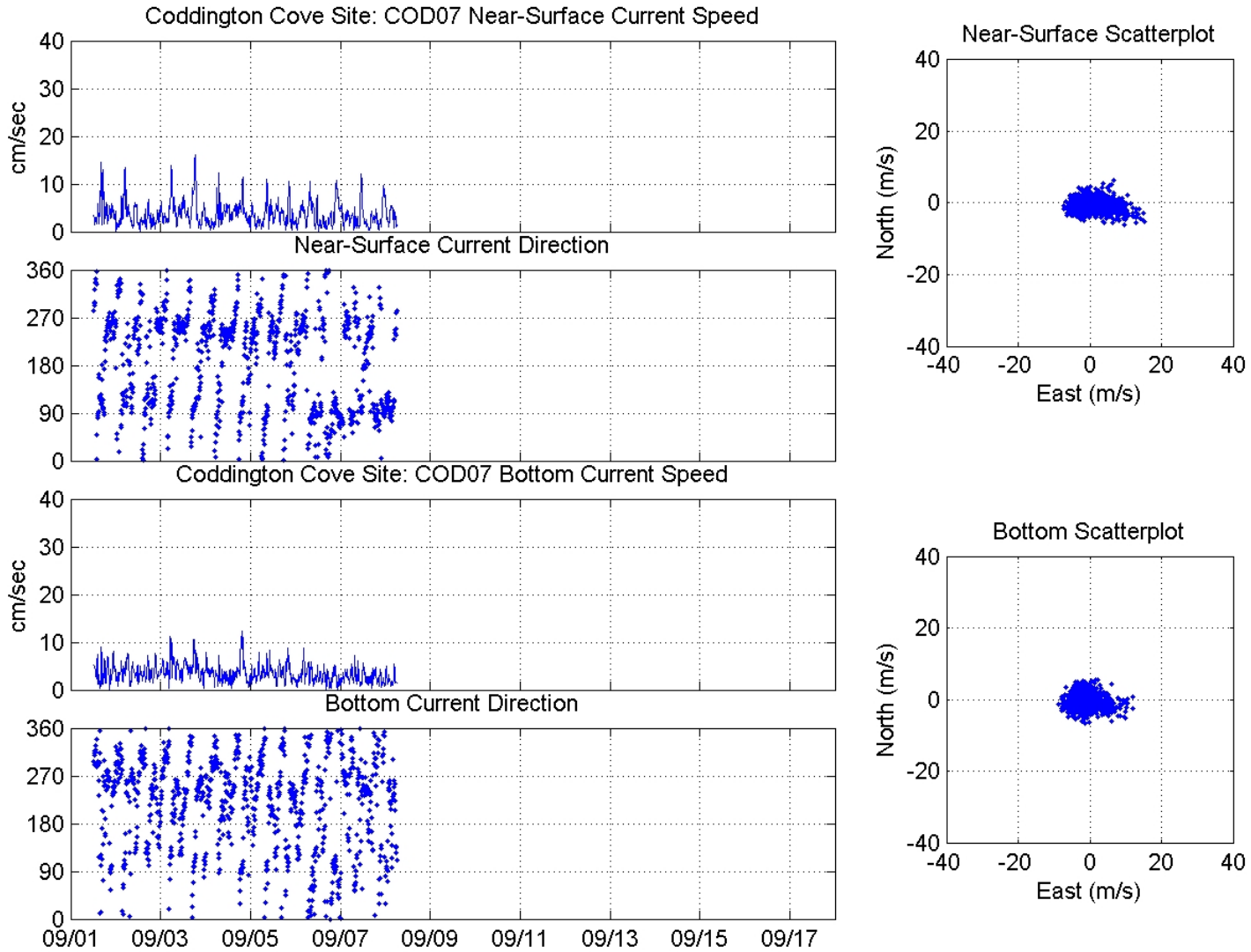

Figure 17: (Right) Time series of current speed and direction at site COD07. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents. Near-bottom currents were corrupted and edited out of all subsequent analyses.

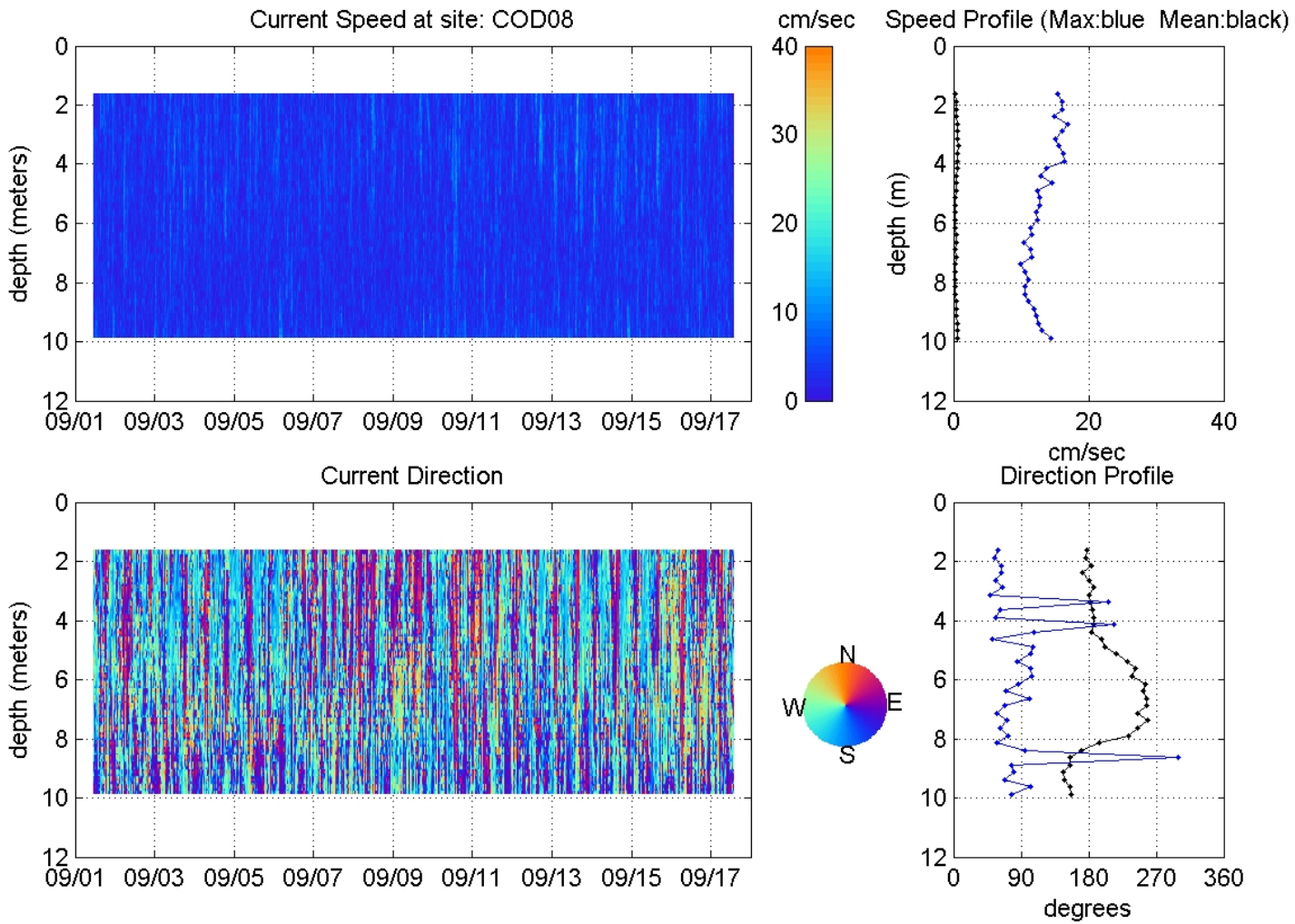

Figure 18: (Right) Color panels of current speed and direction at site COD08. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

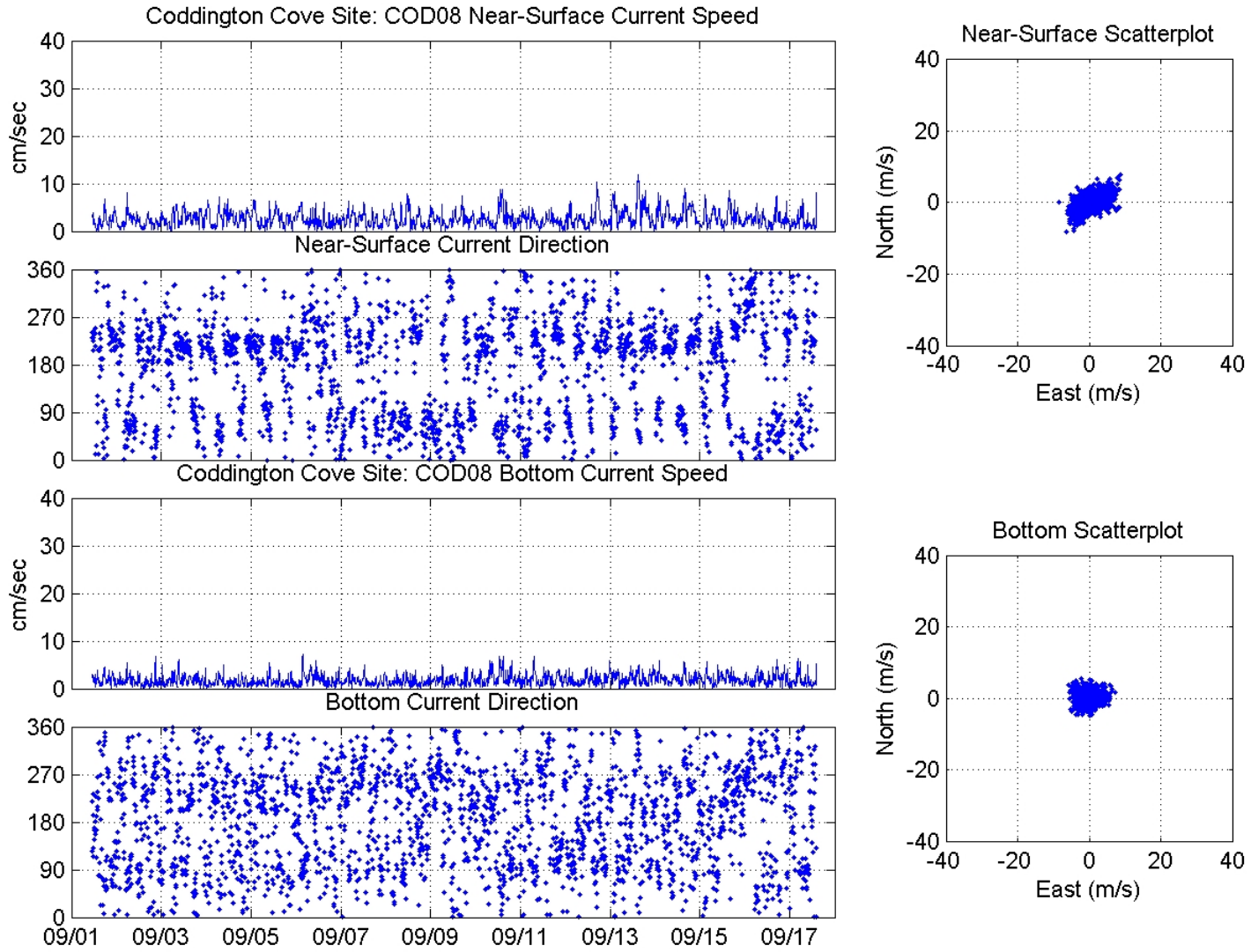

Figure 19: (Right) Time series of current speed and direction at site COD08. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

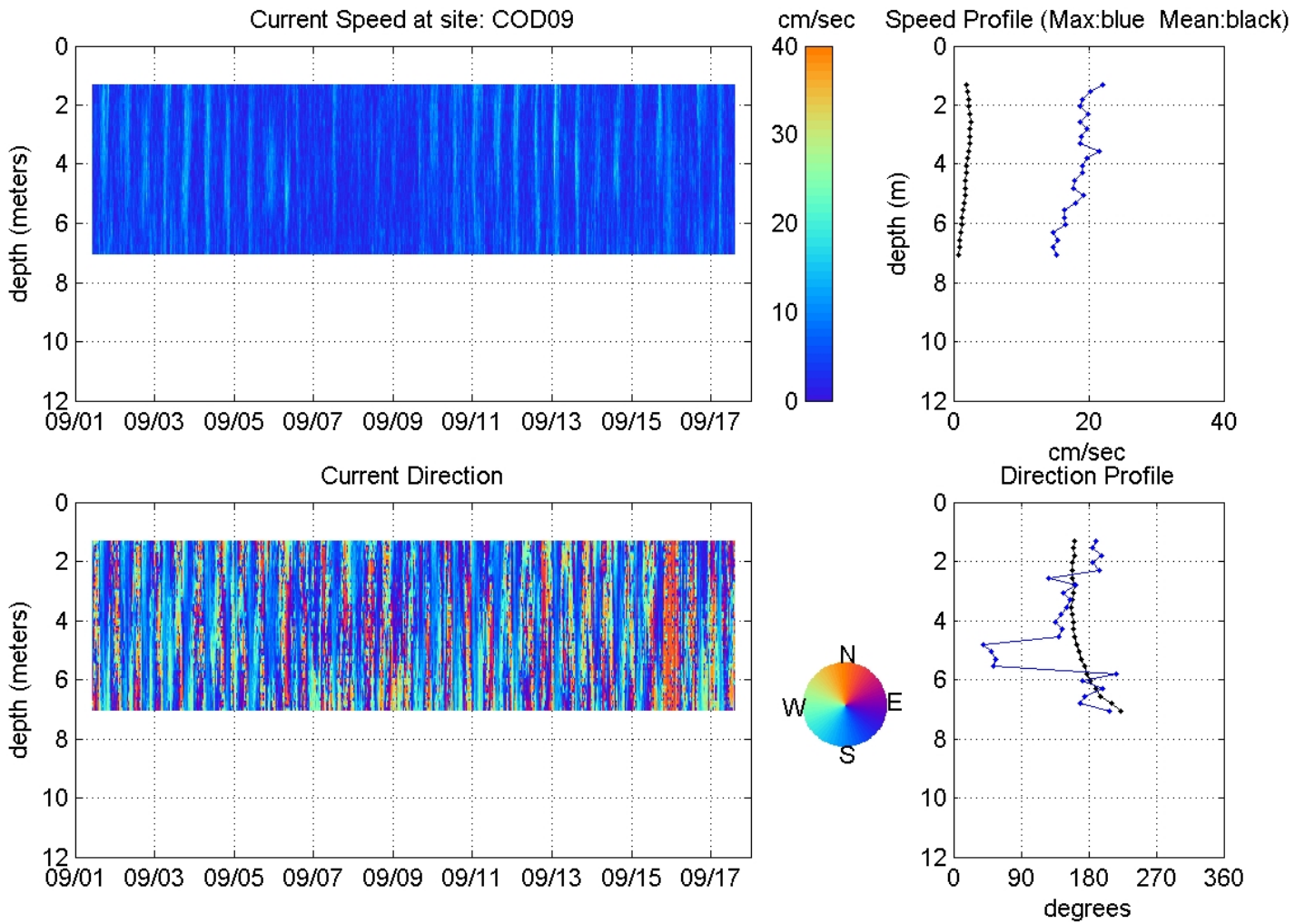

Figure 20: (Right) Color panels of current speed and direction at site COD09. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

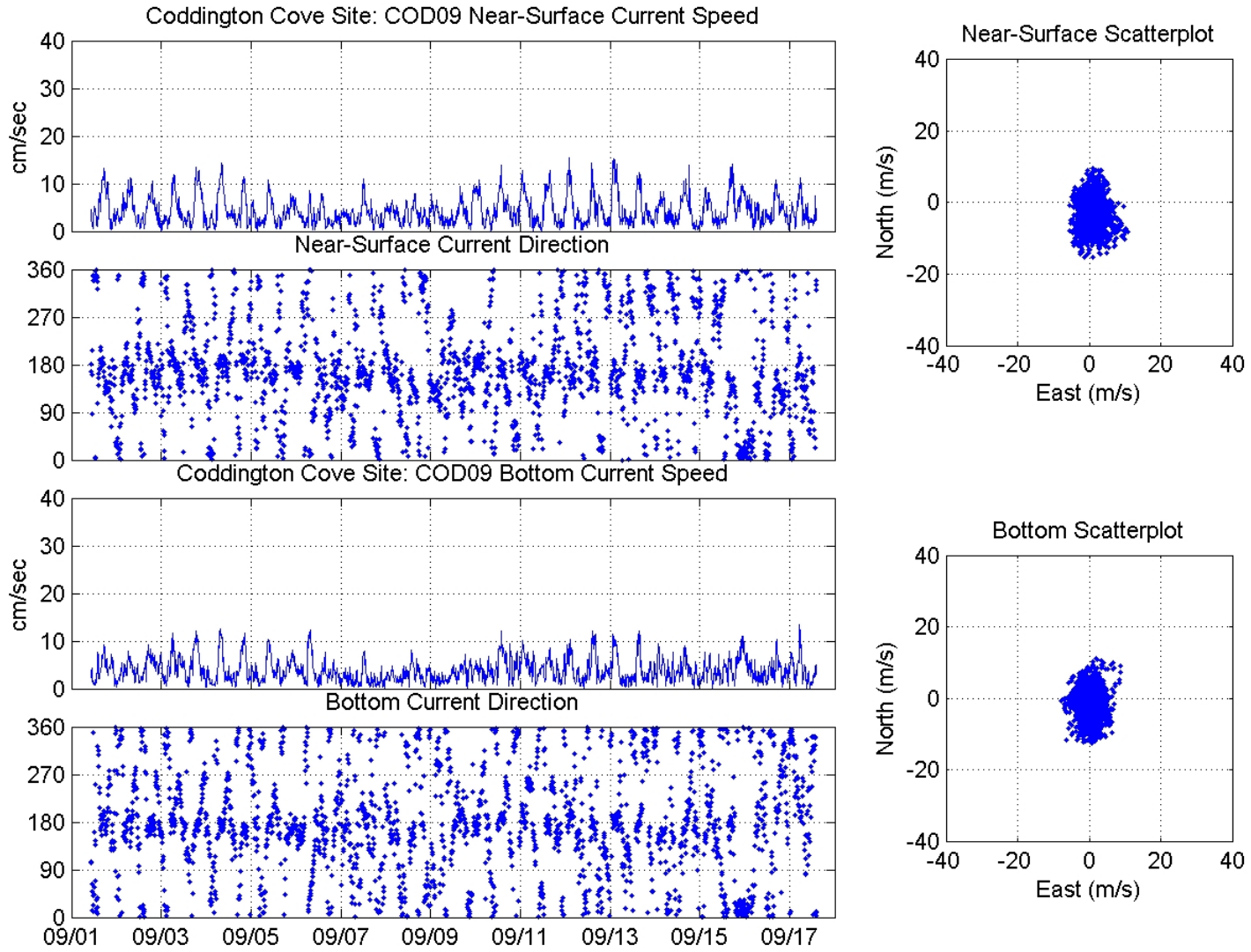

Figure 21: (Right) Time series of current speed and direction at site COD09. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

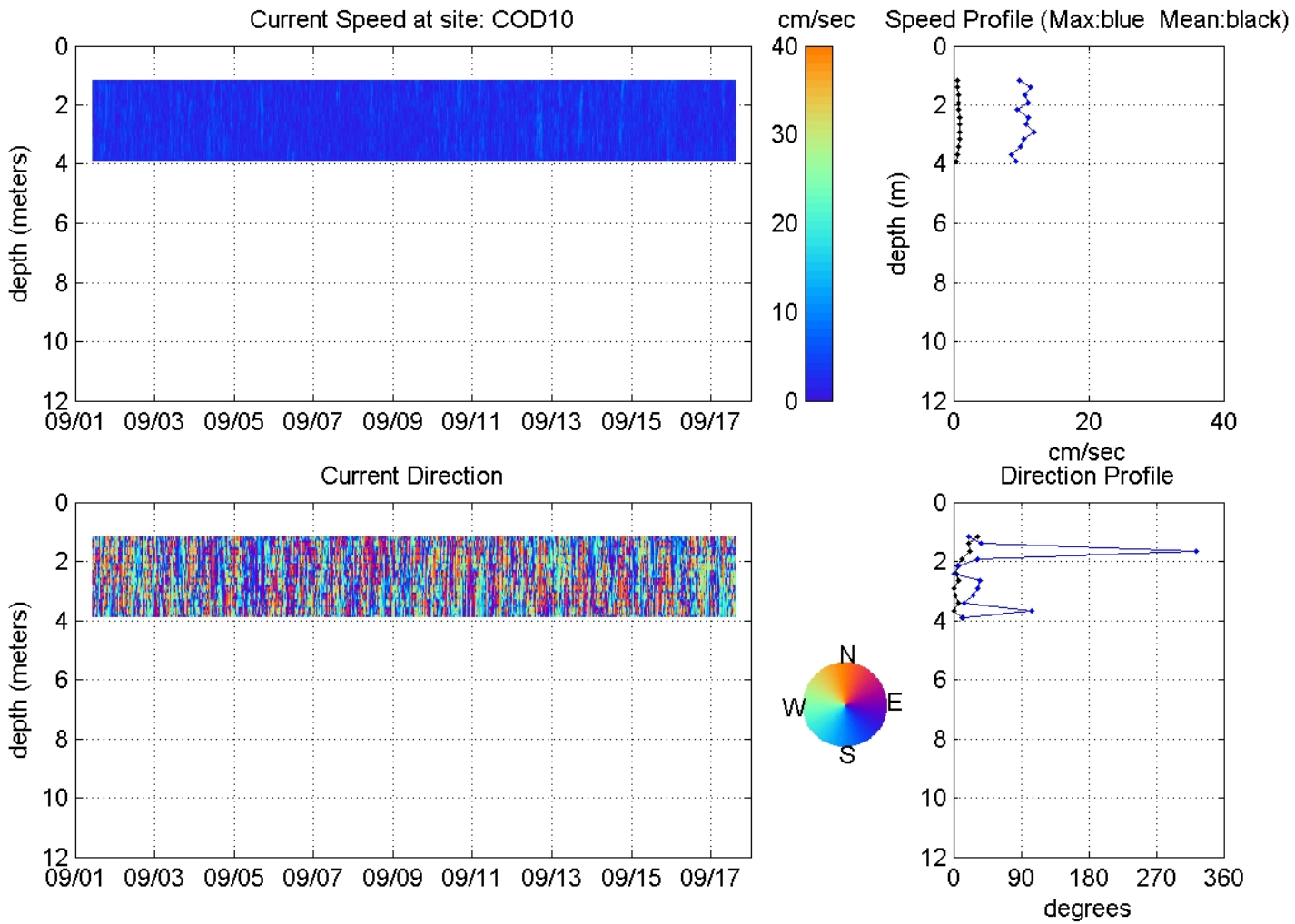

Figure 22: (Right) Color panels of current speed and direction at site COD10. (Left) vertical profiles of speed (upper) and direction (lower). Blue profiles represent the maximum speed and direction of the maximum speed. Black lines represent the mean speed and mean direction.

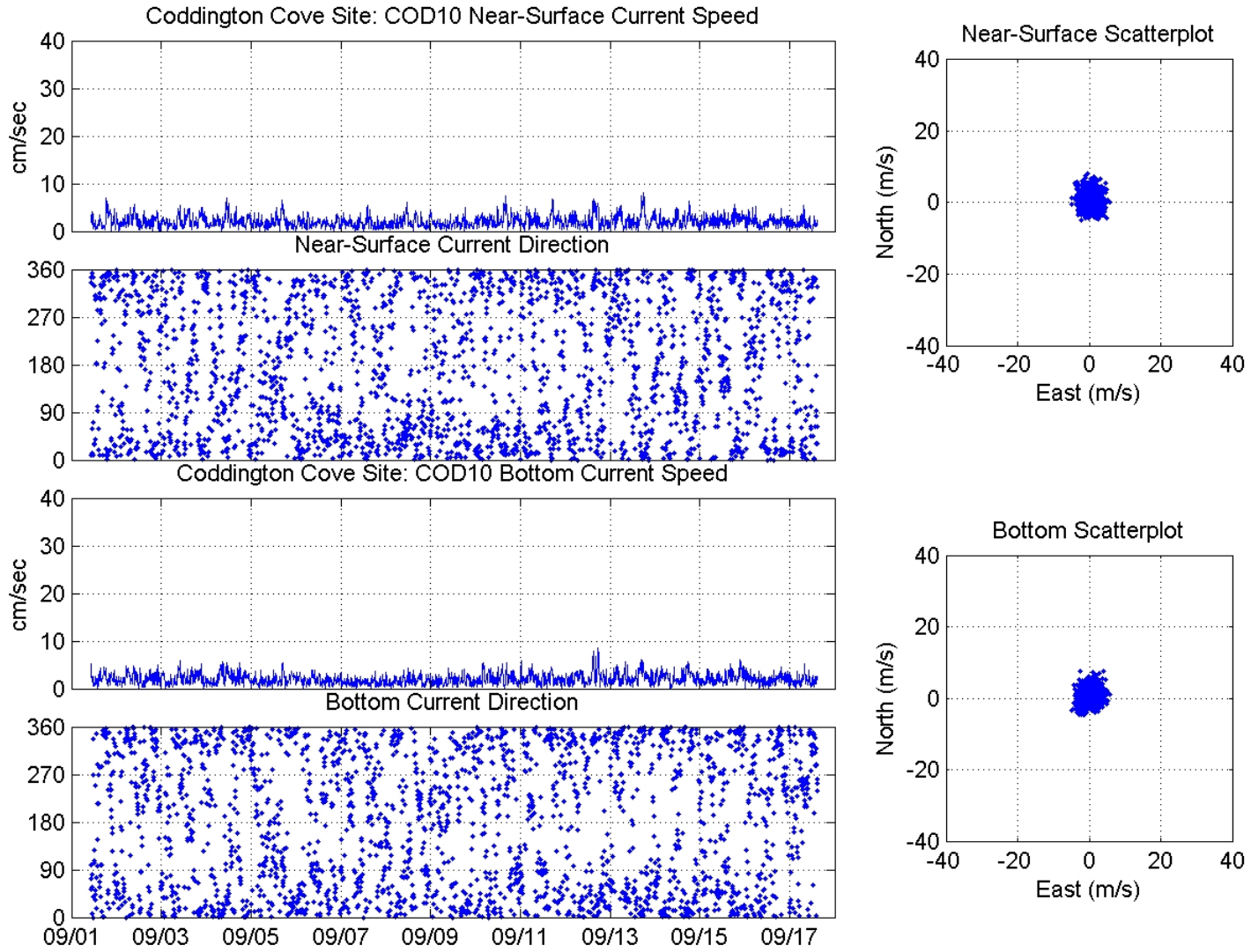

Figure 23: (Right) Time series of current speed and direction at site COD10. Near-surface currents are presented as the top two plots; near-bottom as the lower two plots. (Left) Scatterplots of near-surface (top) and near-bottom (lower) currents.

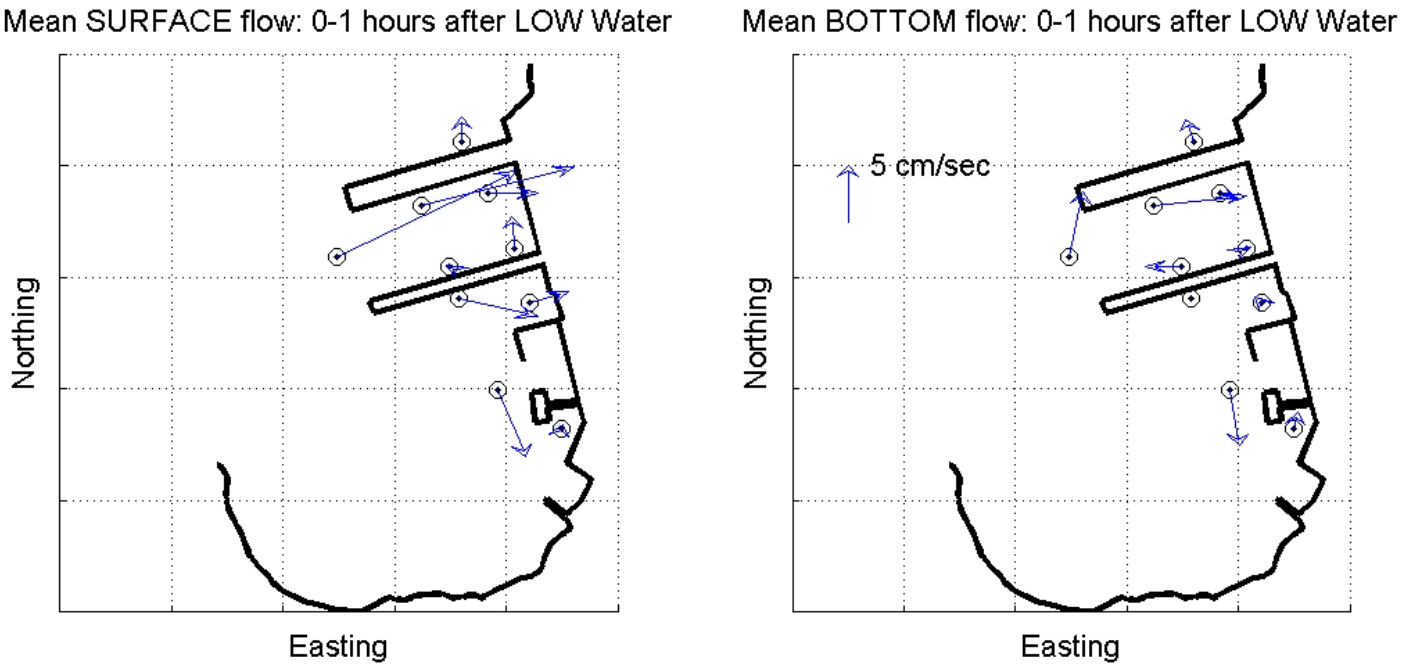

Figure 24: Mean flow vectors in Coddington Cove just after the time of low water. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. These vectors resulted from the vector-average of measurements obtained 0-to-1 hours after low water for each tidal cycle over the ~16-day deployment. There appeared a strong rush of incoming flow just after the tide change.

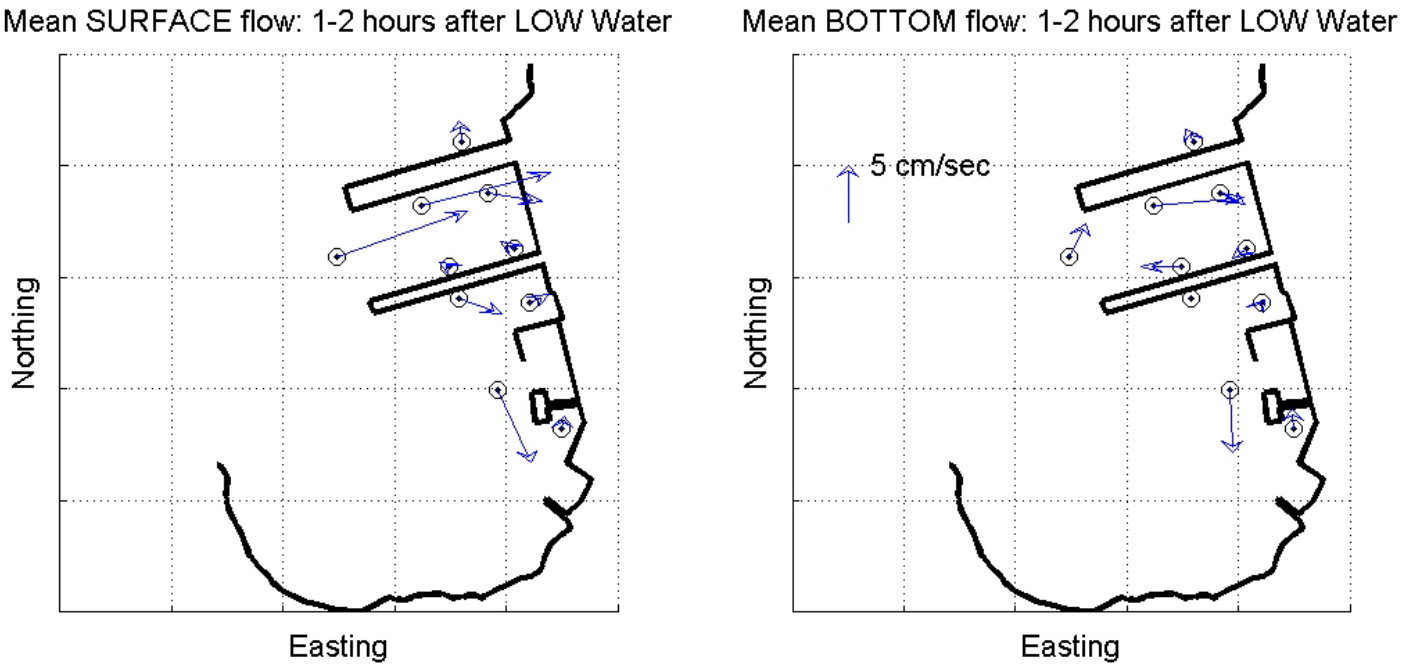

Figure 25: Mean flow vectors resulting from the vector-average of measurements 1-to-2 hours after low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. The strong rush of incoming flow after the tide change continues.

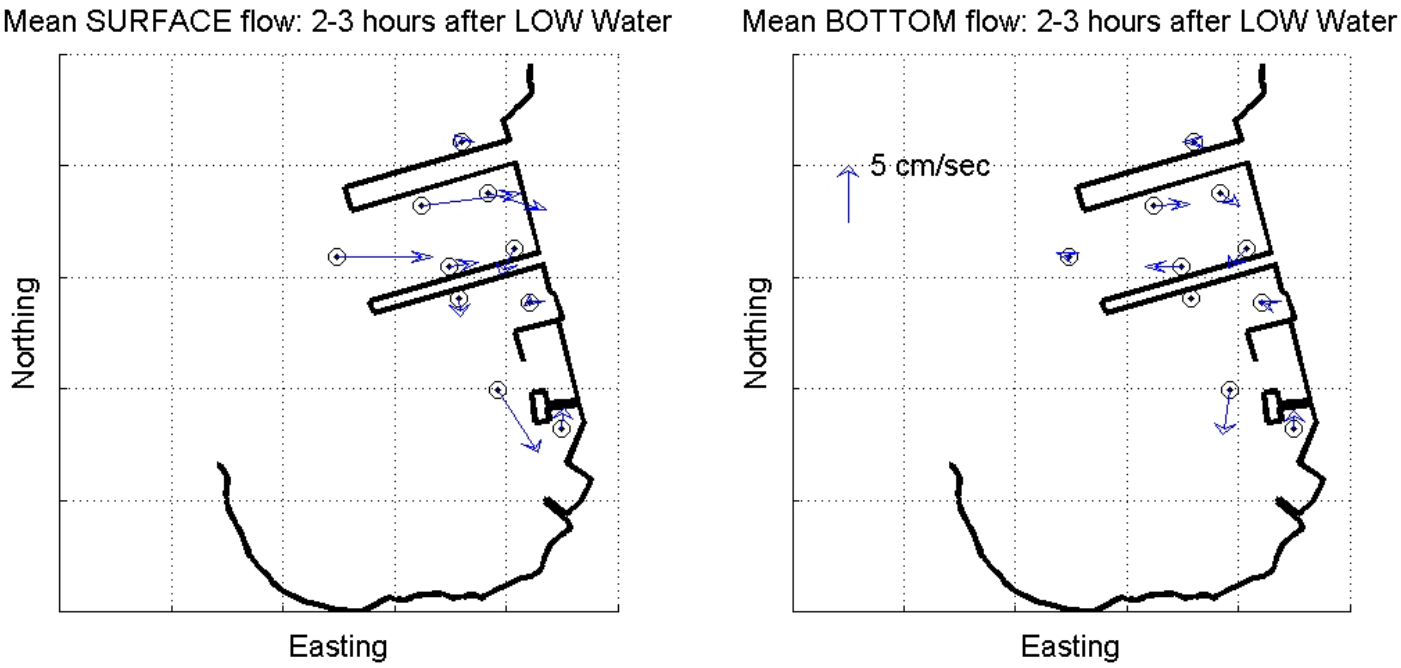

Figure 26: Mean flow vectors resulting from the vector-average of measurements 2-to-3 hours after low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. The strong rush of incoming flow after the tide change seems to slow.

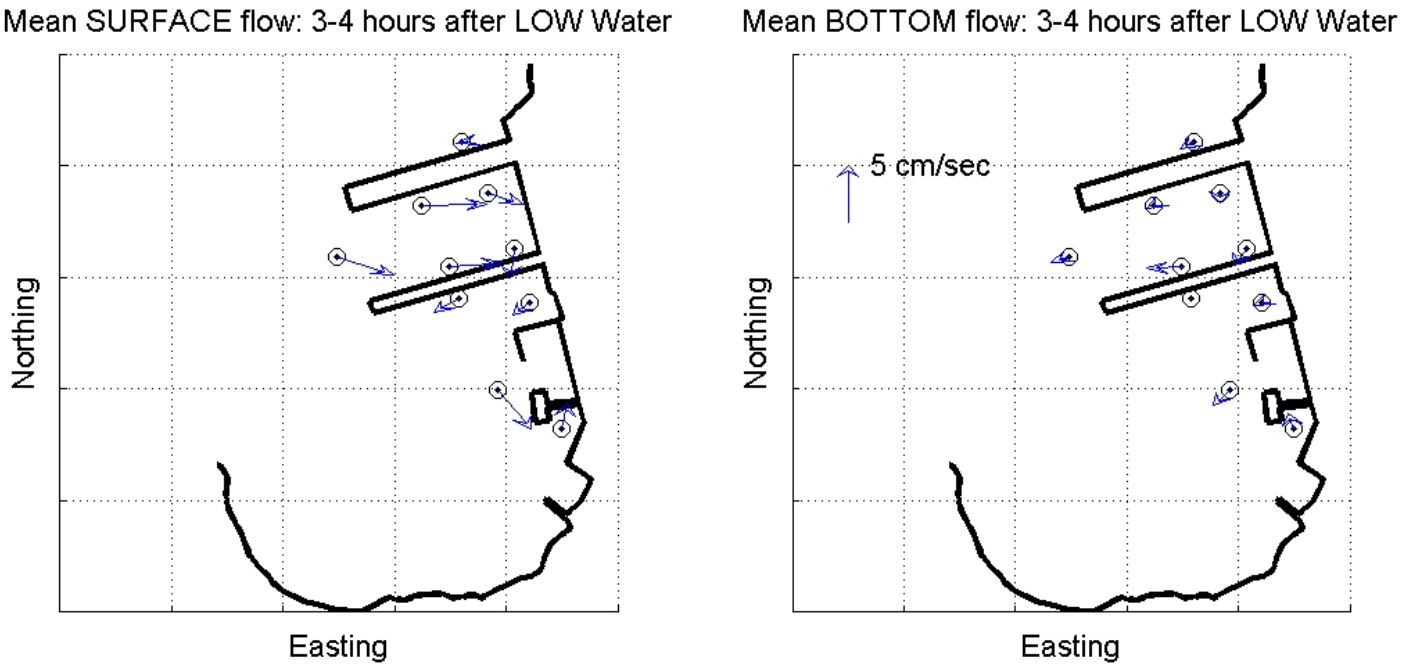

Figure 27: Mean flow vectors resulting from the vector-average of measurements 3-to-4 hours after low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Incoming flows are slowing.

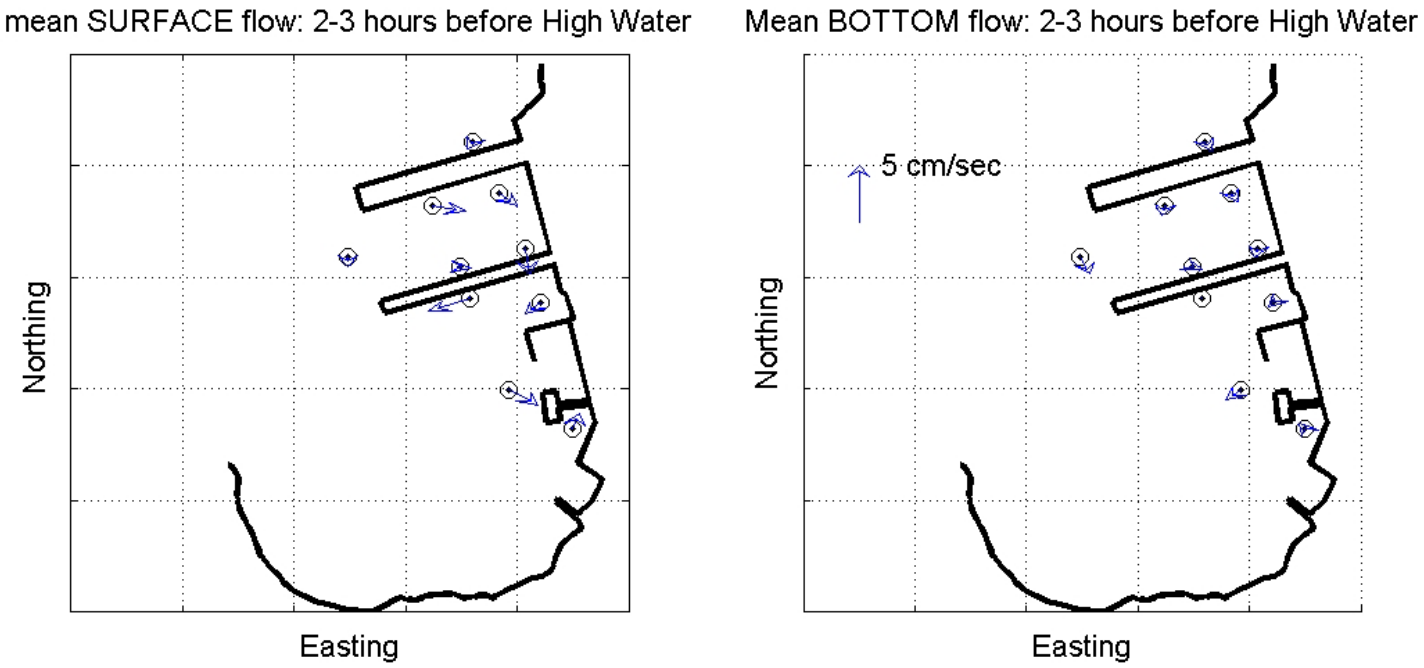

Figure 28: Mean flow vectors resulting from the vector-average of measurements 2-to-3 hours before high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. This appears to be the time of slack water, about midway between low and high water, an interesting result suggesting the tidal currents are in phase with tidal elevation (usually velocity and elevation are 90 degrees out of phase).

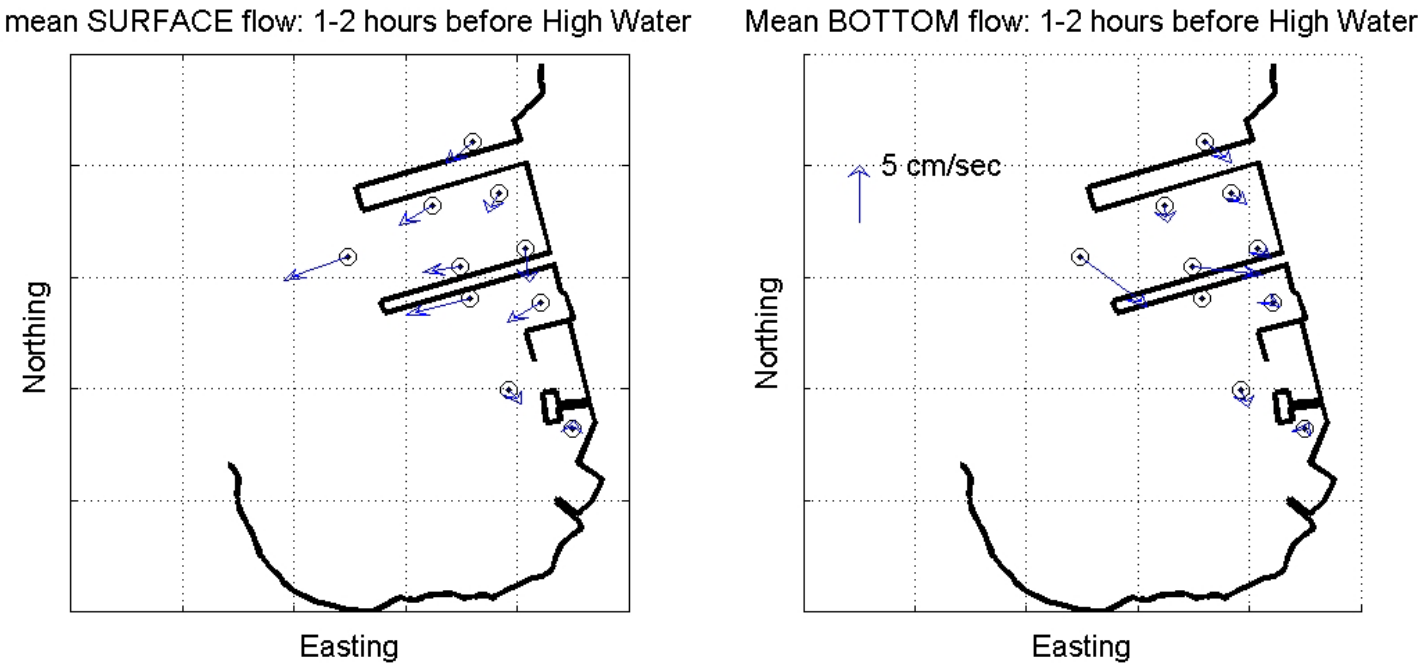

Figure 29: Mean flow vectors resulting from the vector-average of measurements 1-to-2 hours before high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Near-surface flows at the stations suggest water is exiting from the Cove, even though the tide continues to rise.

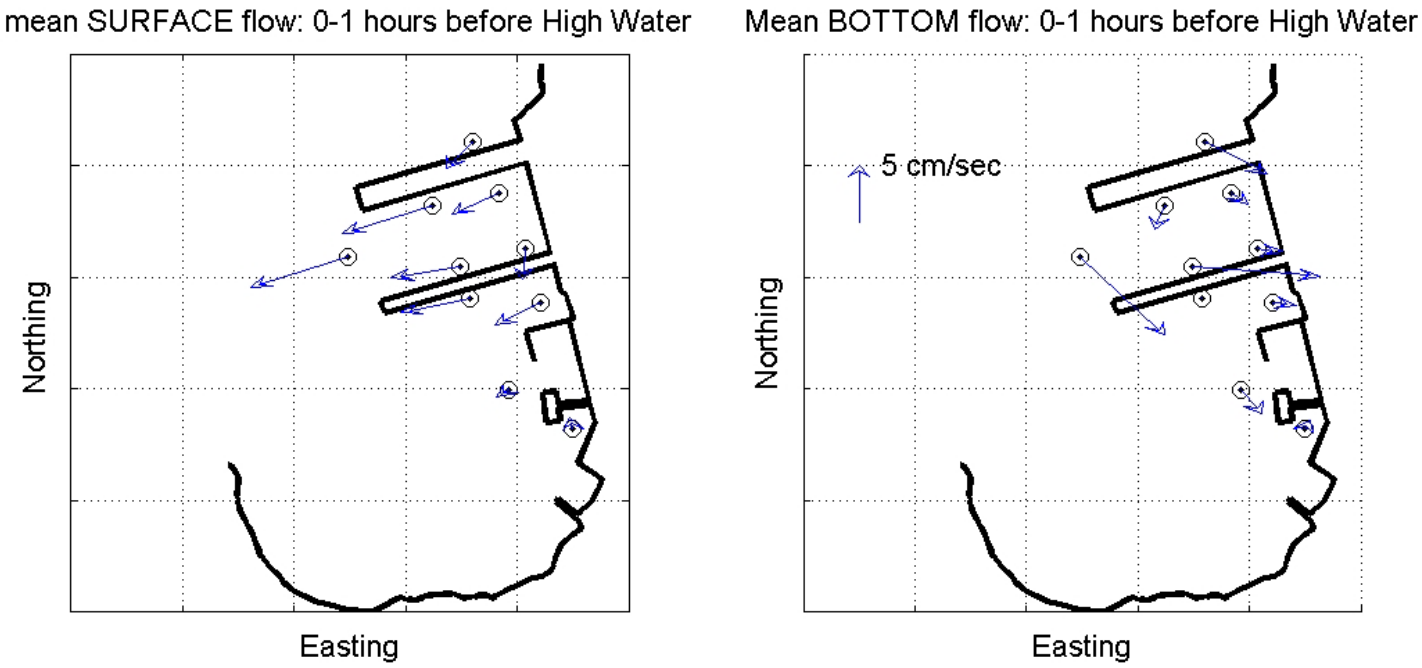

Figure 30: Mean flow vectors resulting from the vector-average of measurements 0-to-1 hour before high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Near-surface flows at the stations suggest water is exiting from the Cove, even though the tide continues to rise.

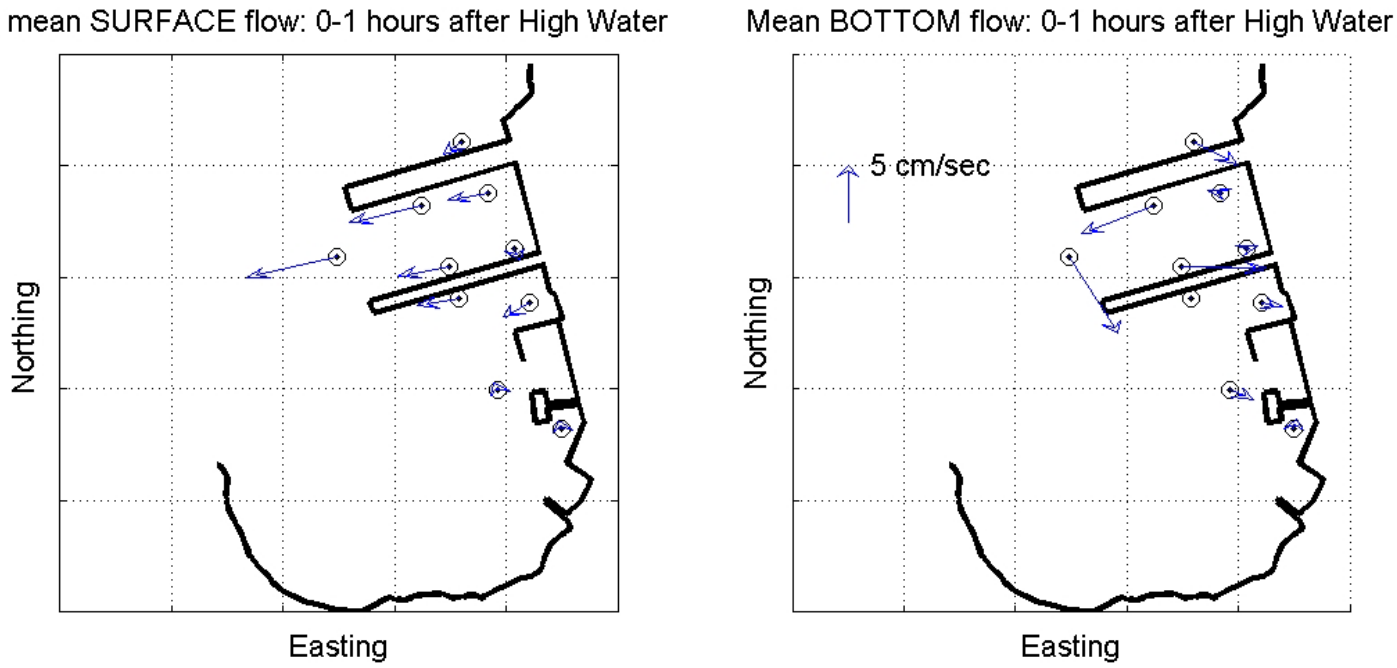

Figure 31: Mean flow vectors resulting from the vector-average of measurements 0-to-1 hour after high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Near-surface flows at the stations suggest water is exiting from the Cove.

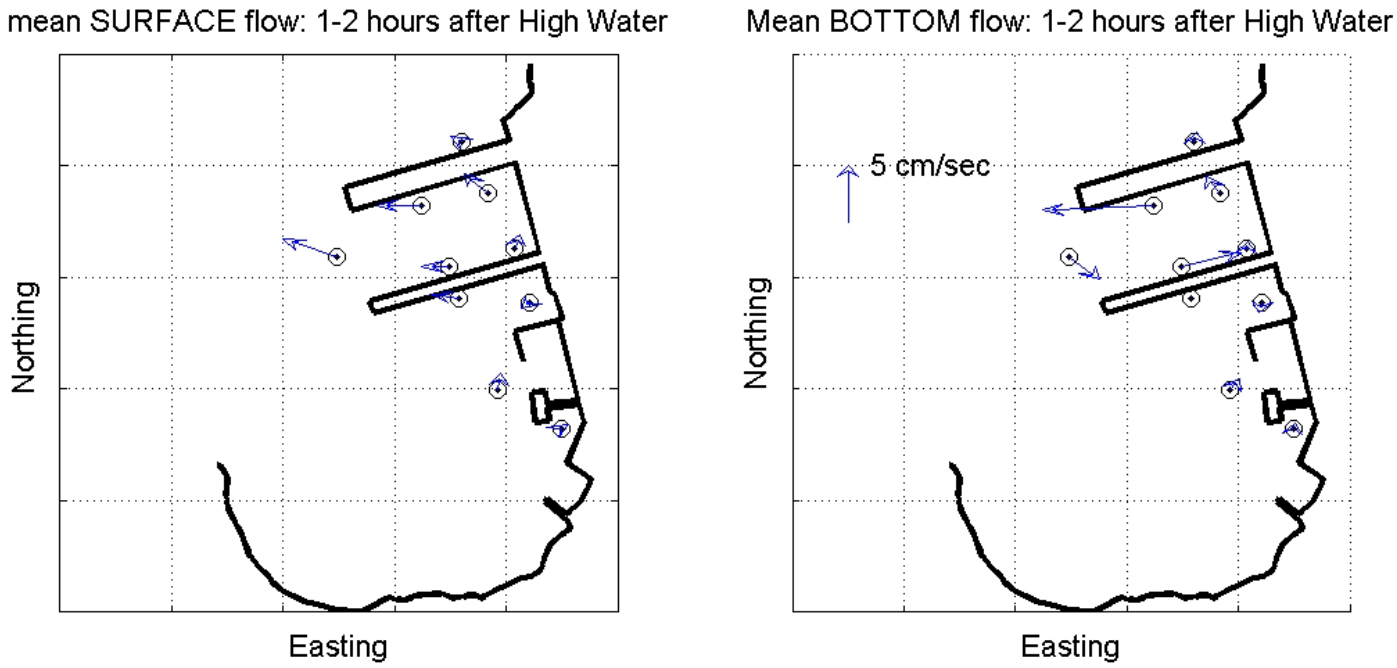

Figure 32: Mean flow vectors resulting from the vector-average of measurements 1-to-2 hours after high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Westward flow is weakening.

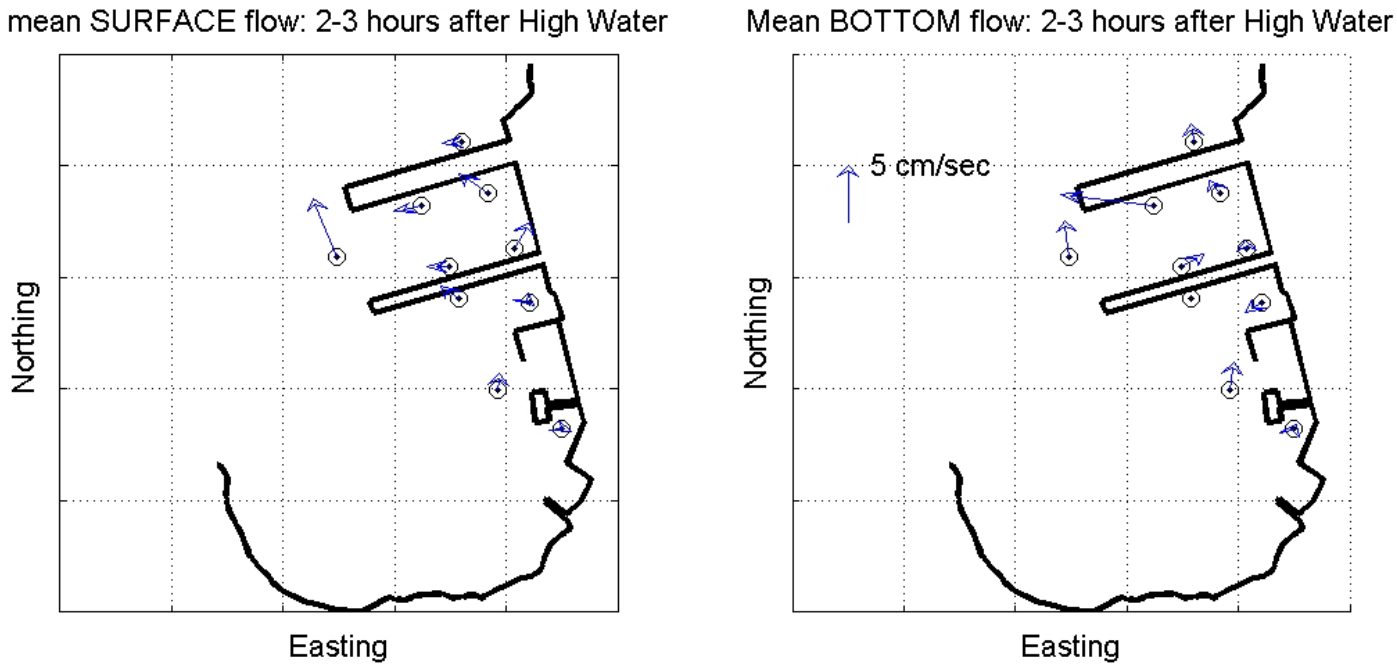

Figure 33: Mean flow vectors resulting from the vector-average of measurements 2-to-3 hours after high water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right.

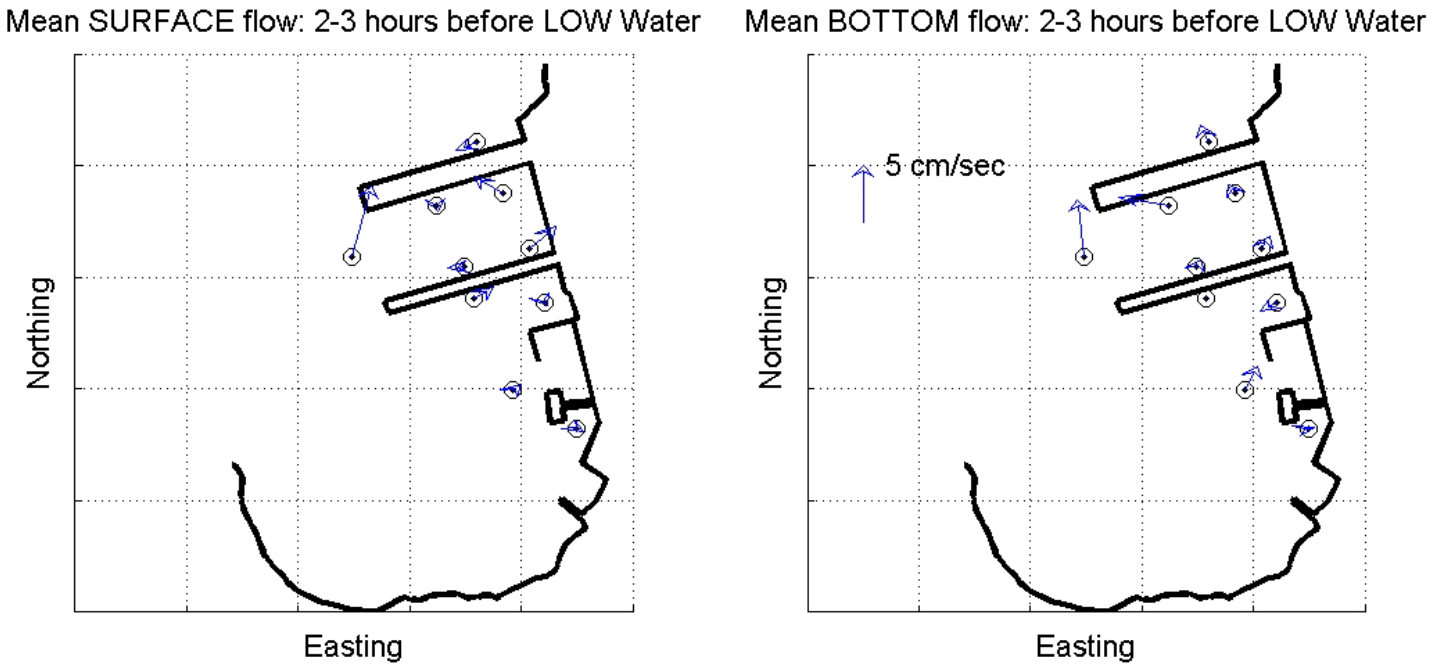

Figure 34: Mean flow vectors resulting from the vector-average of measurements 2-to-3 hours before low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right.

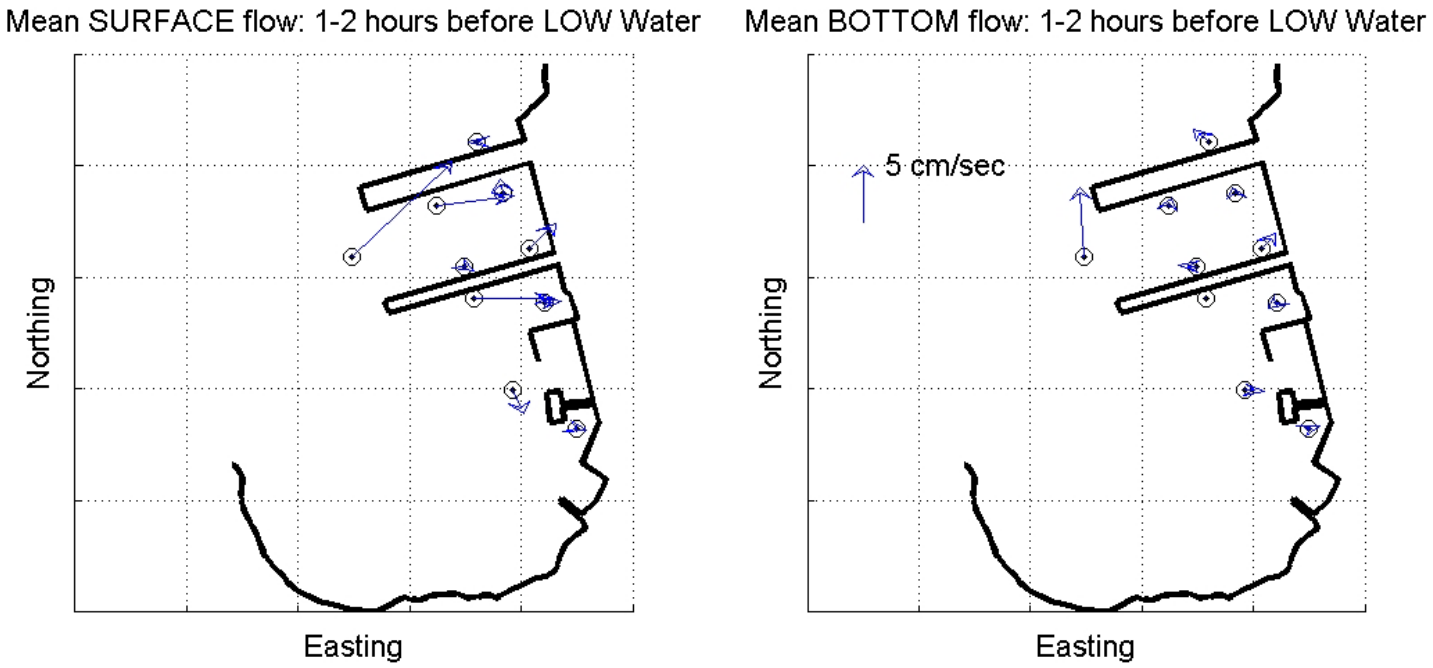

Figure 35: Mean flow vectors resulting from the vector-average of measurements 1-to-2 hours before low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. Flow seems to be generally eastward at many of the stations.

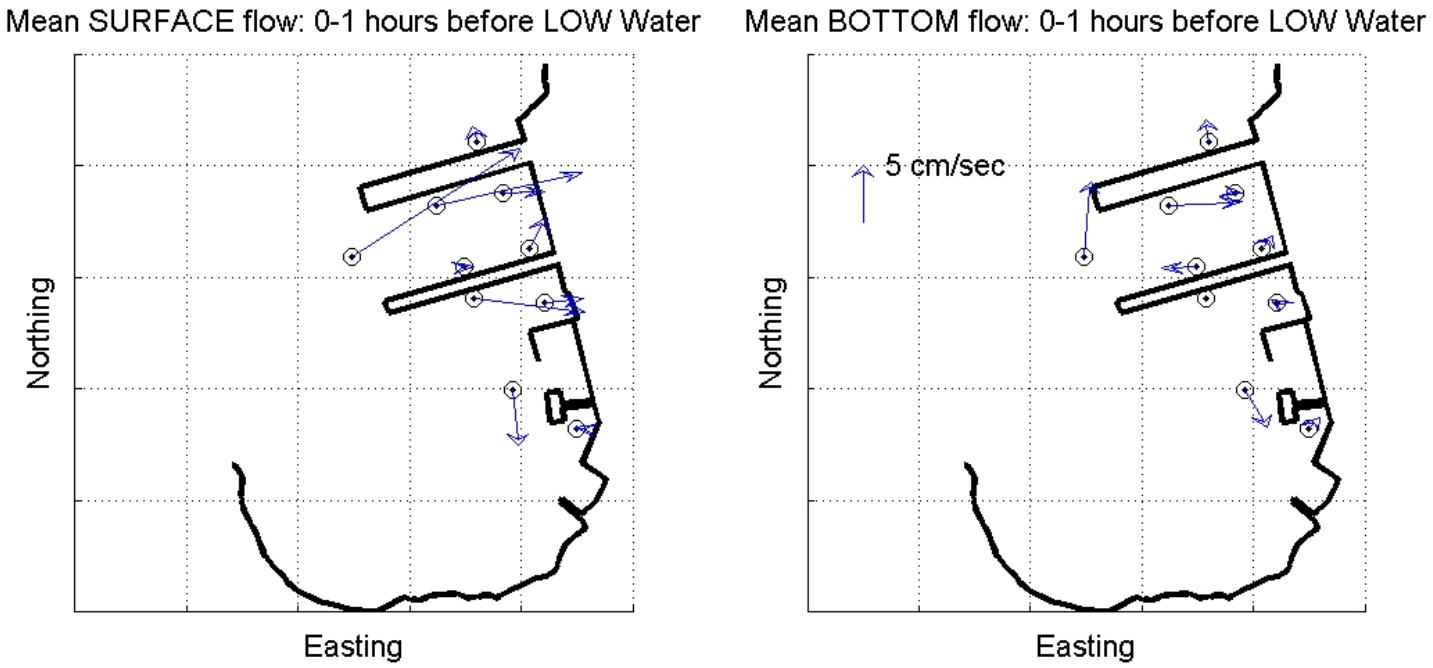

Figure 36: Mean flow vectors resulting from the vector-average of measurements 0-to-1 hours before low water for each tidal cycle over the ~16-day deployment.. Near-surface flow (i.e. upper half of the water column) is shown to the left; near-bottom flow (i.e. lower half of the water column) to the right. There seems to be a strong inflow towards the east/northeast during this stage of the tide.

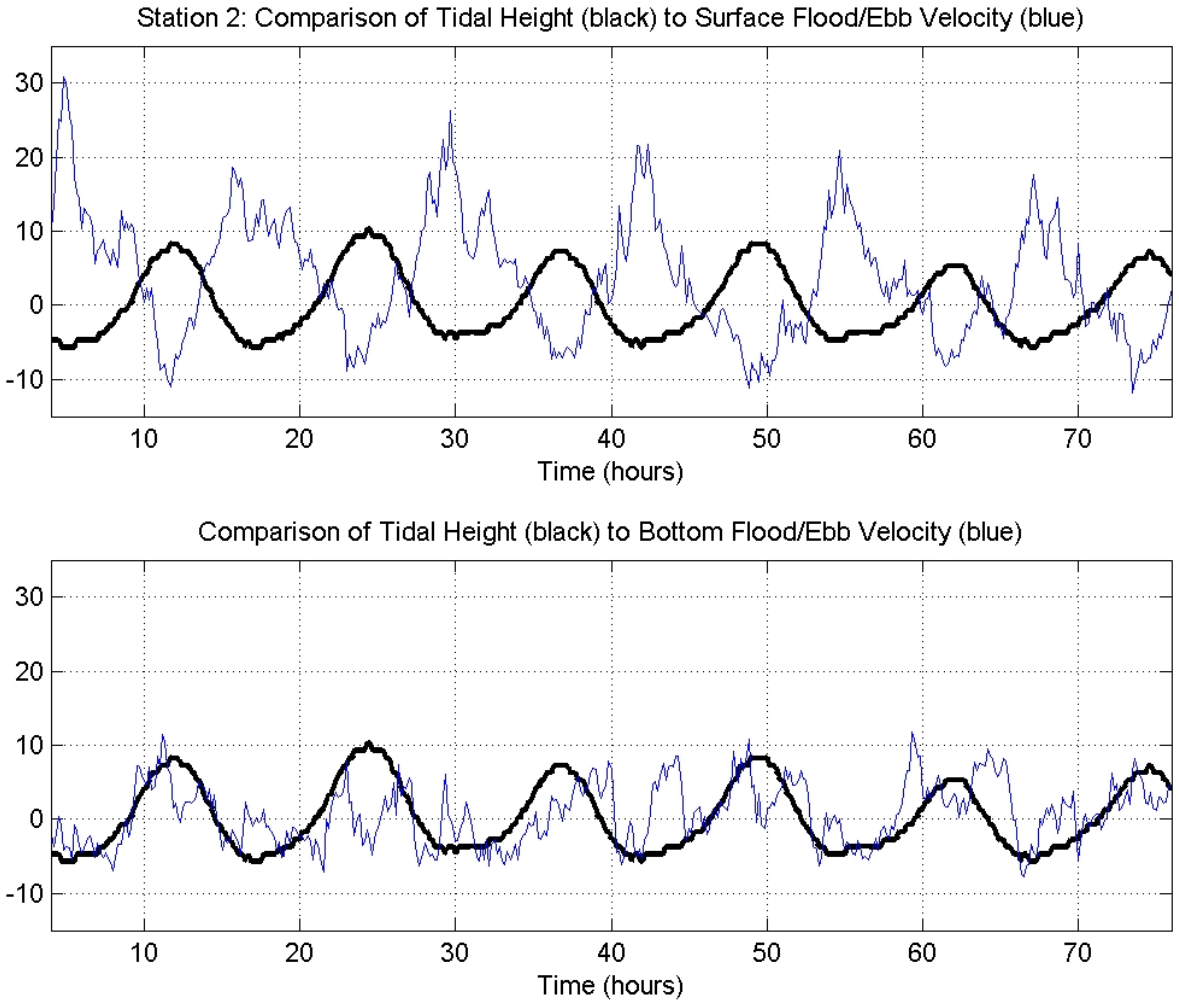

Figure 37: Relative phase between tidal elevations (black line) and near-surface tidal velocities (blue line, top plot) and near-bottom velocities (blue line, bottom plot) for a selected 3-day time period at Station 02. Tide height (in meters) was multiplied by 10 to better compare with velocity. Incoming flood velocities were of order ~20-30 cm/sec while out-going ebb velocities were of order 10 cm/sec. Near-surface velocities appeared by about 180 degrees out of phase with tidal elevations, with peak flood velocities occurring at low water and peak ebb velocities occurring at the time of high water. Near-bottom flows appeared to be in phase with elevation changes.

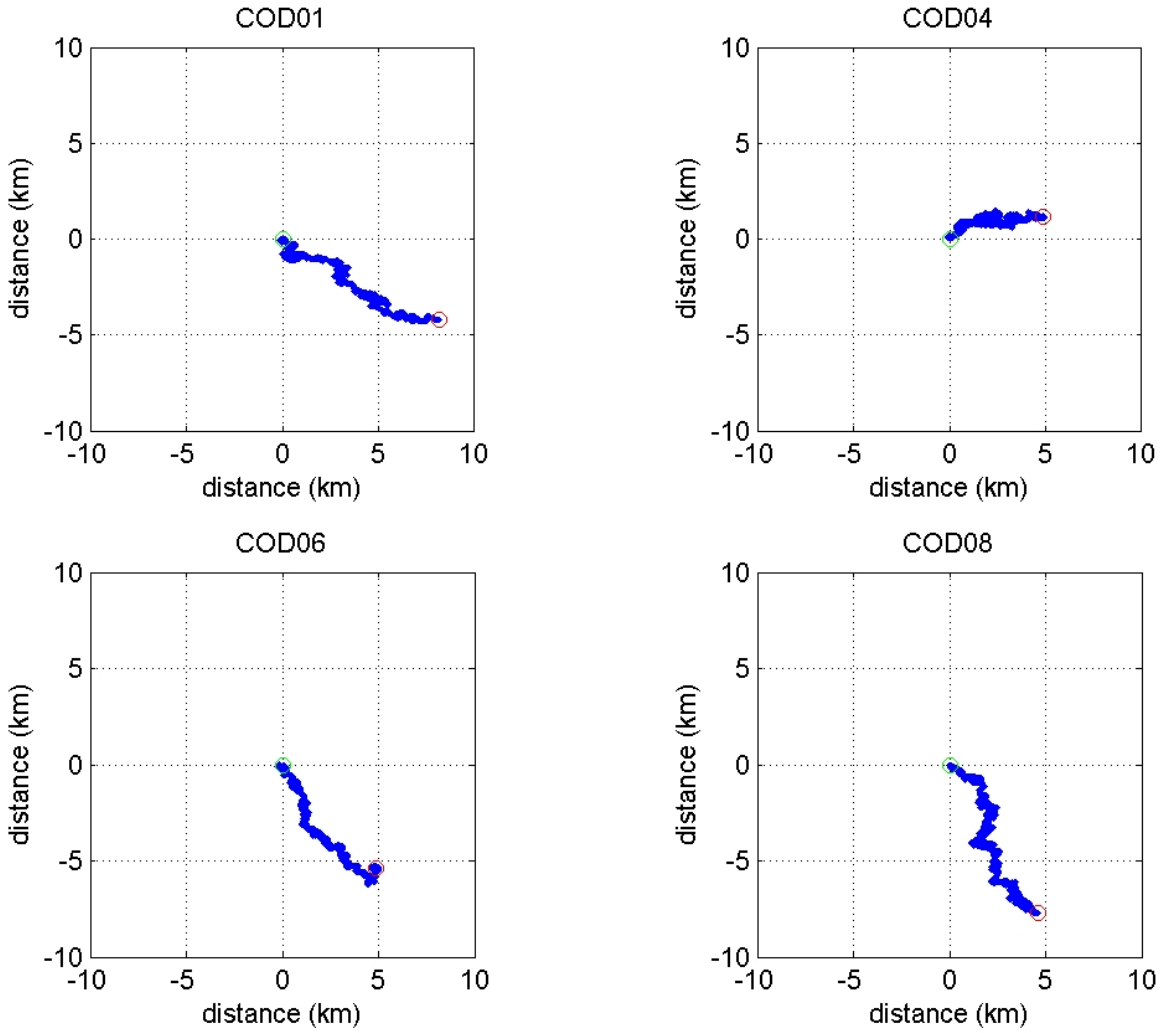

Figure 38: Progressive vector diagram for near-bottom flow at sites 1, 4, 6 and 8 (northern nearshore stations). These diagrams show the theoretical track of particles transported by bottom currents. The origin is located at (0,0) depicted by the green circle. The end point is depicted by the red circle. Net transport for these stations appears to be eastward or southeastward.

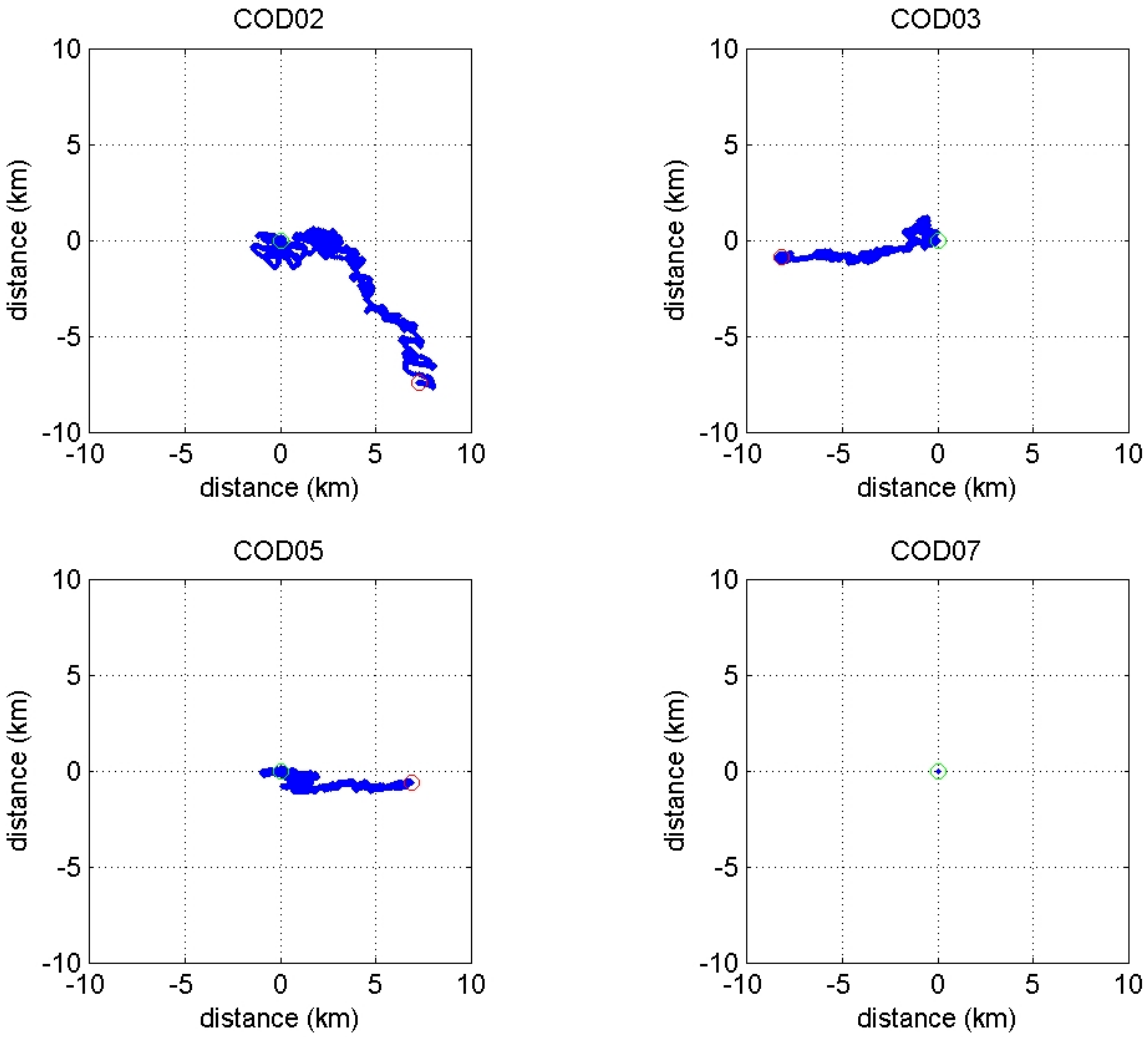

Figure 39: Progressive vector diagram for near-bottom flow at sites 2, 3, 5, and 7 (offshore stations). These diagrams show the theoretical track of particles transported by bottom currents. The origin is located at (0,0) depicted by the green circle. The end point is depicted by the red circle. Net transport for these stations appear to be eastward or southeastward. Bottom currents at Station 7 were invalid due to bias so not shown.

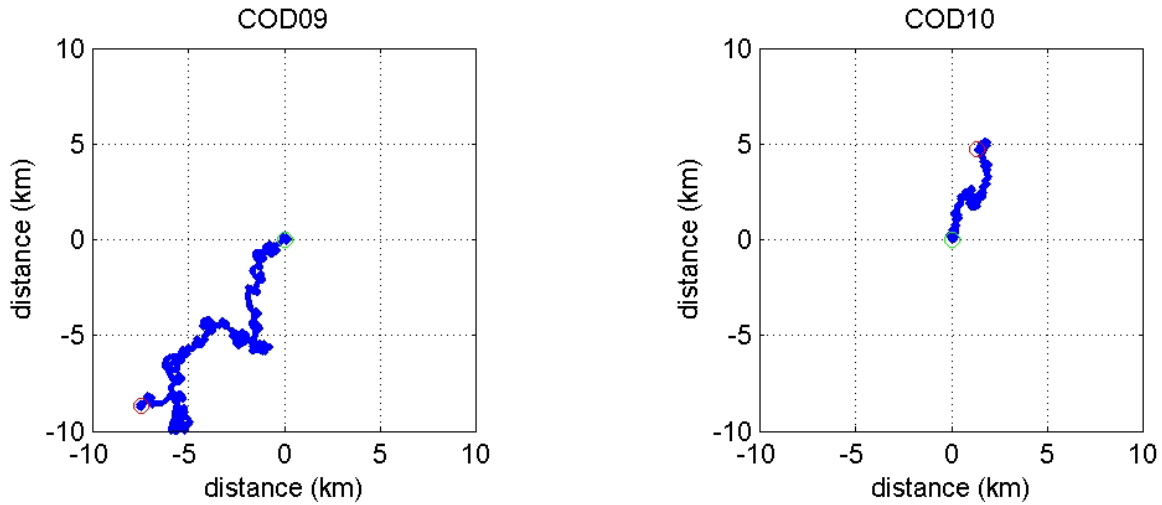

Figure 40: Progressive vector diagram for near-bottom flow at sites 9 and 10 (southern nearshore stations). These diagrams show the theoretical track of particles transported by bottom currents. The origin is located at (0,0) depicted by the green circle. The end point is depicted by the red circle. Net transport for station 09 was southwestward but Station 10 net transport was northward.

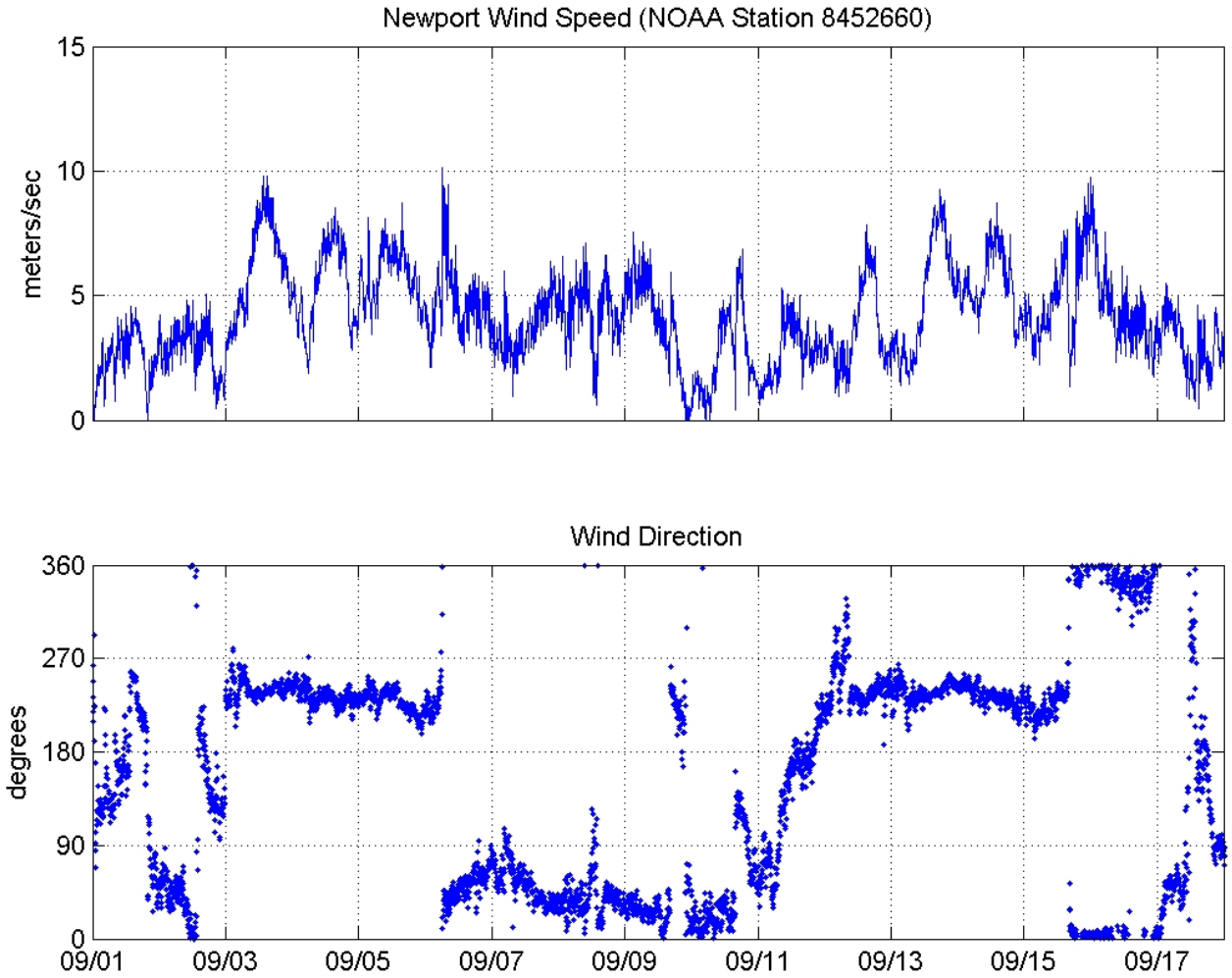

Figure 41: Wind speed and direction during the ADCP deployment (courtesy of NOAA PORTS system website http://tidesandcurrents.noaa.gov). Winds were from the northeast or southwest much of the time, rarely exceeding 10 m/s (~20 knots).

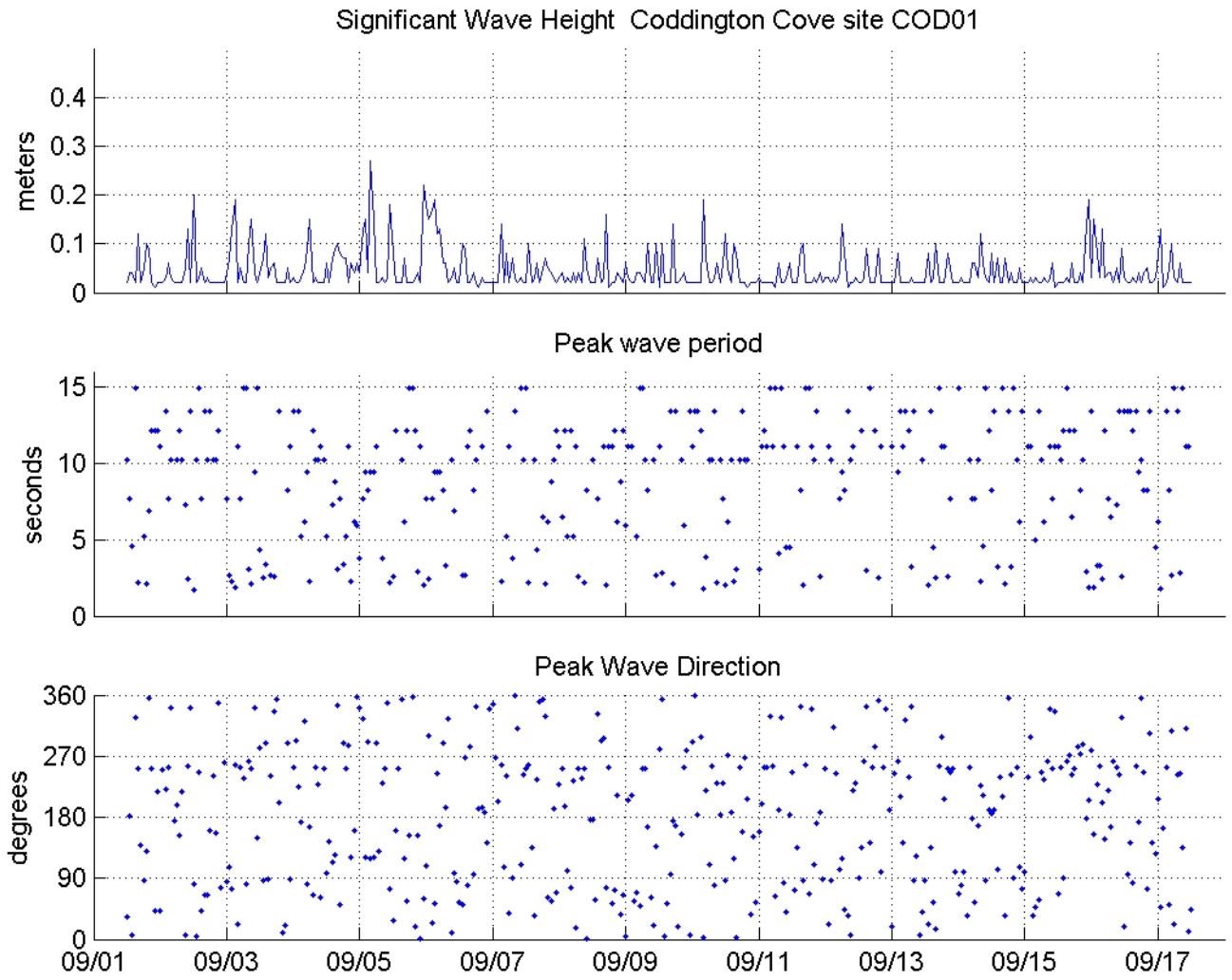

Figure 42: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD01.

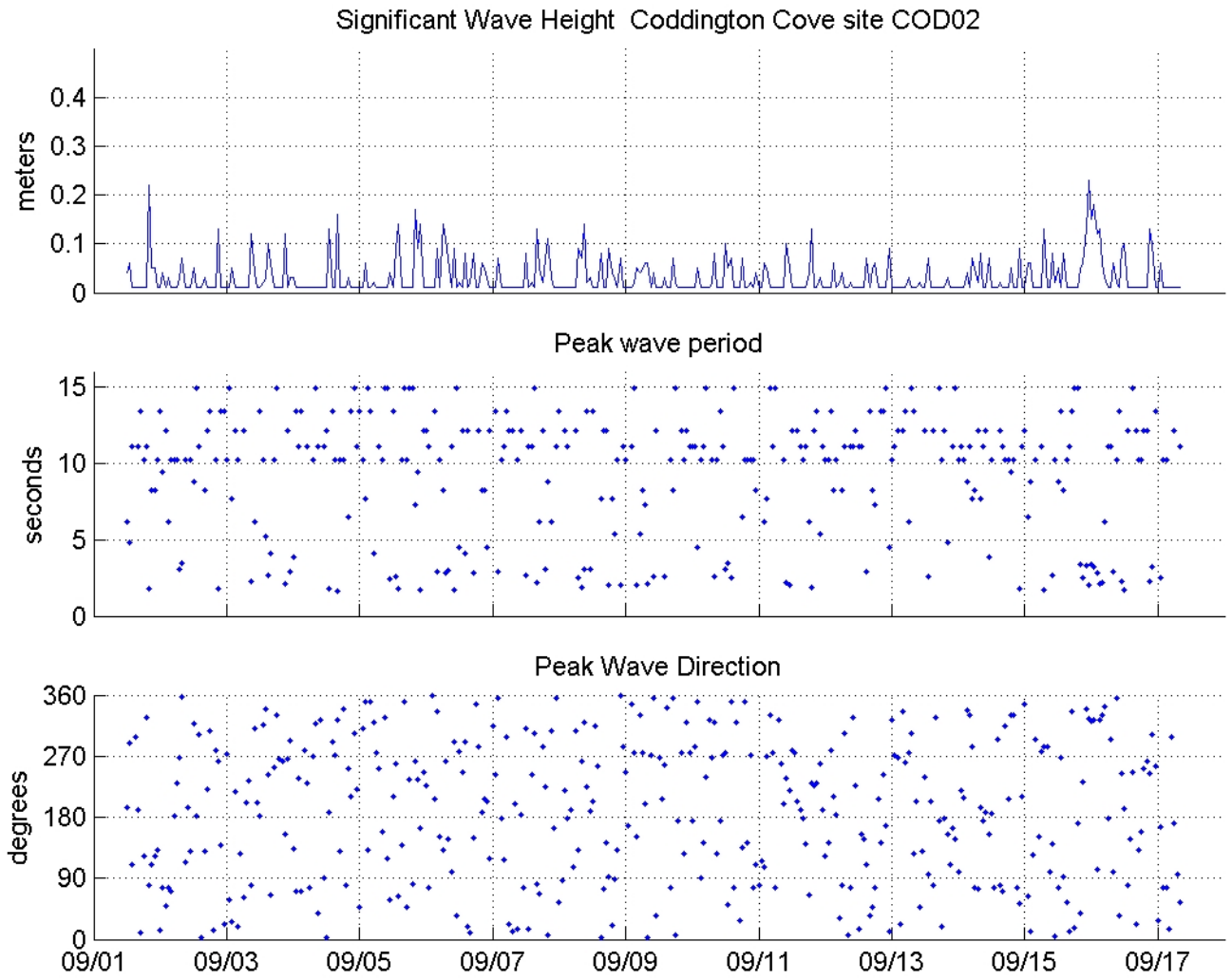

Figure 43: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD02.

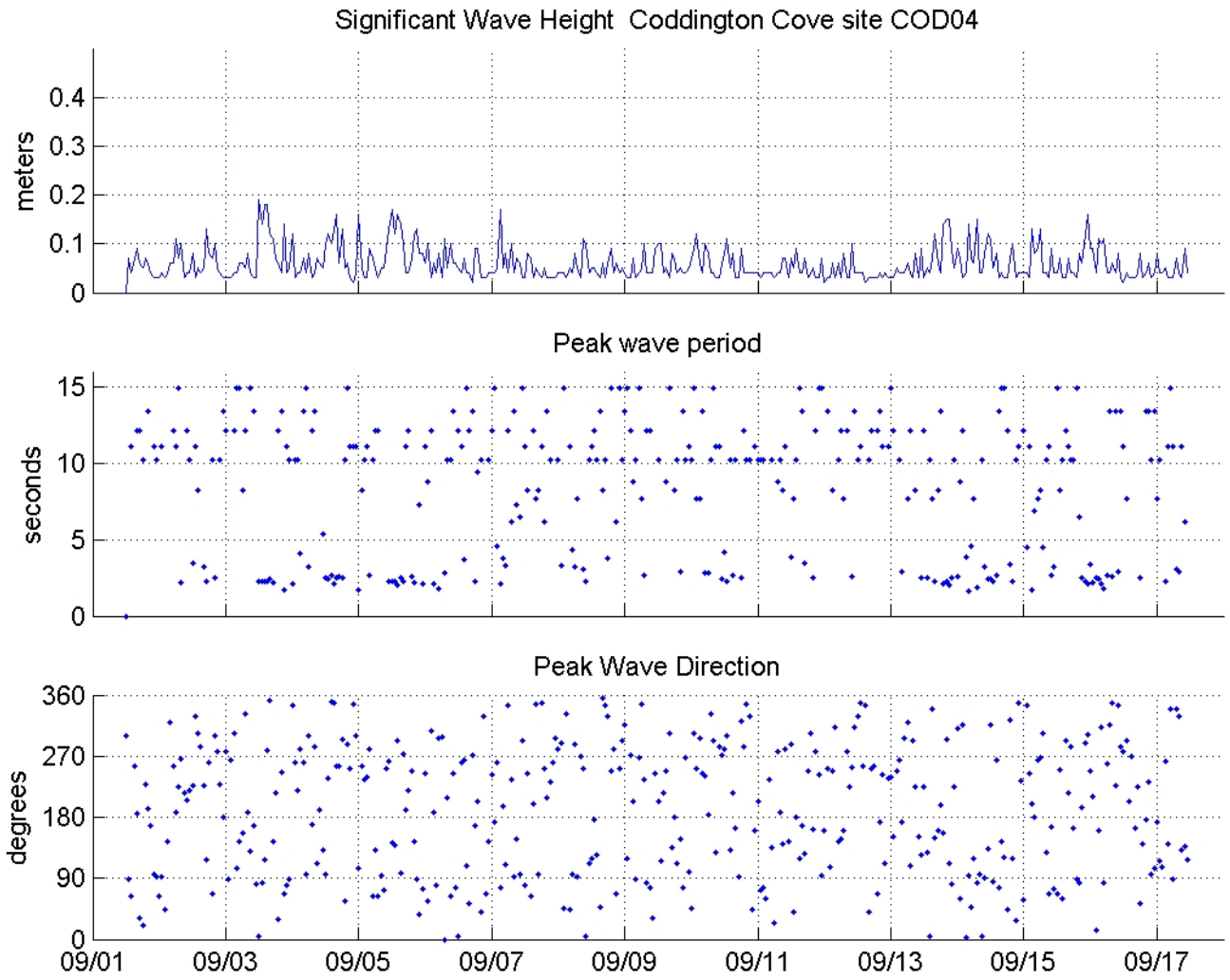

Figure 44: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD04.

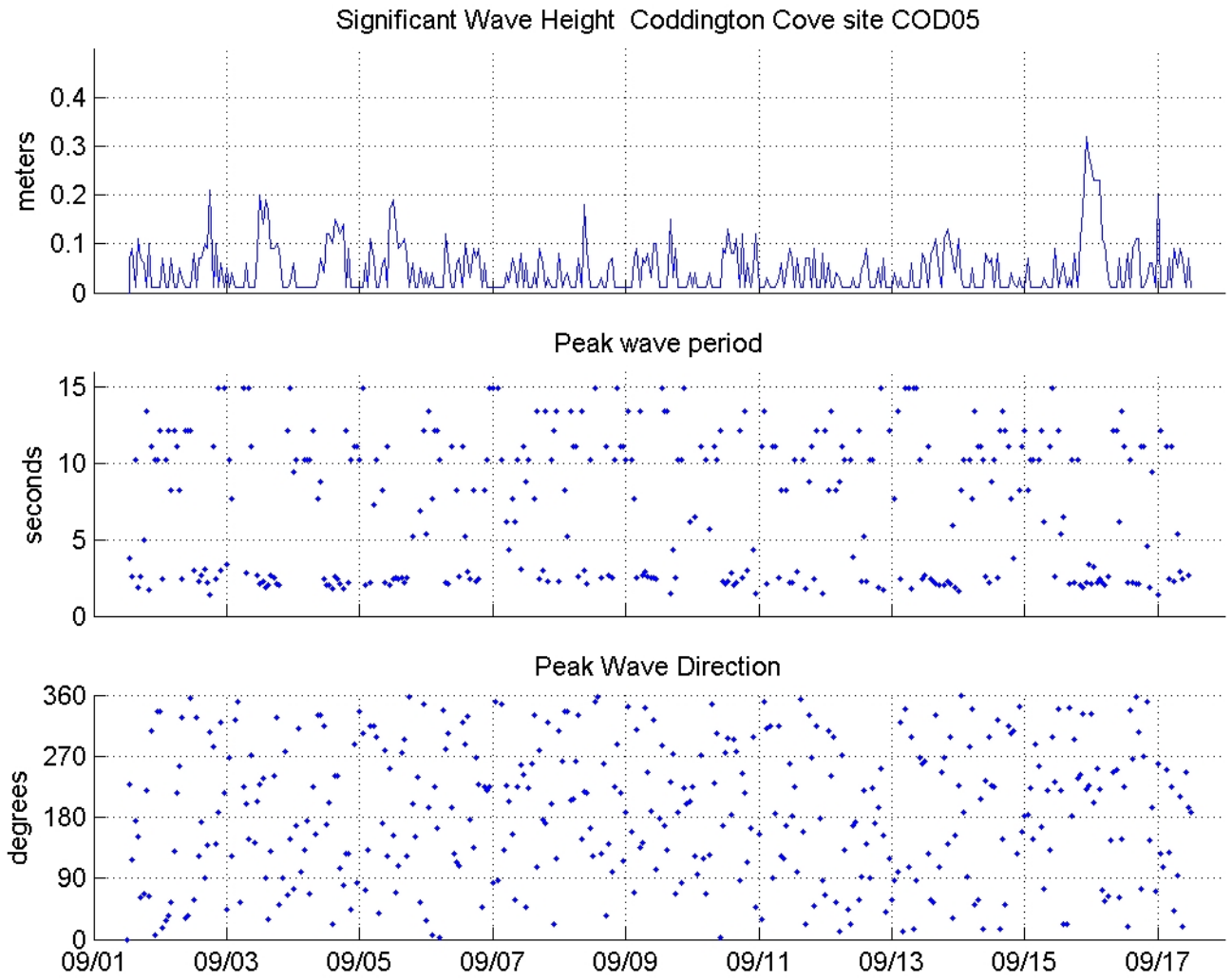

Figure 45: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD05.

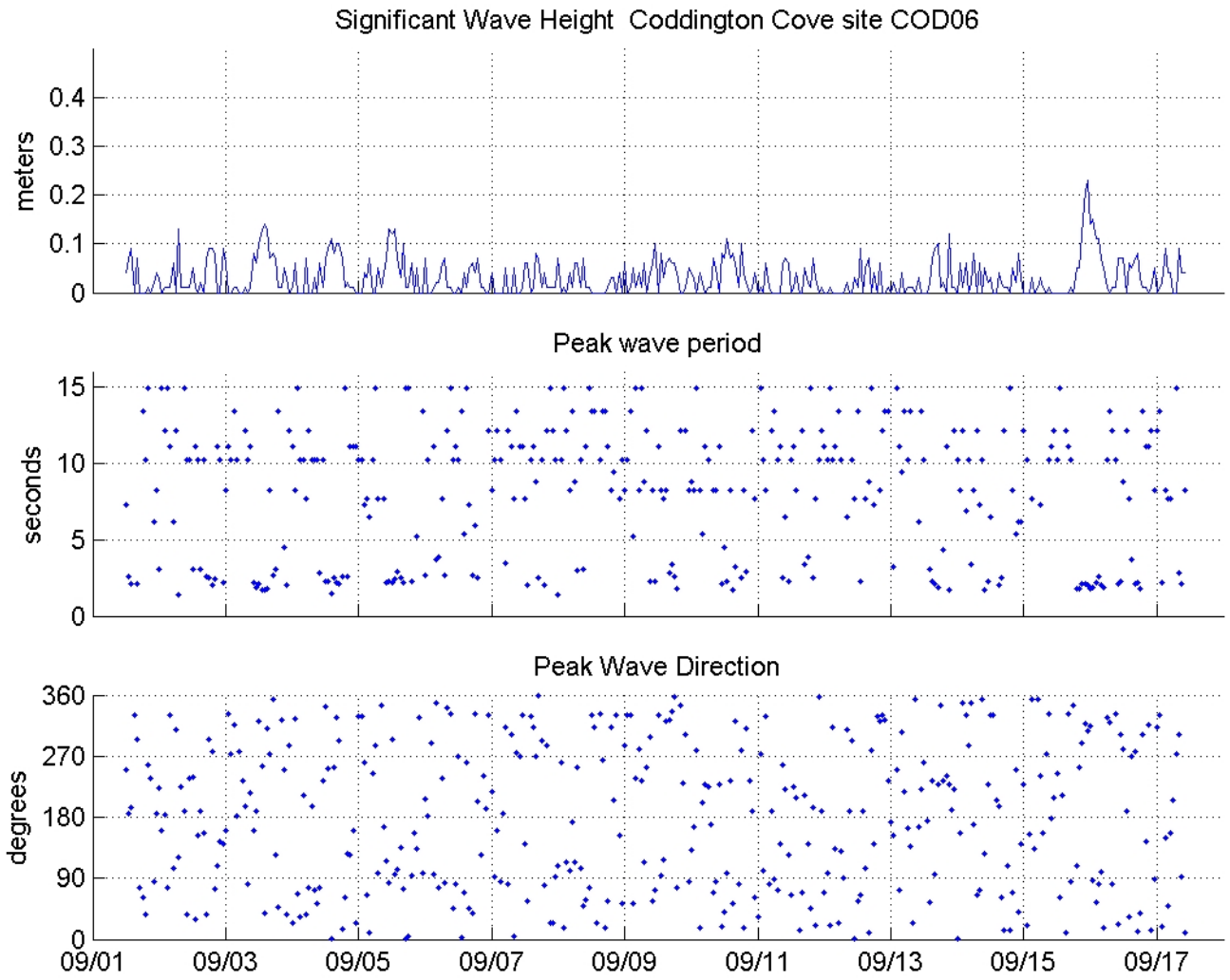

Figure 46: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD06.

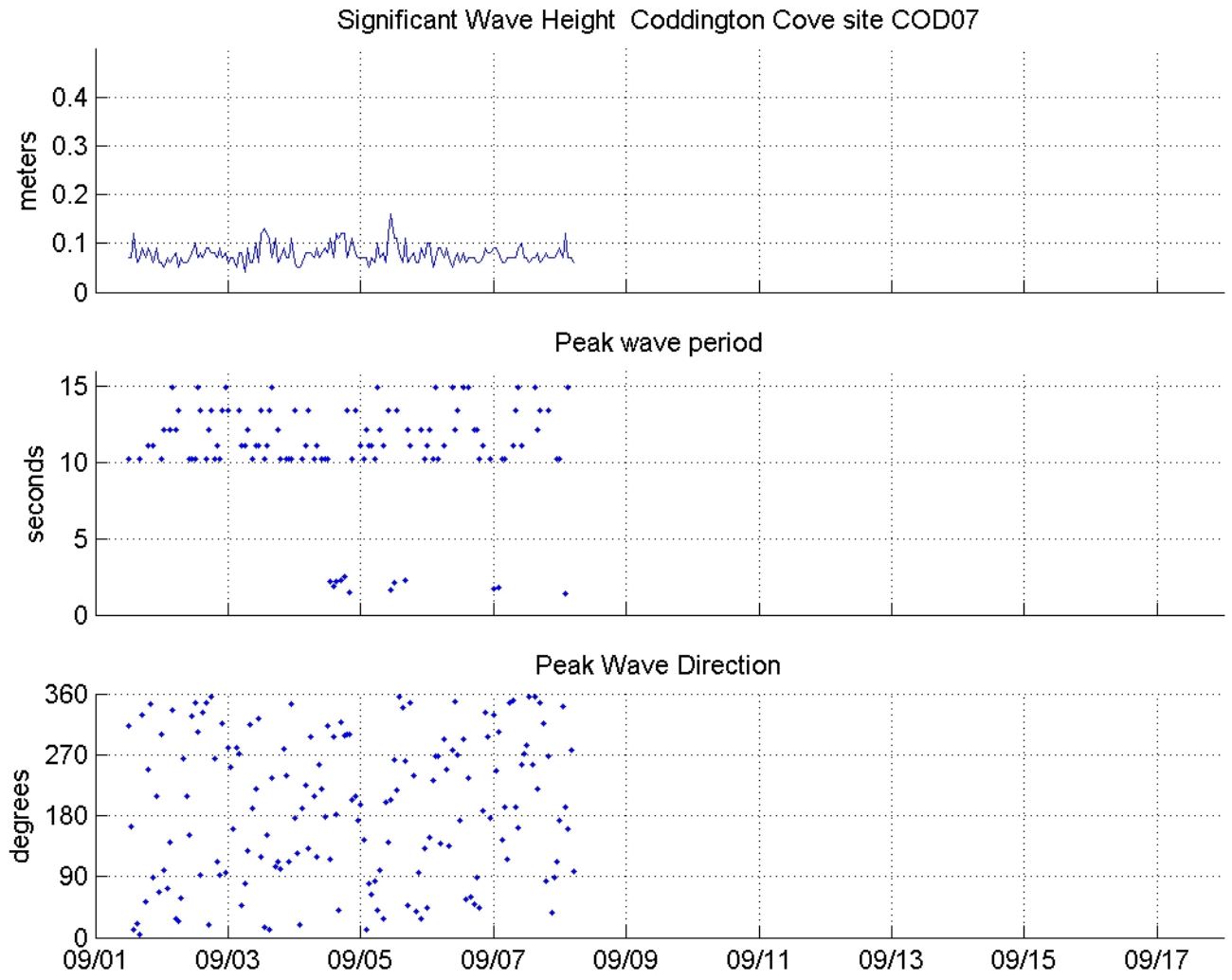

Figure 47: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD07.

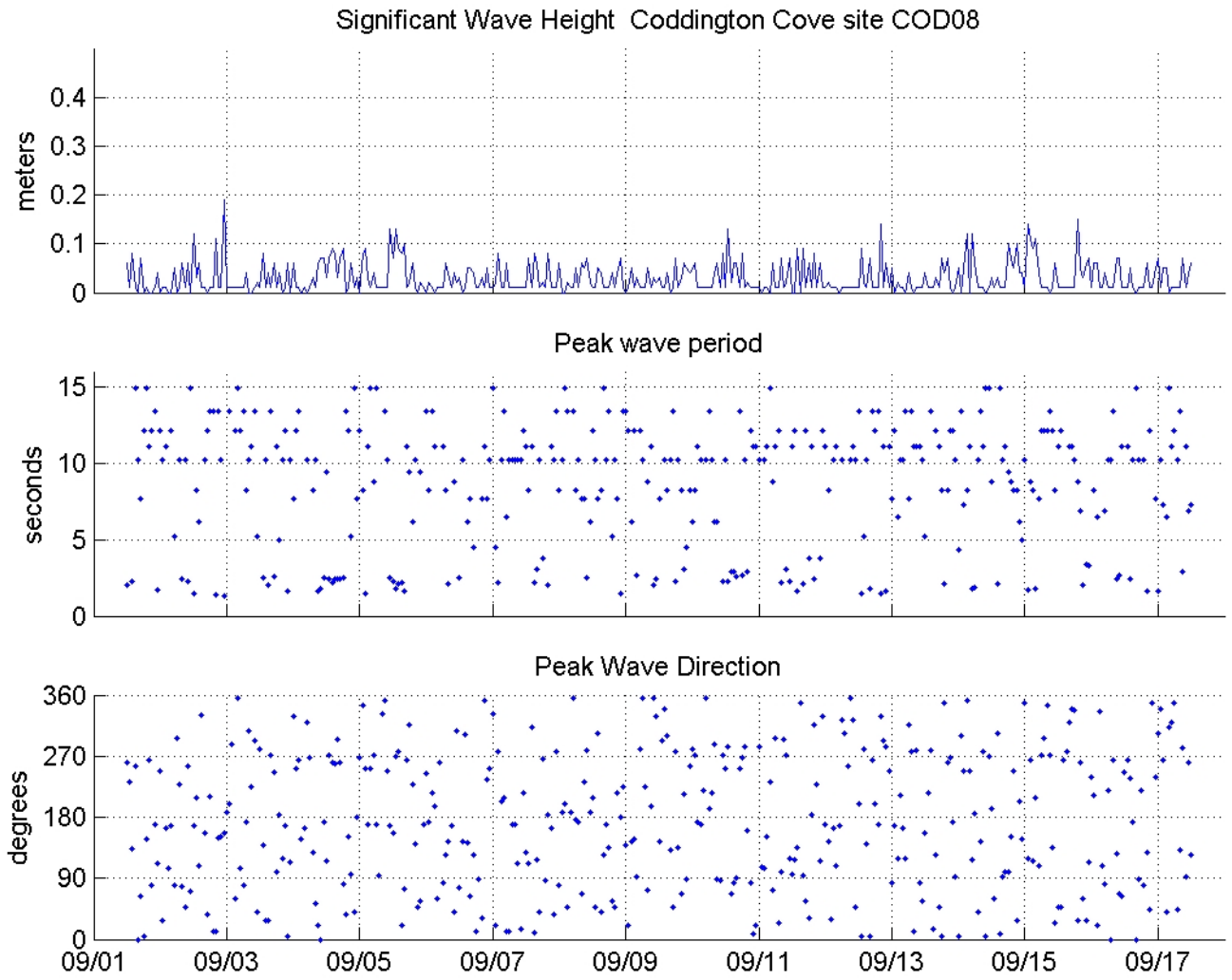

Figure 48: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD08.

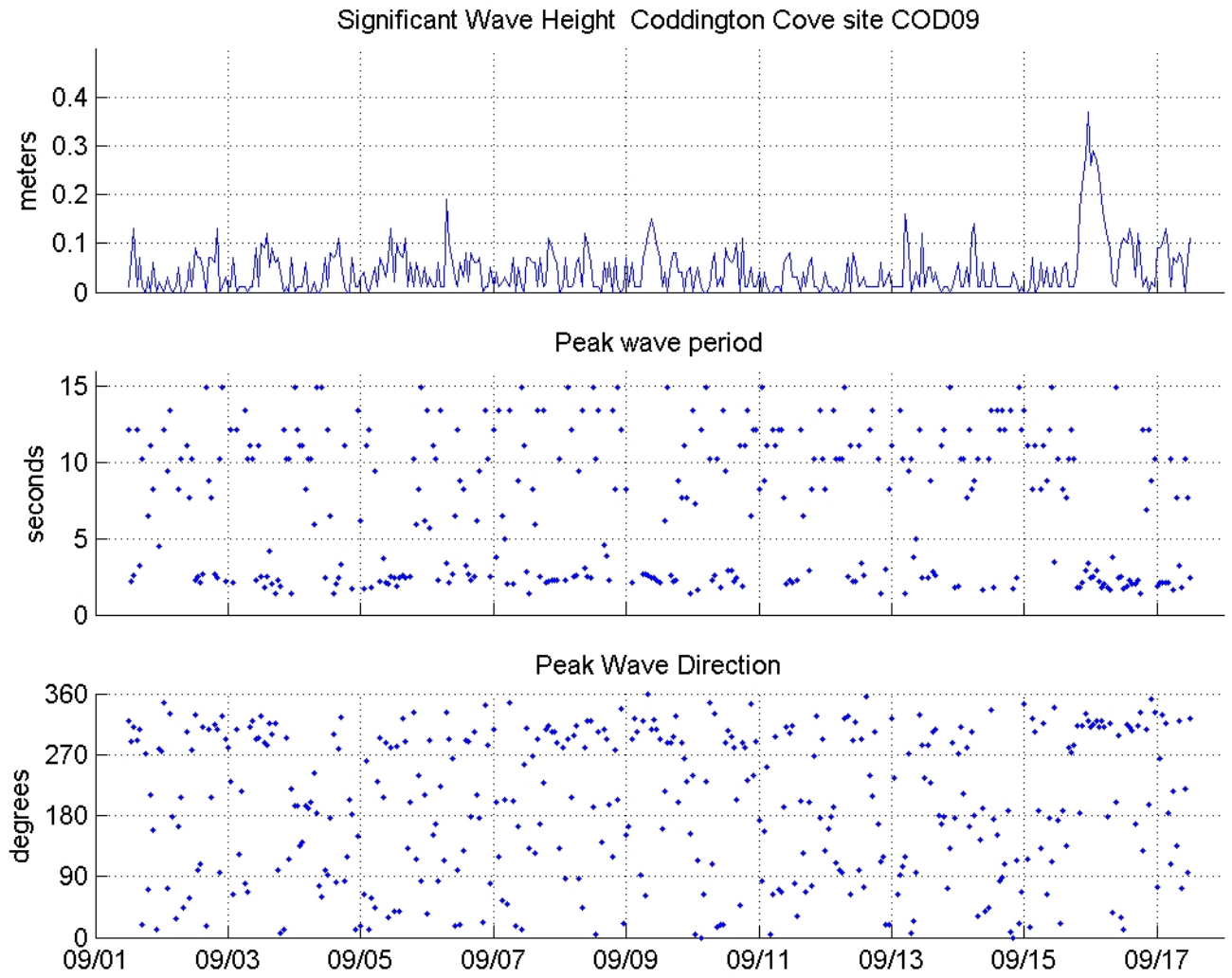

Figure 49: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD09.

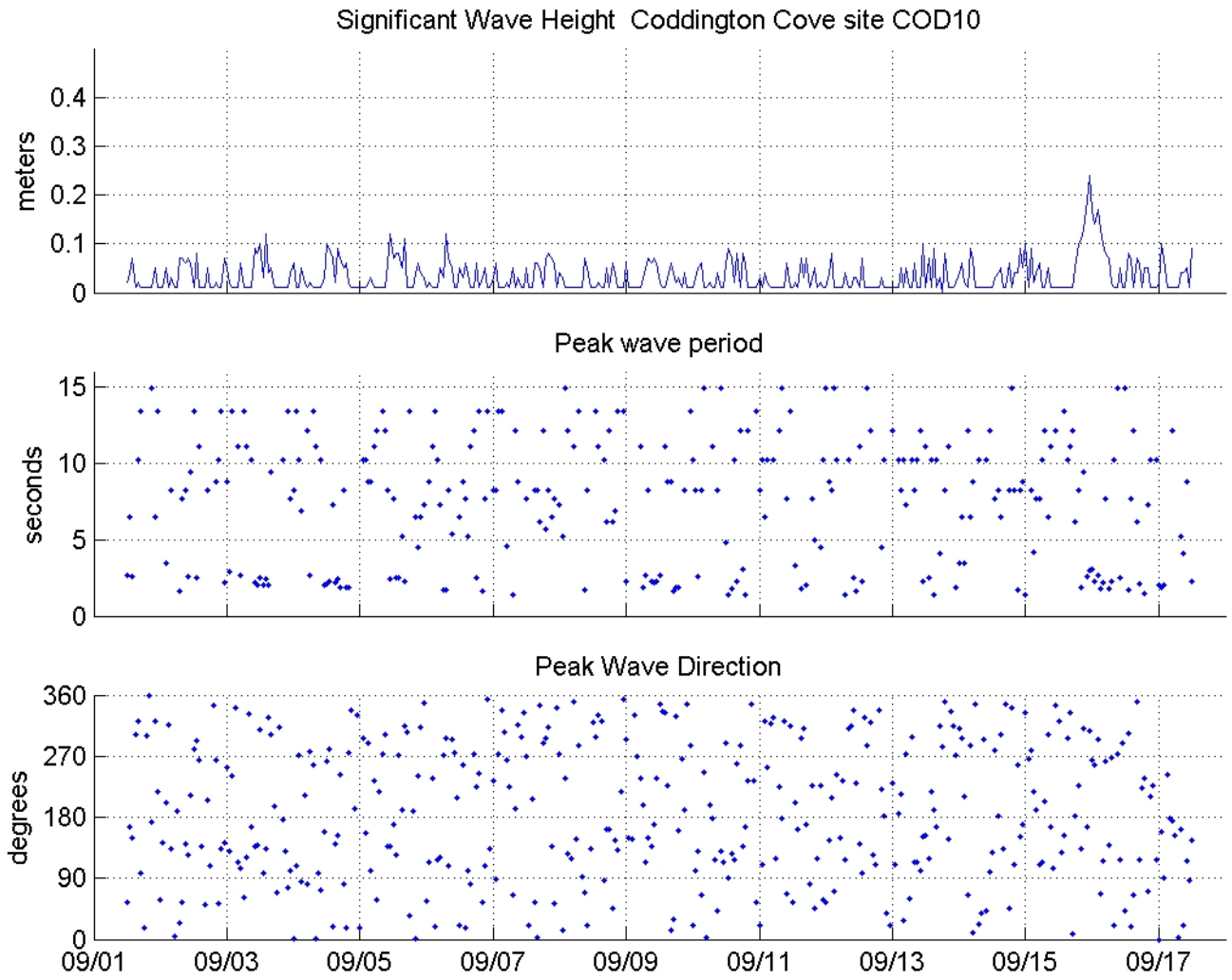

Figure 50: Significant wave height (top), peak wave period (middle) and peak wave direction (lower plot) for station COD10.

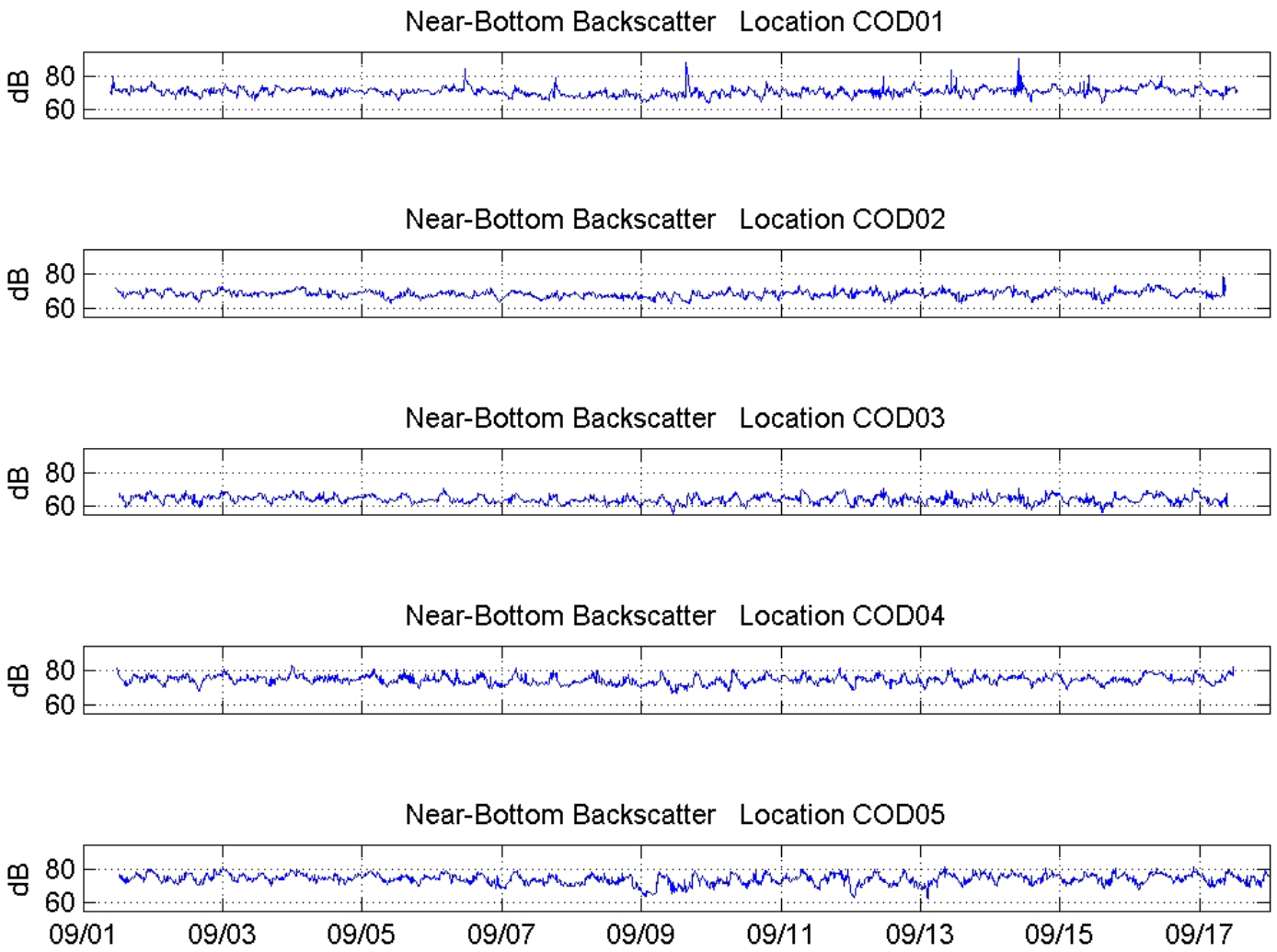

Figure 51: ADCP backscatter nearest the bottom at Sites 01 through 05. Correlation of backscatter to tides and wind events was not particularly strong, suggesting sediment re-suspension processes were weak during this time period.

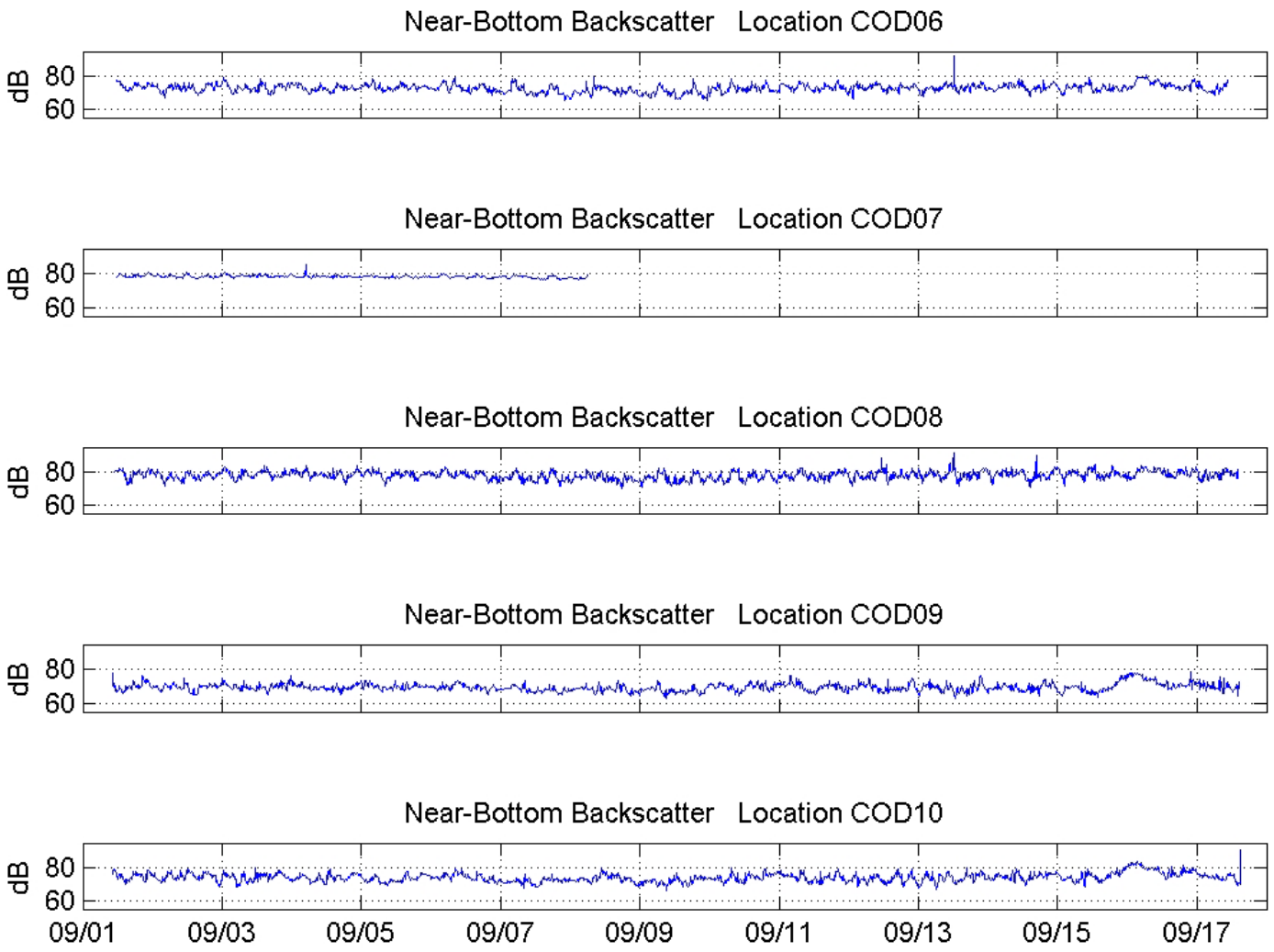

Figure 52: ADCP backscatter nearest the bottom at Sites 06 through 10. Location 09 and 10 showed some correlation to wind events, particularly strong north winds on September 16th.

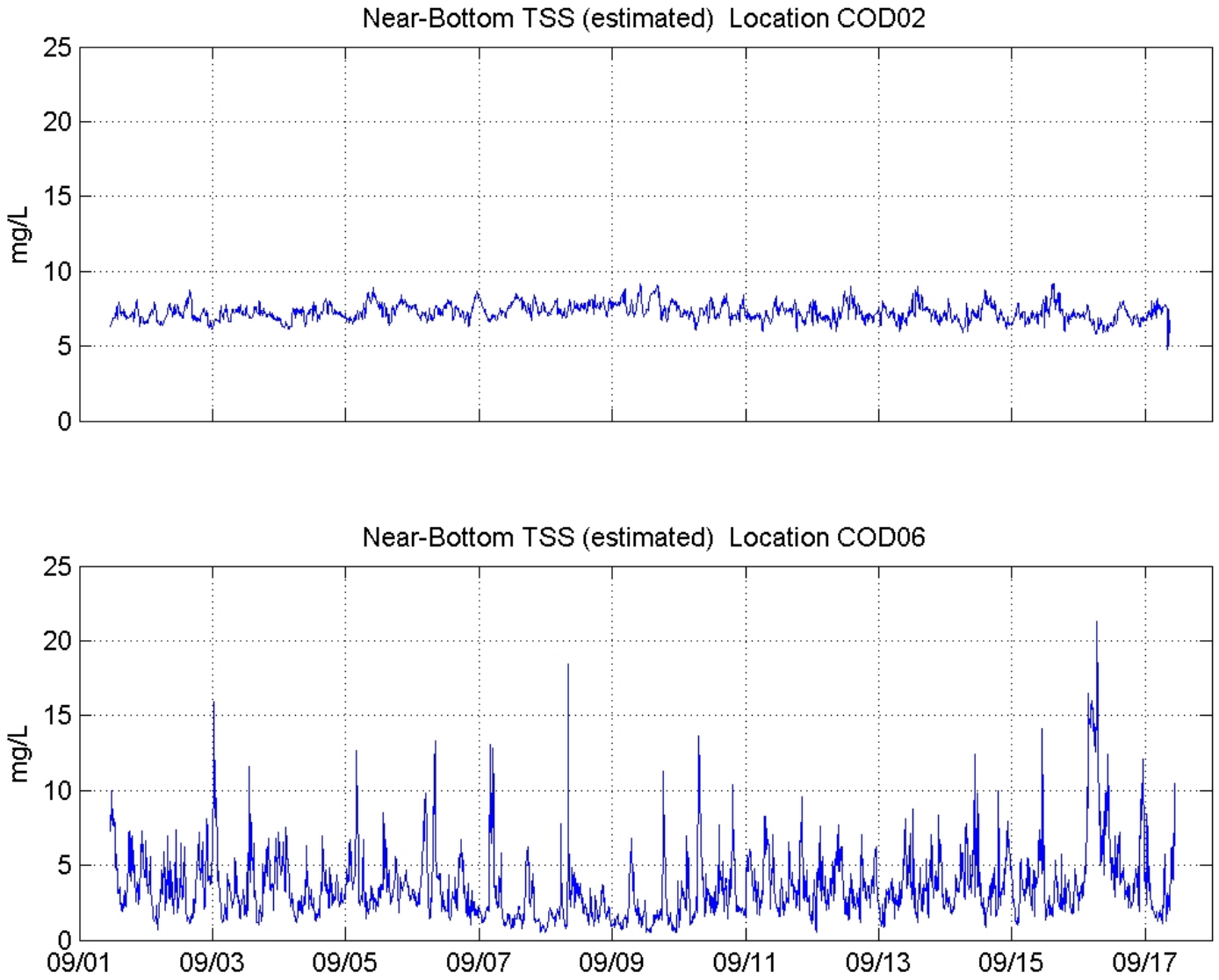

Figure 53: Total Suspended solid concentrations estimated from ADCP backscatter measurements at Locations COD02 and COD06. These were the only locations where the TSS-backscatter calibrations were reasonable. Variability at COD06 showed some dependence on wind events.

C3 COHESION TESTING REPORT – ERDC FEBRUARY 2012

LETTER REPORT

Cohesive Sediment Erosion Field Study: Coddington Cove, Narragansett Bay, Rhode Island

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Vicksburg, Mississippi

—DRAFT DOCUMENT—

03 February 2012

Tetra Tech Inc., under Prime Contract with US Naval Facilities Engineering Command Atlantic, is evaluating the resuspension potential for sediments within Coddington Cove, Rhode Island. Of particular concern are fine-grained sediment deposits with high concentration of contaminants including PCBs and PAHs. As part of this assessment, a cohesive sediment transport model will be applied for the region. The cohesive sediment transport model requires parameterization of first-order transport processes (erosion and settling). This chapter describes field experiments conducted to define cohesive sediment erosion processes and analysis of these data to parameterize cohesive sediment transport in the numerical sediment transport model.

Cohesive Sediment Transport Processes

Sedimentation within Coddington Cove includes cohesive sediments. Non-cohesive sediment (sand and gravel) erosion and settling can be generally estimated from grain size distribution and mineral density. Cohesive sediment transport processes are dominated by other factors. Cohesive sediments are generally a mixture of sand, silt, and clay sized particles.

Erosion

A general definition for cohesive sediment is sediment for which the erosion rate cannot be estimated by standard sand/gravel transport methods. In these cases, cohesive forces are equivalent to or are greater than the gravitational forces that dominate sand transport. Cohesive sediment erosion characteristics are highly dependent upon factors such as particle size distribution, particle coatings, fine sediment mineralogy, organic content, bulk density, gas content, pore-water chemistry, and biological activity. Erosion rate and critical shear stress for erosion can vary significantly with small changes in only one of these inter-dependent parameters. It has been well demonstrated that critical stress and erosion rates for cohesive sediment can vary over several orders of magnitude for sediments with only slightly differing properties. Therefore, the influence of cohesion on sediment processes is significant. Qualitatively, it is understood which properties most significantly influence erosion. However, there are no quantitative methods available to determine erosion rate from cohesive sediment properties. Therefore, due to the sensitivity and wide range of influencing parameters, erosion characteristics of cohesive sediments are determined by site-specific analysis of erosion with erosion flumes.

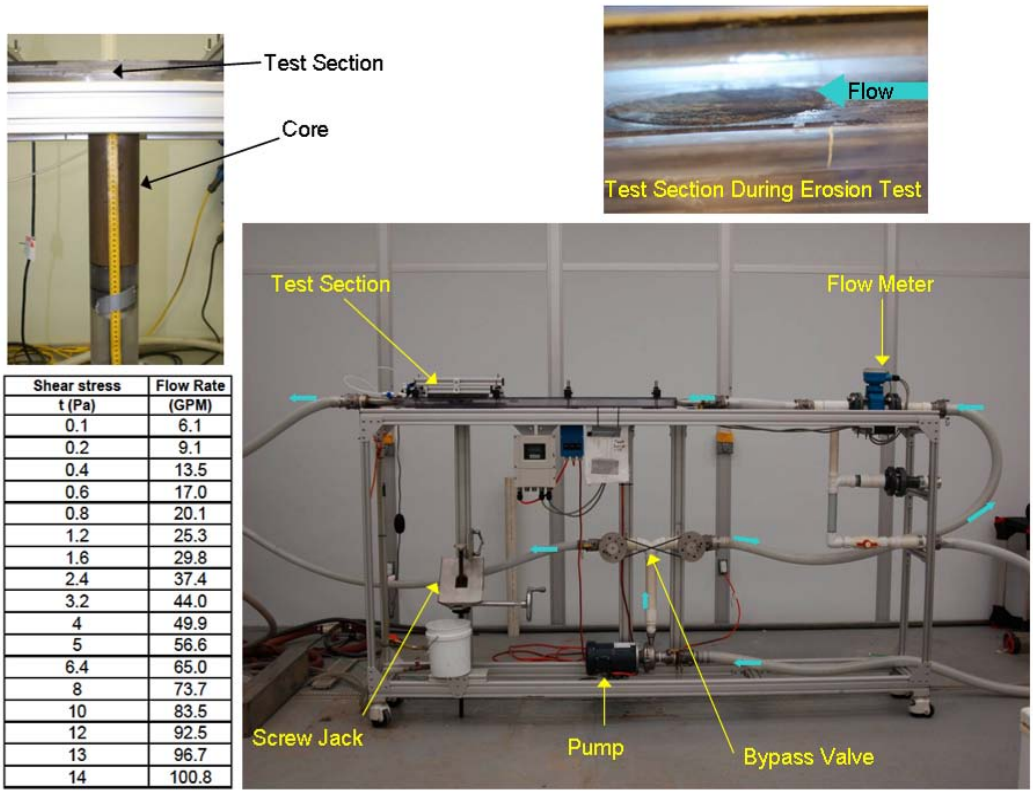
Several flumes are available to parameterize site-specific cohesive sediment erosion algorithms. Most of these devices operate over a range of low shear stress (<2 Pa) and are consequently capable of measuring only surface sediment erosion. Sedflume is an erosion device with capability to impose bed stresses in the range of 0.1 to 12 Pa and measures erosion rates from sediment cores taken from the field (for in-situ or stratified bed conditions) or prepared in the laboratory (for assessing disturbed sediments such as dredged material). Sedflume is designed to quantify erosion rates for surface and sub-surface sediments. These measurements permit description of the vertical variation of erosion rate within the bed. It should be noted that even if sediments are well mixed, cohesive sediment bed erosion will change with depth due to the influence of consolidation (bed density) on erosion rate. Erosion rate can vary by several orders of magnitude between surficial sediments and sediment buried less than 30 cm below the surface. Sedflume was selected to quantify erosion rate and erosion rate variation with depth (density) for this study.

Methods

This section describes the field experiments, sampling and experimental methods, and data analysis methods used in determining cohesive sediment erosion within Coddington Cove. Background and technical information about the experimental device is presented first, followed by description of how these devices were deployed during field experiments to meet the study objectives.

Sedflume

Sedflume is a field- or laboratory-deployable flume for quantifying cohesive sediment erosion. The USACE-developed Sedflume is a derivative of the flume developed by researchers at the University of California at Santa Barbara (McNeil et al. 1996). The flume includes an 80-cm-long inlet section (Figure 1) with cross-sectional area of 2 × 10 cm for uniform, fully developed, smooth-turbulent flow. The inlet section is followed by a 15-cm-long test section with a 10 × 15 cm open bottom (the open bottom can accept cores with rectangular cross-section (10 × 15 cm) or circular cross-section (10-cm diameter)). Coring tubes and flume test section, inlet section, and exit sections are constructed of clear polycarbonate materials to permit observation of sediment-water interactions during the course of erosion experiments. The flume includes a port over the test section to provide access to the core surface for physical sampling. The flume accepts sediment cores up to 80-cm in length.



Shear stress t (Pa)	Flow Rate (GPM)
0.1	6.1
0.2	9.1
0.4	13.5
0.6	17.0
0.8	20.1
1.2	25.3
1.6	29.8
2.4	37.4
3.2	44.0
4	49.9
5	56.6
6.4	65.0
8	73.7
10	83.5
12	92.5
13	96.7
14	100.8

Figure 1. Sedflume erosion flume (lower right). Core inserted into test section (upper left). Core surface flush with bottom of flow channel (upper right). Table of shear stress associated with channel flow rates (lower left).

Erosion Experiments

Prior to the erosion experiment, descriptions of the core are recorded, including length, condition of the core surface, biological activity, and any visual evidence of layering. Cores are inserted into the testing section of Sedflume and a screw jack is used to advance the plunger such that the core surface becomes flush with the bottom wall of the flume. Flow is directed over the sample by diverting flow from a 3-hp pump, through a 5-cm inner diameter hose, into the flume. The flow through the flume produces shear stress on the surface of the core. (Numerical, experimental, and analytical analyses have been performed to relate flowrate to bottom shear stress.) Erosion of the surface sediment is initiated as the shear stress is increased beyond the critical stress for erosion, τ_{cr}. As sediment erodes from the core surface, the operator advances the screw jack to maintain the sediment surface flush with the bottom wall of the erosion flume. Figure 1 includes a photograph of the flume, a close-up photograph of the test section, and a table of flow rate/shear stress relationships.

Erosion rate is determined from the displacement of the core surface over the elapsed time of the experiment. Generally, erosion experiments are performed in repeating sequences of increasing shear stress. Operator experience permits sequencing of erosion tests to allow greater vertical resolution of shear stress/erosion rate data where required. The duration of each erosion experiment at a specified shear stress is dependent on the rate of erosion and generally is between 0.25 and 15 minutes. Shear stresses that induce no measurable erosion are also recorded. The

range of shear stress for each cycle is determined by the operator based on the previous erosion sequences and erosion behavior during the ongoing sequence.

Sediment Bulk Properties

Physical samples for bulk sediment property measurements are taken at approximately 3-5 cm intervals during erosion experiments, generally at the end of each shear stress cycle. Physical samples are collected by draining the flume channel, opening the port over the test section, and extracting a sample from the sediment bed. Properties measured include bulk density and grain-size distribution, and separate samples were collected from the core surface for these analyses. These properties strongly influence erosion; therefore, understanding their variation with depth is important in interpreting the erosion data.

Bulk Density Measurements. Bulk sediment density of physical samples is determined by a wet-dry weight analysis. Physical samples are extracted from the saturated core surface and placed in a pre-weighed aluminum tray. Sample weight is recorded immediately after collection and again after a minimum of 12 hours in an 90° C (194° F) drying oven. Wet weight of the sample was calculated by subtracting tare weight from the weight of the sample. The dry weight of the sample was calculated as the tare weight subtracted from the weight after drying. The water content w is then given

$$w = \left(\frac{m_w - m_d}{m_d} \right) \tag{1}$$

where m_w and m_d are the wet and dry weights, respectively. A volume of saturated sediment, V, consists of both solid particles and water and can be written as

$$V = V_s + V_w \tag{2}$$

where V_s is the volume of solid particles and V_w is the volume of water. If the sediment particles and water have density ρ_s and ρ_w, respectively, the water content of the sediment can be written as

$$w = \frac{\rho_w V_w}{\rho_s V_s} \tag{3}$$

A mass balance of the volume of sediment gives

$$\rho V = \rho_s V_s + \rho_w V_w \tag{4}$$

where ρ is the bulk density of the sediment sample.

(1)-(4) are used to derive an explicit expression for the bulk density of the sediment sample, ρ, as a function of the water content, w, and the densities of the sediment particles and water. This equation is

$$\rho = \rho_s + \frac{w\rho_s \left(\rho_w - \rho_s \right)}{\rho_w + w\rho_s} \tag{5}$$

For the purpose of these calculations, ρ_s = 2.65 g·cm^{-3} and ρ_w is calculated for measured pore water at sample temperature.

Particle-Size Distribution. Samples collected during erosion experiments were transported to the Sediment Laboratory at ERDC for grain size analysis. A Beckman-Coulter LS-100 laser diffraction particle-sizer was used to measure the particle-size distributions in sub-samples collected from the cores. The particle sizer measures particle size over the range 0.4 to 900 μm. Particle size distributions were determined by first removing and sieving (#20 mesh) sediment and shell fragments larger than 850 μm. The passing portion of the sample was added to a small volume of water (approximately 150 mL) and sonicated using a high-powered laboratory sonicator to disperse the sediment. The dispersed solution was placed in the particle sizer fluid module. The sample is pumped and recirculated through the optical module. The optical module includes a spatial filter assembly containing a laser diode and laser beam collimator. The diffraction detector assembly contains a custom photodetector array that is used for the measurement of light scattering by the suspended particles. The distribution of grain sizes and median grain sizes is derived from this light scattering measurement. Organic material was not oxidized before grain size analysis was performed; therefore grain size distributions include organic material.

Multivariate Erosion Rate Prediction

The goal of erosion data analysis is to determine appropriate parameterization of erosion processes for numerical modeling studies. For this study, the erosion data are to be described in the SEDZLJ model. SEDZLJ is flexible in the form of the erosion equation, and the effects of bulk density, depth, and applied shear stress may be represented as indicated by the erosion data. Analysis of the erosion data from Coddington Cove suggested that the erosion algorithm should be of the following form:

$$\begin{aligned} E &= 0; && \left(\tau < \tau_c\right) \\ E &= A\tau^n; && \left(\tau_c < \tau < \tau_m\right) \\ E &= A\tau_m^n; && \left(\tau > \tau_m\right) \end{aligned} \tag{6}$$

where E represents erosion rate (cm·s^{-1}) from the bed, τ is bed shear stress, τ_c is critical stress for erosion, A is an empirical constant, n is an empirical exponent, and τ_m is bed stress at which erosion rate becomes constant. Solution of Equation (6) to data requires solving for three parameters, τ_c, A, and n. Bed stress for the upper limit of erosion rate is determined by examining the data. The best fit of Equation (6) to measured data is accomplished through an iterative, multi-parameter, least-squares method on the linear transform of Equation (6).

Field Experiments

Field experiments were conducted from August 31 through September 8 of 2011. Field experiments included core collection and cohesive sediment erosion experiments.

Core Collection

On August 31, 2011, twelve 10-cm (4-inch) diameter cores were collected from ten locations (Figure 2, Table 1) within Coddington Cove for the purpose of erosion experiments. The ten core collection locations were provided to ERDC by Tetra Tech Inc. A gravity corer was used to collect a core from each location. In addition, a replicate gravity core was collected at both stations 7 and 8 to bring the total number of cores collected to twelve.

Table 1. Core Summary					
Core ID	**Latitude (North)**	**Longitude (West)**	**Collection Method**	**Collection Date**	**Sample Depth (cm below sediment surface)**
Station 1	41.5313	71.3153	Gravity	31 August 2011	16
Station 2	41.5283	71.3202	Gravity	31 August 2011	21
Station 3	41.5296	71.3172	Gravity	31 August 2011	27
Station 4	41.5297	71.3146	Gravity	31 August 2011	20
Station 5	41.5281	71.3163	Gravity	31 August 2011	16
Station 6	41.5288	71.3142	Gravity	31 August 2011	15
Station 7	41.5272	71.3158	Gravity	31 August 2011	15-21
Station 8	41.5271	71.3136	Gravity	31 August 2011	25-29
Station 9	41.5252	71.3145	Gravity	31 August 2011	22
Station 10	41.5240	71.3124	Gravity	31 August 2011	20

The ERDC gravity corer (Figure 3A) is constructed of steel and weighs approximately 32 kg (70 lbs). The gravity corer consists of a core barrel, check valve, fins, and cable harness. The gravity corer is lowered to the bottom and penetrates the bed by its own weight and momentum. The check valve serves to create a seal above the core to prevent the captured sediment core from slipping out of the core tube. Once the core is retrieved to the vessel, a plunger with Bentonite paste (for sealing and lubrication) is inserted into the bottom of the core and each end of the core is sealed with end caps (Figures 3B-C). Each core was labeled, logged, and stored submerged in water on the vessel deck.

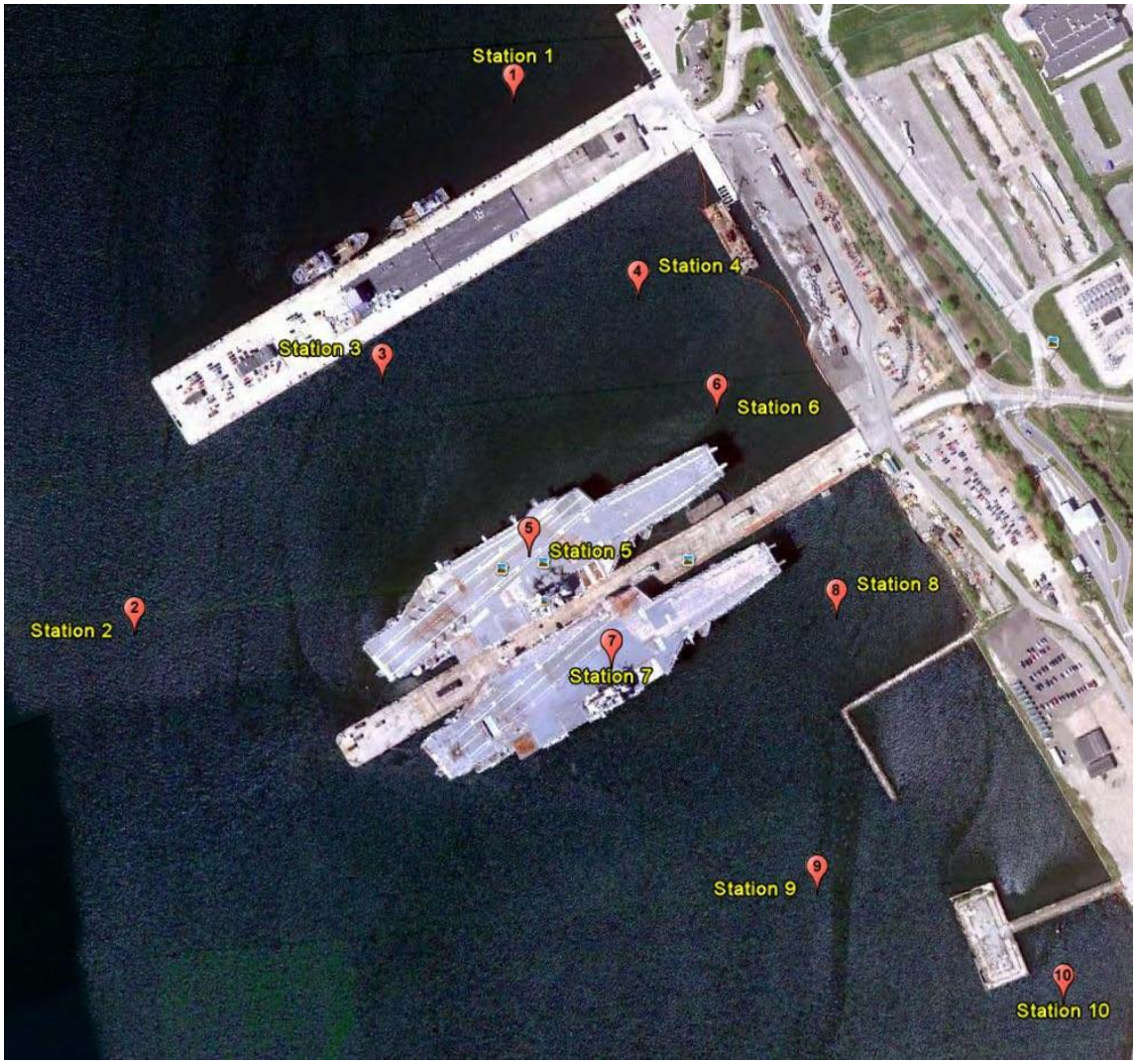


Figure 2. Coring locations in Coddington Cove, RI.

A) Gravity Corer

B) Plungers with Bentonite paste

C) Core with plunger inserted.

Figure 3. Sampling devices.

Erosion Experiments

Cores collected were transported by vessel to the ERDC-CHL Field Sediment Laboratory (located on Coddington Cove on the Newport Rhode Island Navy complex). Erosion experiments were conducted 02 September through 08 September 2011, in the field laboratory following the Sedflume methods presented earlier in this report. During the time of erosion experiments, sediment cores were stored in a shaded barrel, filled with site water.

Results and Discussion

Cohesive sediment transport process data collected during the field study were analyzed to determine SEDZLJ model parameterizations for cohesive sediment erosion and settling velocity. This section presents results of the data analysis, model parameterization, and general observation with discussion. The reader is referred to technical appendices for full presentation of the analyzed dataset. Appendix A presents physical descriptions of each core including:

photographs, bed density profiles, and grain size analysis. Appendix B provides erosion analysis of each core, including definition of bed layers that erode similarly. Appendix C provides grouping of bed layers across all cores collected, including confidence intervals on the parameterized erosion equations.

Cohesive Sediment Erosion

Analysis of cohesive sediment erosion data obtained from undisturbed field cores is inherently complex. Cohesive sediment erosion is sensitive to slight changes in bed density, deposit mineralogy, gas content, organic content, biological activity, debris and a host of other factors. In many cases, these factors change significantly at relatively small vertical scales (such as depositional bed sequences). Consequently, measured cohesive sediment erosion rates from field cores are notoriously variable. To compensate for the large variance in measured erosion rates, field erosion experiments are conducted in a manner to produce a large sample from which to derive statistically representative relationships for various numerical erosion algorithms. To ensure high quality in the data analysis, data and associated experimental notes are evaluated to identify outliers in the dataset. Outliers are rejected based on comparisons between adjacent data points and experimental log notes.

During the erosion experiments, all cores were found to be vertically stratified. The vertical variation in erosion characteristics was associated with shell content, vegetation, and/or sand content. Cores 07 and 08 included a significant amount of shells and shell fragments. Erosion measurement had to be halted for portions of these cores due to the presence of shells.

Erosion Parameterization

Erosion rate data were evaluated for relationships between erosion rate, bed density, and applied shear stress. Each of the cores analyzed indicated bed layering (as inferred from the visual observations, sediment size analysis, and erosion rates). In some cases, the boundaries between layers were very distinct, in other cases the layer boundaries transitioned more gradually. Each of the identified sediment layers within a core was first analyzed separately, then with other layers to form sediment groupings that contain a larger number of erosion data points and represent a larger area of influence.

The erosion data from Core 08B will be presented here to illustrate the parameterization of the erosion data from Coddington Cove. Figure 3 presents the erosion data with depth and the sediment bulk density profile determined from physical samples taken from the core. First, the erosion data were grouped vertically within cores. This grouping was accomplished by reviewing the erosion notes and erosion rate relationships to depth, density, and shear stress. At the sediment water interface, there is typically a thin, low-density layer that erodes more easily than the more highly consolidated sediments deeper in the sediment bed. This was observed for Core 08B between depths of 0 – 1 cm into the core, which is defined as Layer S08B-0. Beneath the surface layer was a layer from 2 – 13 cm that was consistent in sediment size distribution and for which the erosion rate data followed similar relationships to bed density and shear stress (Figure 4).

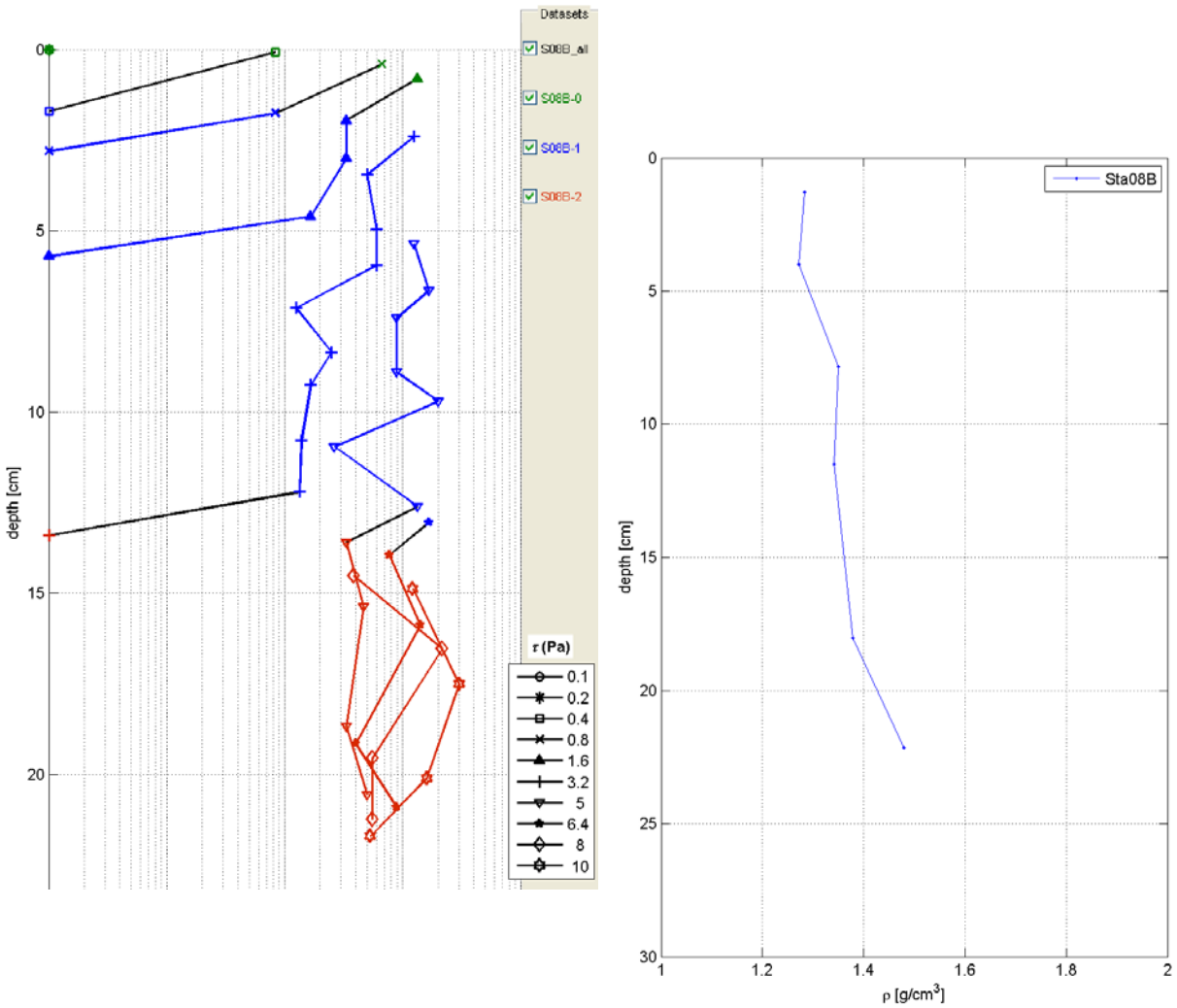


Figure 3. Erosion rate data (left) and bulk density profile (right) of Core 08B. For erosion rate data set, colors indicate the layers of the core as inferred from erosion data, visual observations, and physical properties.

A multivariate least squares fit of erosion rate to shear stress and bed density (Core 08B, Layer 1) is presented in the upper plot of Figure 4. Layer 08B-1 was one of the few layers that demonstrated a clear relationship between erosion and bed density. For most of the layers, other factors such as vegetation, mussels, shell hash, or sand content influenced erosion more than bed density. In these cases, the erosion relationship was characterized by a simpler relationship of only shear stress (Figure 4, bottom).

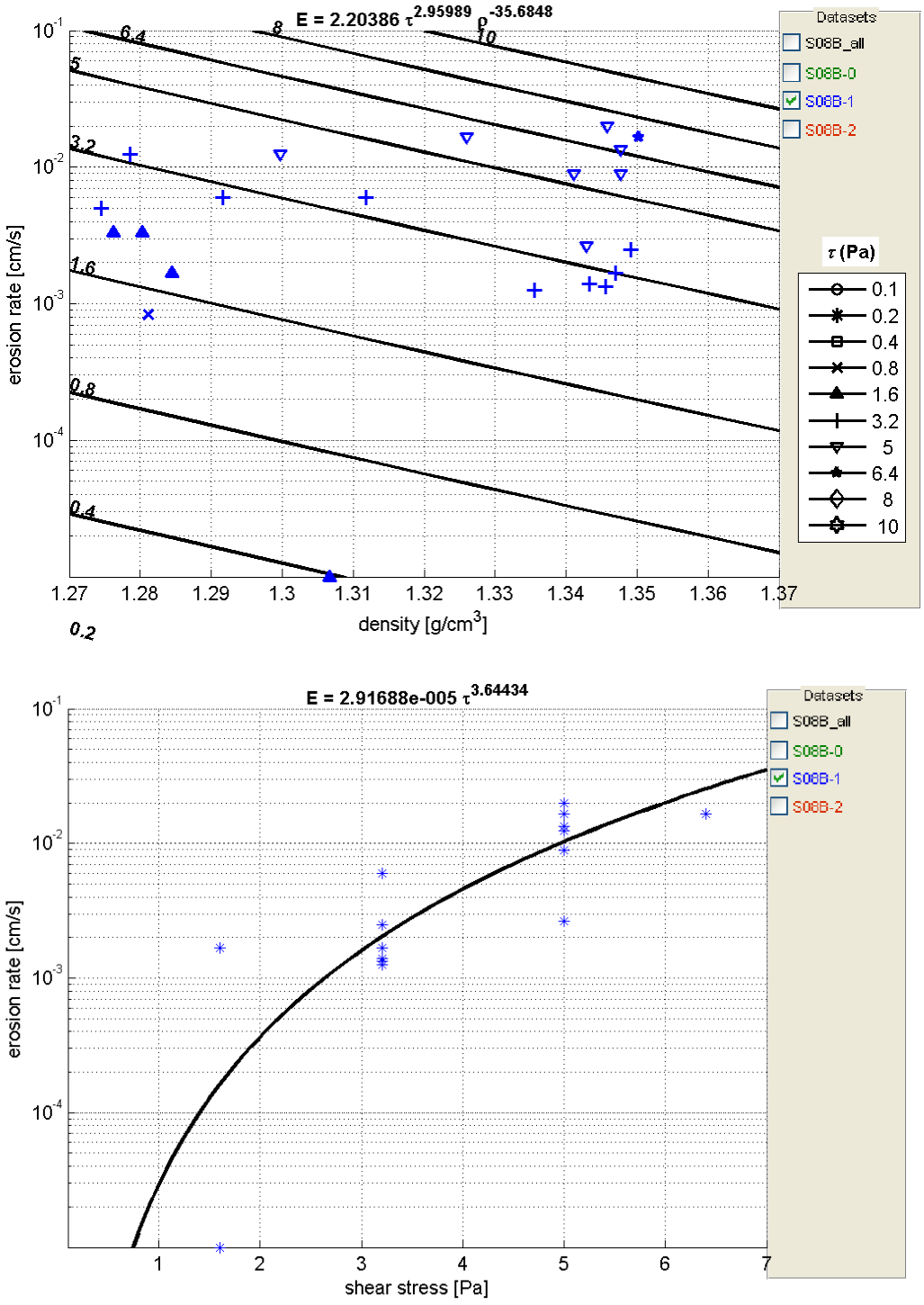


Figure 4. Erosion parameterization for Core 08b, Layer 1. (Top) Multivariable least squares fit of erosion to bulk density and shear stress. (Bottom) Least squares fit of erosion to shear stress for bottom half of Layer 1. (Upper half of Layer 1 has different response to shear stress which is related to density, see top plot).

After evaluating layers in individual cores, the layers were grouped together to identify sediments that eroded similarly across samples at the site. For example, Layer 08B-1 from Figures 3 and 4 was grouped with Layers 07A-1, 08A-1, and 09-1 to form Group C (Figure 5). In this case, the grouped data provide a reasonably sized dataset (number of samples, $N = 63$) to provide a significant correlation ($r^2 = 0.56$, $p \ll 0.01$) between erosion and shear stress. The least-squares fit to $E = A\tau^n$ is indicated by "fit". The 68% confidence intervals (± 1 σ) on the data around the least squares fit ("ci data") are indicated. The confidence intervals suggest that erosion varies by approximately a factor of 2 around the best fit line, not an uncommon level of variance in erosion rates for field samples. Furthermore, there is uncertainty in the A coefficient and n exponent of the best fit line. The "ci fit param" indicates the resulting fit of $E = (A + \delta A)\tau^{(n+\delta n)}$ and $E = (A - \delta A)\tau^{(n-\delta n)}$, where δ indicates parameter uncertainty. Seven data groupings were determined from the Coddington Cove dataset. The grouped data, fit statistics, and confidence intervals are presented in Appendix C and summarized in Table 2.

All cores collected exhibited cohesive erosion behavior. Critical shear stress for erosion generally increased with depth and erosion rates at a given shear stress decreased with depth. This is a common observation associated with stronger bonding with increased sediment consolidation and density. All cores exhibited some degree of bed layering, which influenced the cohesive sediment transport rates. Bed layering was associated with sand content, vegetation, and

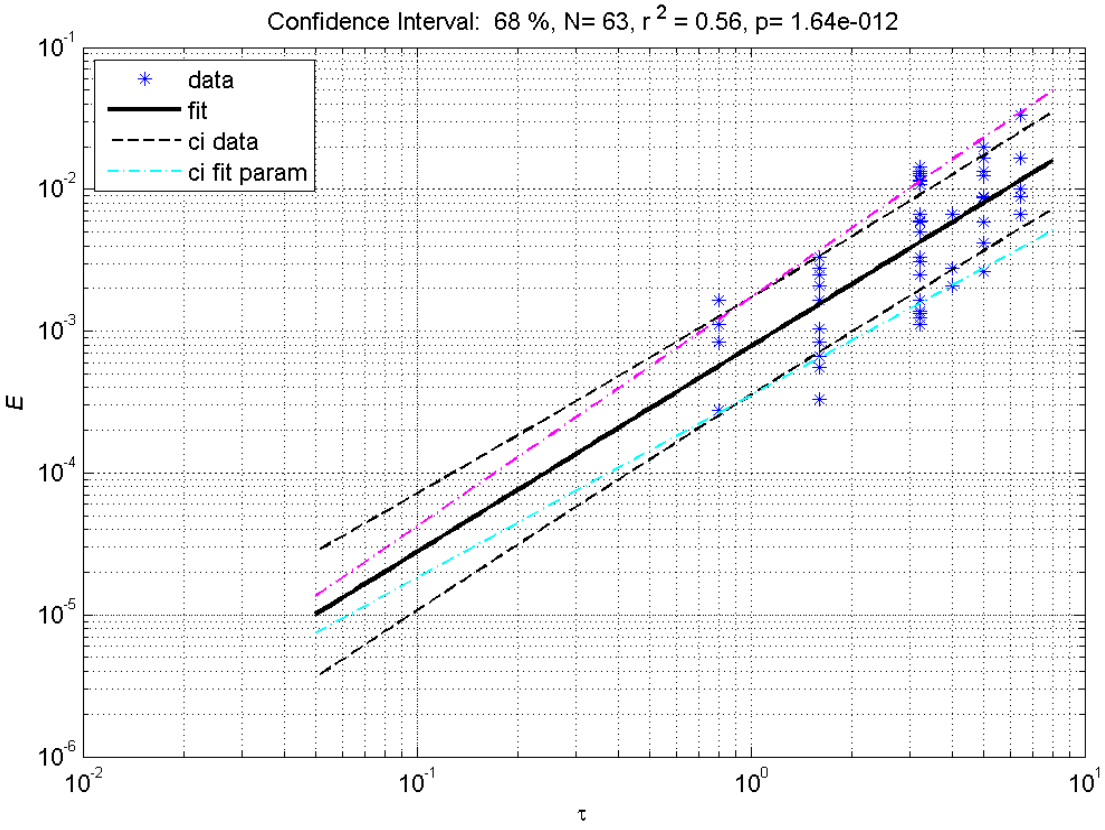


Figure 5. Erosion parameterization for Group C (composed of Layers 07A-1, 08A-1, 08B-1, and 09-1). Shear stress(τ) in Pa and erosion rate (E) in cm/s. The fit to $E = A\tau^n$, 68% confidence intervals (± 1σ) on the data ("ci data"), and 68% confidence intervals on the fit parameters ("ci fit param") are provided.

shell. Groups A-E were composed of relatively shell- and sand-free cohesive beds, with varying clay content and bed density. Cores with substantial shell and vegetation were grouped into Group F. Cores 9 and 10 had layers with more than 20% sand by weight, which were combined to form Group G.

Table 2. Cohesive Sediment Erosion Parameterization for SEDZLJ

Group	DataSets	Depth (cm)	Fit Parameters				
			Fit	τ_{cr} (Pa)	τ_{max} (Pa)	*A*	*n*
A	All	0-1	Best	0.2	2	7.8e-3	1.58
			Low	0.2	2	3.9e-3	1.37
			High	0.2	2	15.5e-3	1.80
B	S03-1	1.5 - 5.5	Best	0.4	8	1.2e-3	1.34
	S04B-1	2 – 6.5	Low	0.4	8	0.56e-3	1.12
	S05-1	2.3 – 7.5	High	0.4	8	2.4e-3	1.55
C	S07A-1	3.0 – 6.5	Best	0.4	9	0.78e-3	1.45
	S08A-1	2.0 – 11.5	Low	0.4	9	0.35e-3	1.29
	S08B-1	2 - 13	High	0.4	9	1.7e-3	1.61
	S09-1	1.5 – 7.5					
D	S08A-2	12 - 20	Best	1.6	12	1.3e-3	0.98
	S08B-2	13 - 22	Low	1.6	12	0.68e-3	0.72
			High	1.6	12	2.4e-3	1.24
E	S03-2	7.0 – 9.5	Best	0.8	9	0.64e-3	1.56
	S05-2	6.0 – 11.0	Low	0.8	9	0.28e-3	1.22
	S07B-2	5.5 – 8.0	High	0.8	9	1.5e-3	1.90
F	S07A-2	7.0 – 9.0	Best	0.8	12	0.32e-3	1.05
	S02-3	7.0 – 14.0	Low	0.8	12	0.16e-3	0.86
	S03-3	10 - 15	High	0.8	12	0.66e-3	1.25
	S07B-3	12 - 14					
	S03-4	15 - 21					
G	S09-2	8.0 – 10.5	Best	0.8	12	0.51e-3	1.42
	S09-3	11.5 - 18	Low	0.8	12	0.23e-3	1.18
	S10-1	1.8 – 4.0	High	0.8	12	1.1e-3	1.67
	S10-3	5 - 12					

Summary and Conclusions

Tetra Tech NUS commissioned the ERDC to conduct cohesive sediment erosion testing services for the purpose of defining erosion rates of contaminated sediments at Coddington Cove, Narragansett Bay, Rhode Island. ERDC-CHL conducted the erosion testing in August/September 2011.

Twelve, 4-inch (10-cm) diameter sediment cores were collected from within Coddington Cove. The cores were eroded in the Field Sediment Transport Laboratory that was operated at the Newport Rhode Island Naval Base. During erosion experiments, the cores were visually described, eroded, and subsampled for physical properties. Erosion data were analyzed by the layers evident in each core and later grouped by core layers that demonstrated similar erosion characteristics. Empirical coefficients were determined for modeling cohesive sediment bed erosion for individual core layers and groups of core layers that had similar erosion behavior.

Acknowledgements

Vessel support for core sampling was provided by the Environmental Protection Agency (EPA), Environmental Effects Research Laboratory – Narragansett. Mr. Skip Nelson and Ms. Barbara Bergen (EPA) are acknowledged for their assistance during core collection. Mr. Tommy Kirklin (contractor for USACE-CHL) assisted with core collection, erosion experiments, and sample analysis. Mr. Richard Hudson (USACE-Environmental Laboratory) performed the grain size analysis on physical samples.

References

Jepsen, R., Roberts, J, and Lick, W. 1997a. 'Effects of bulk density on sediment erosion rates', Water, Air, and Soil Pollution, 99, 21-31.

Appendix A. Core Descriptions

Appendix A includes core photographs, core descriptions, locations and analysis of physical samples.

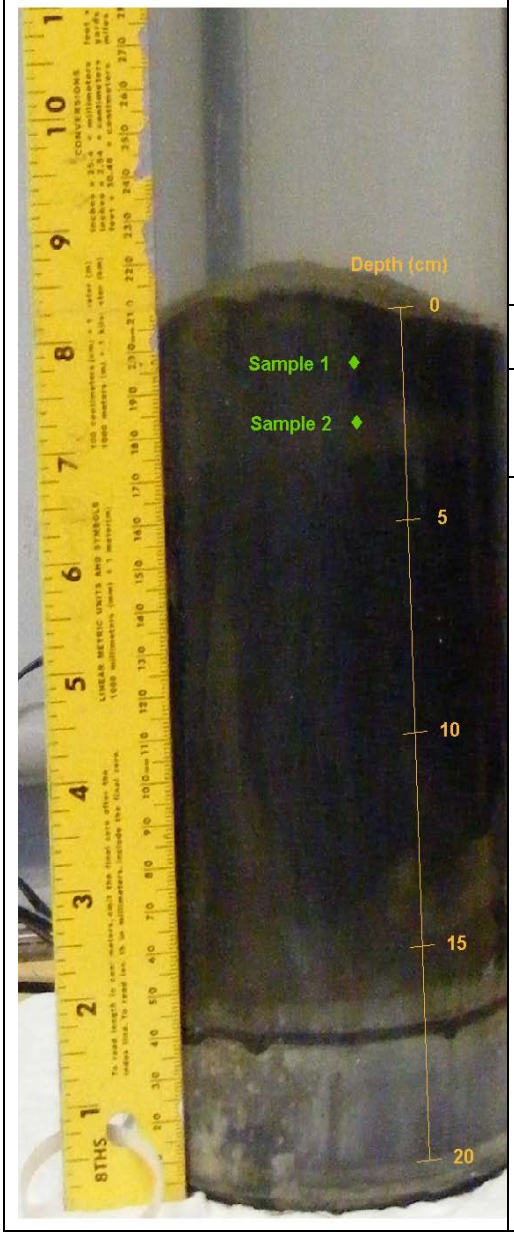
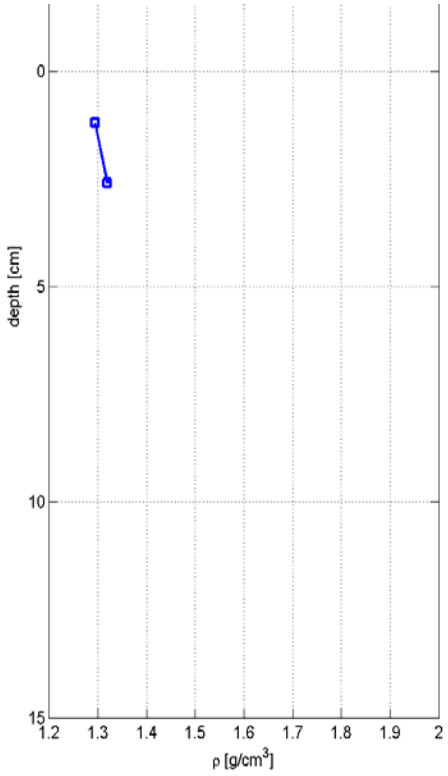
Table A-1a. Core Description, Station 1		
Photograph	**Description**	**Density Profile**
	Overlying Water Surface sediment is light brown in color with a fluffy texture. Below the surface and down to a depth of 4cm, the sediment is a mix of dark and light brown layers. Sediments throughout the remainder of the core are dark brown in color. Shell hash is apparent at 10 cm down core.	

Table A-1b. Core Surface Photographs, Station 1	
Sample 1	
Sample 2	

Table A-1c. Physical Sample Properties, Station 1								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.72	9.64	53.10	7.41	65.74	26.85
1	1.20	1.29	1.63	9.38	45.61	5.27	67.06	27.67
2	2.60	1.32	1.66	9.44	48.89	6.06	66.44	27.49

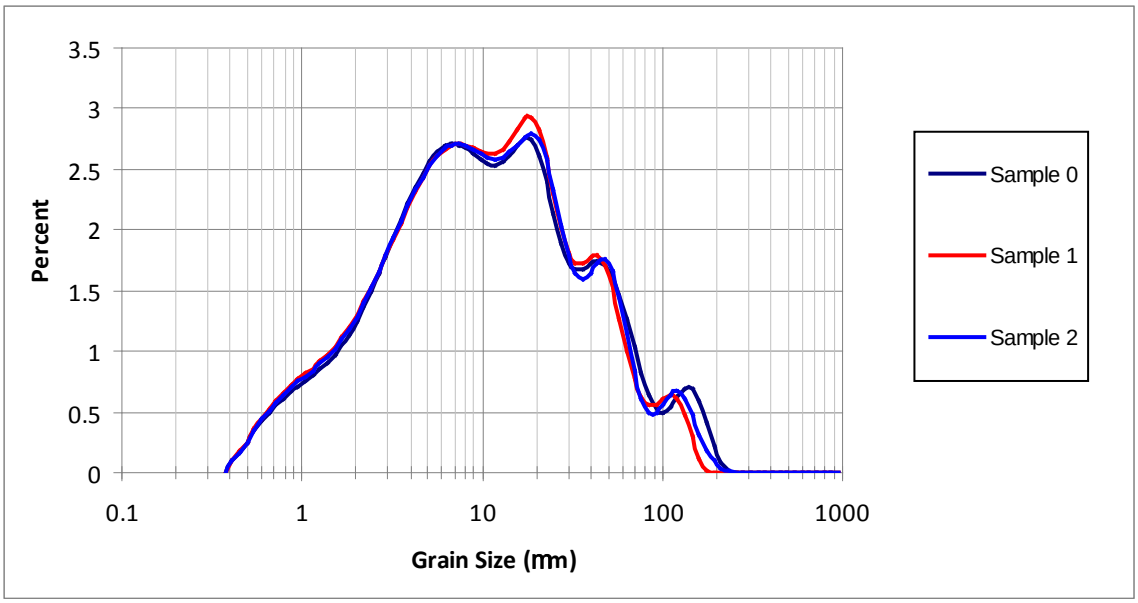


Figure A-1a. Grain size distributions for Station 1 physical samples.

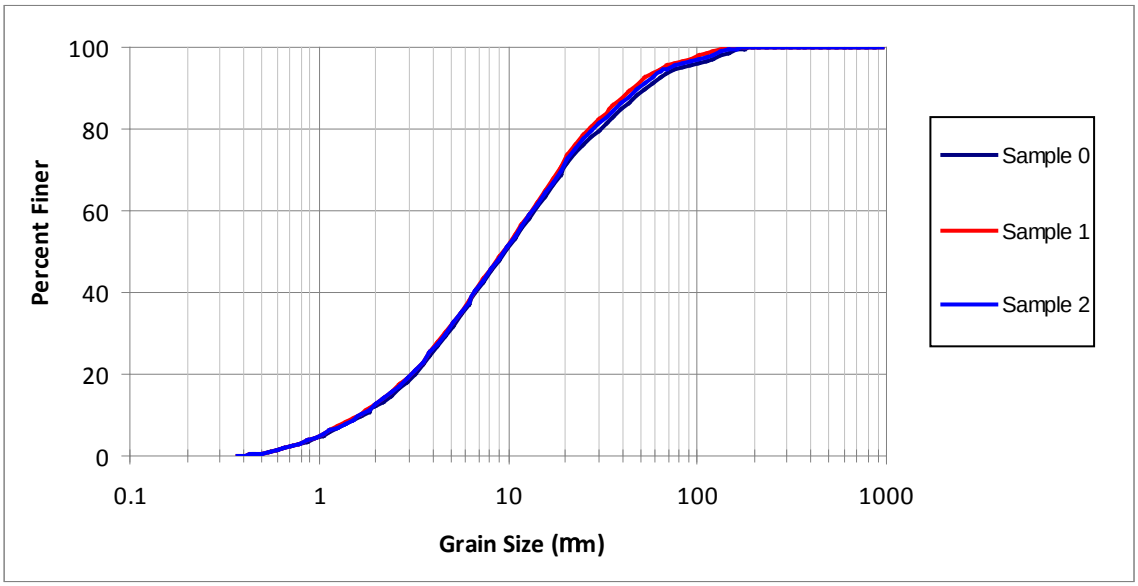


Figure A-1b. Cumulative grain size distributions for Station 1 physical samples.

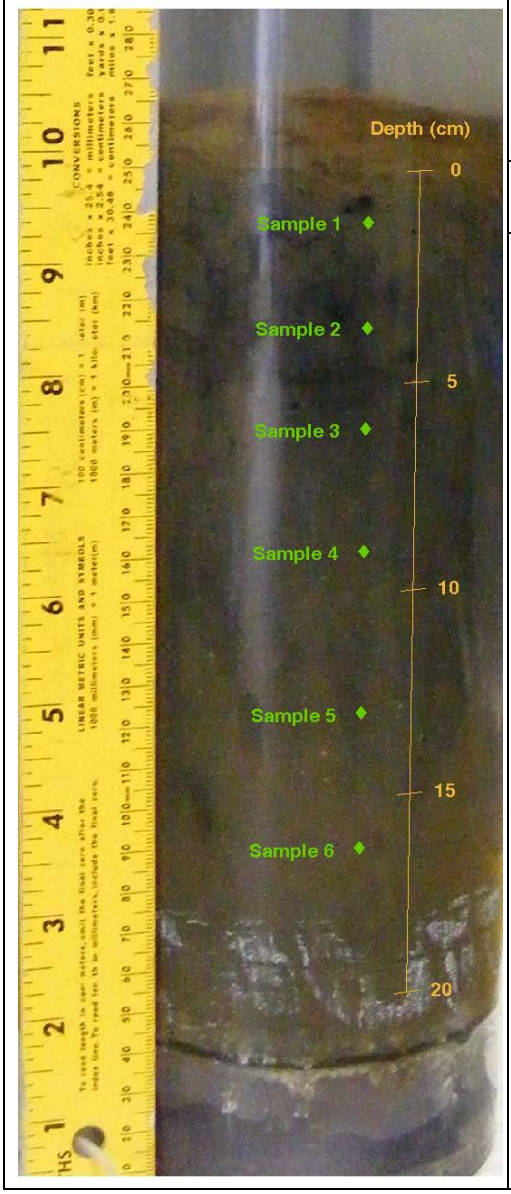
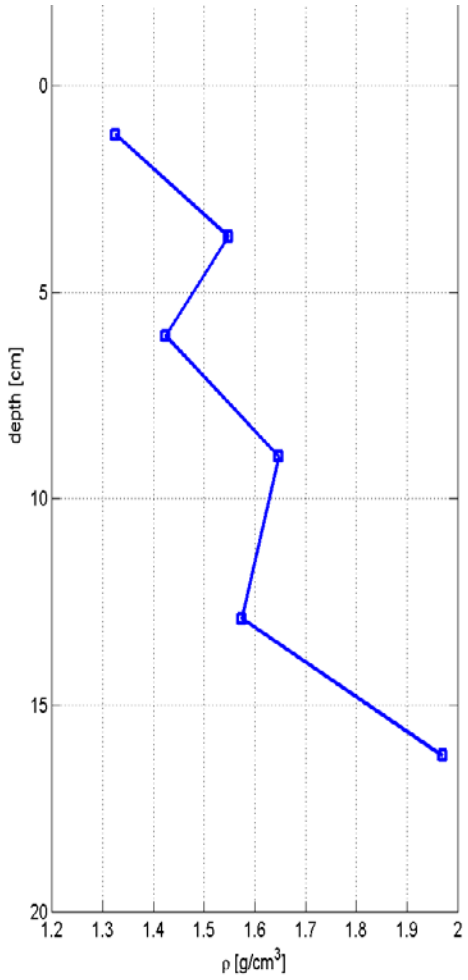
Table A-2a. Core Description, Station 2		
Photograph	**Description**	**Density Profile**
	Overlying water . Surface sediments are light brown in color with a fluffy texture. Remainder of core sediment is predominately light to dark grey in color. A lens of black sediment, 5cm in diameter, is apparent at 3-7cm depth down core	

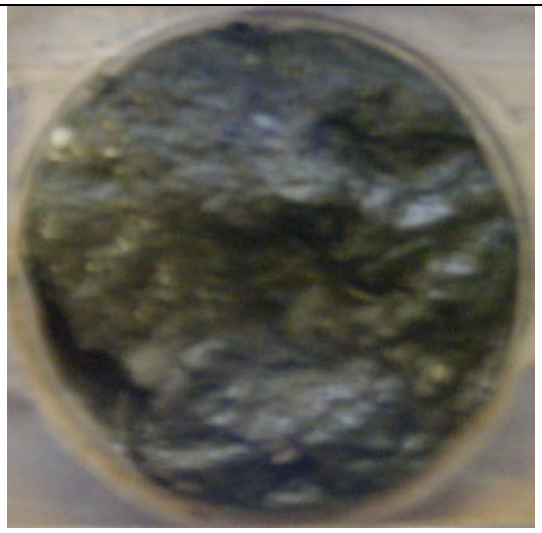
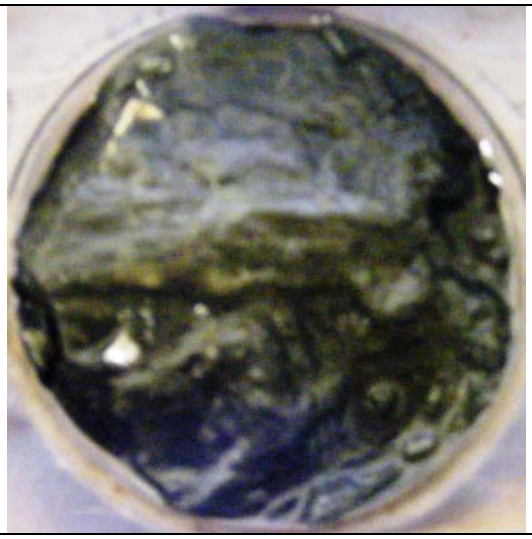
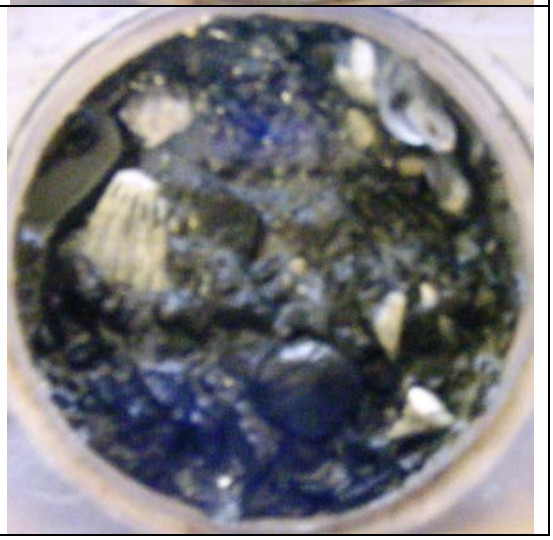
Table A-2b. Core Surface Photographs, Station 2			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3		**Sample 6**	

Table A-2c. Physical Sample Properties, Station 2								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.88	10.54	10.54	7.87	67.31	24.82
1	1.20	1.33	1.79	11.38	58.21	8.54	66.59	24.88
2	3.70	1.55	1.91	12.78	69.93	12.02	64.89	23.10
3	6.10	1.42	1.86	12.79	71.48	12.29	64.37	23.34
4	9.00	1.65	1.94	13.85	79.50	14.67	62.84	22.49
5	12.90	1.57	1.85	13.55	76.23	13.40	63.60	23.00
6	16.20	1.97	1.95	11.86	76.24	12.86	63.82	23.32

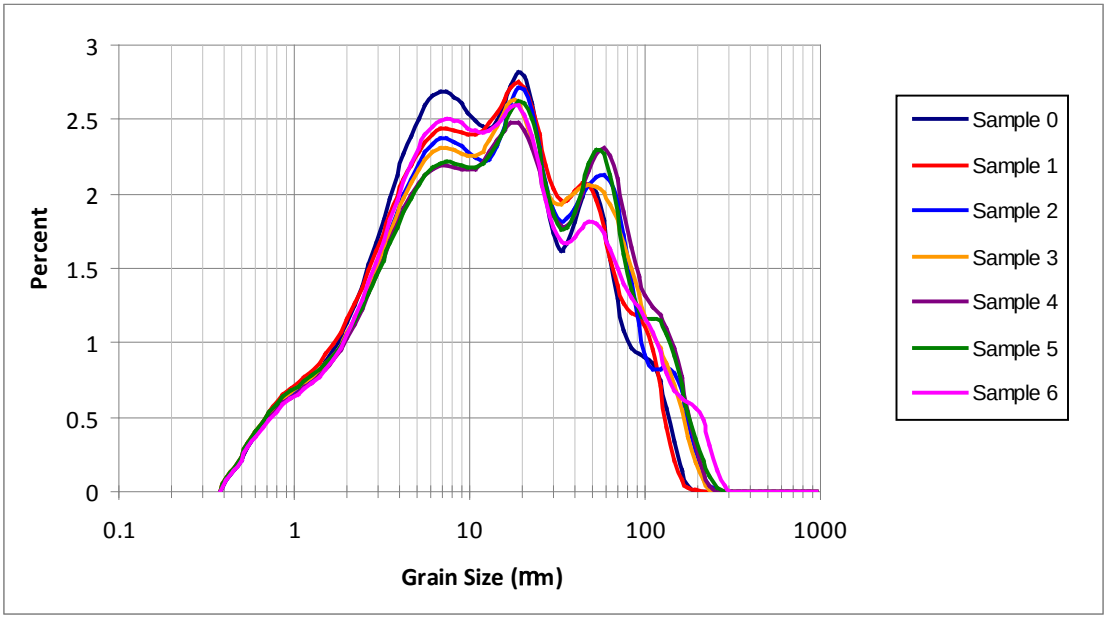


Figure A-2a. Grain size distributions for Station 2 physical samples.

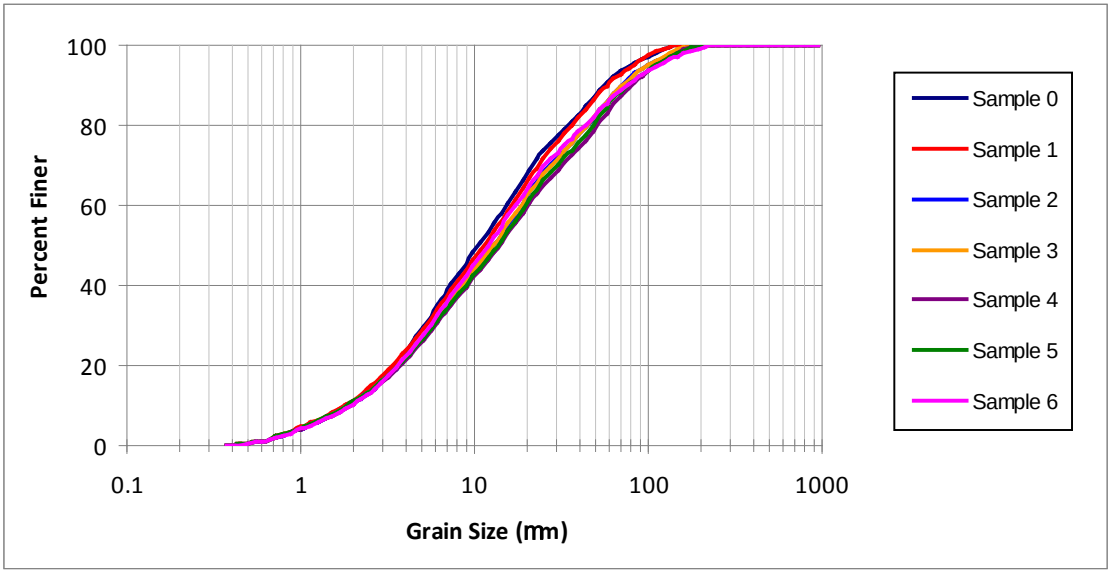


Figure A-2b. Cumulative grain size distributions for Station 2 physical samples

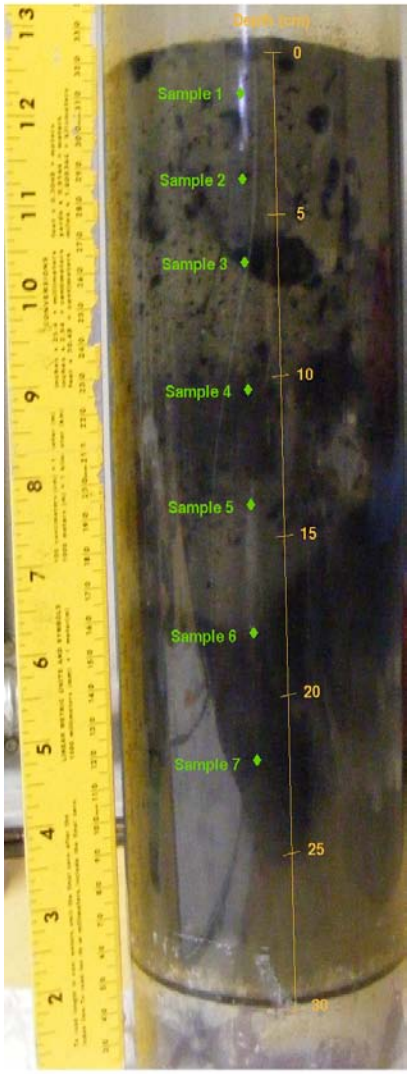
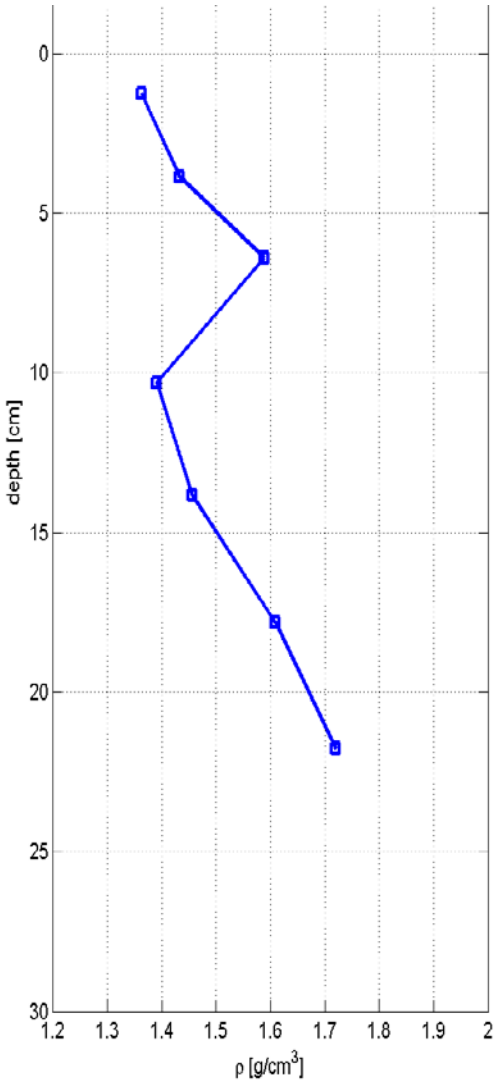
Table A-3a. Core Description, Station 3		
Photograph	**Description**	**Density Profile**
	Overlying water Surface sediment is light brown in color with a fluffy texture. Sediment throughout remainder of core is brownish-grey and black in color.	

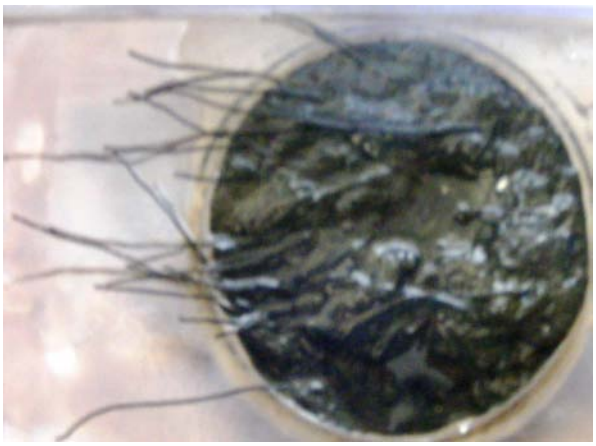
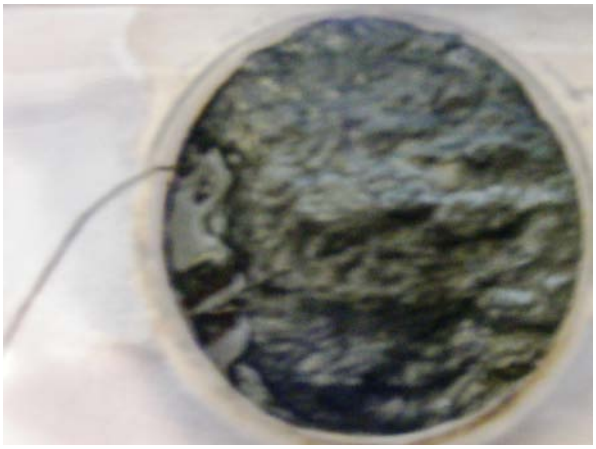
Table A-3b. Core Surface Photographs, Station 3			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3		**Sample 6**	

Table A-3b. Core Surface Photographs, Station 3 (cont.)	
Sample 7	

Table A-3c. Physical Sample Properties, Station 3

Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.51	8.68	41.17	4.09	66.29	29.62
1	1.30	1.36	1.70	11.16	58.59	8.63	66.10	25.27
2	3.80	1.43	2.07	12.93	83.29	14.78	63.61	21.61
3	6.40	1.59	2.00	14.85	92.39	17.69	60.70	21.62
4	10.30	1.39	1.76	11.65	62.19	9.65	65.61	24.74
5	13.80	1.46	1.79	10.54	56.55	8.17	66.32	25.51
6	17.80	1.61	1.95	14.06	94.81	18.10	59.41	22.50
7	21.80	1.72	2.10	15.17	102.32	20.83	57.87	21.29

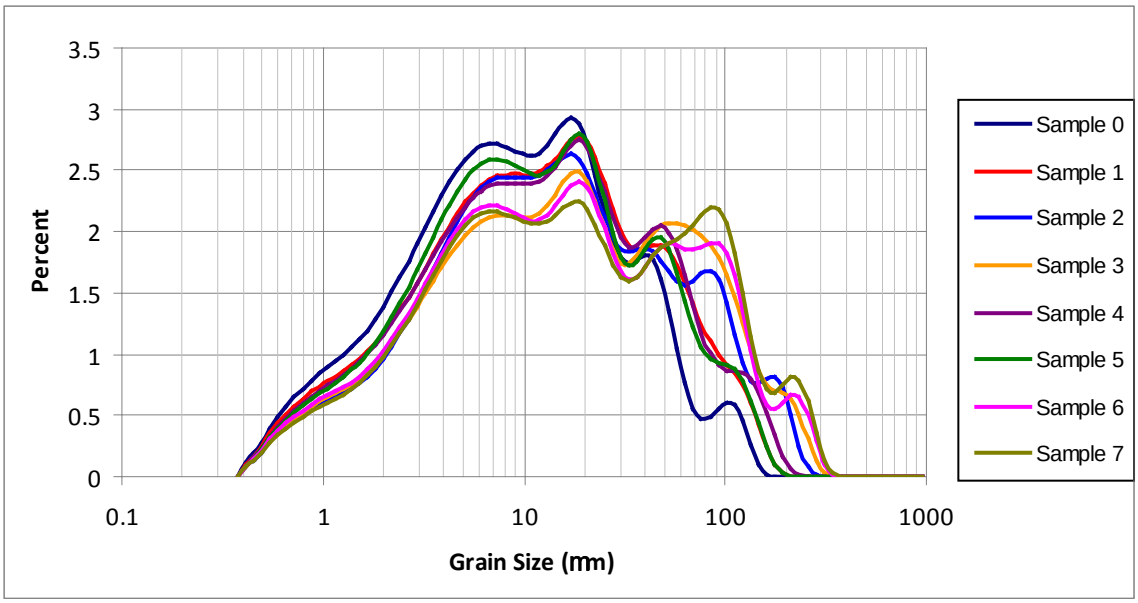


Figure A-3a. Grain size distributions for Station 3 physical samples.

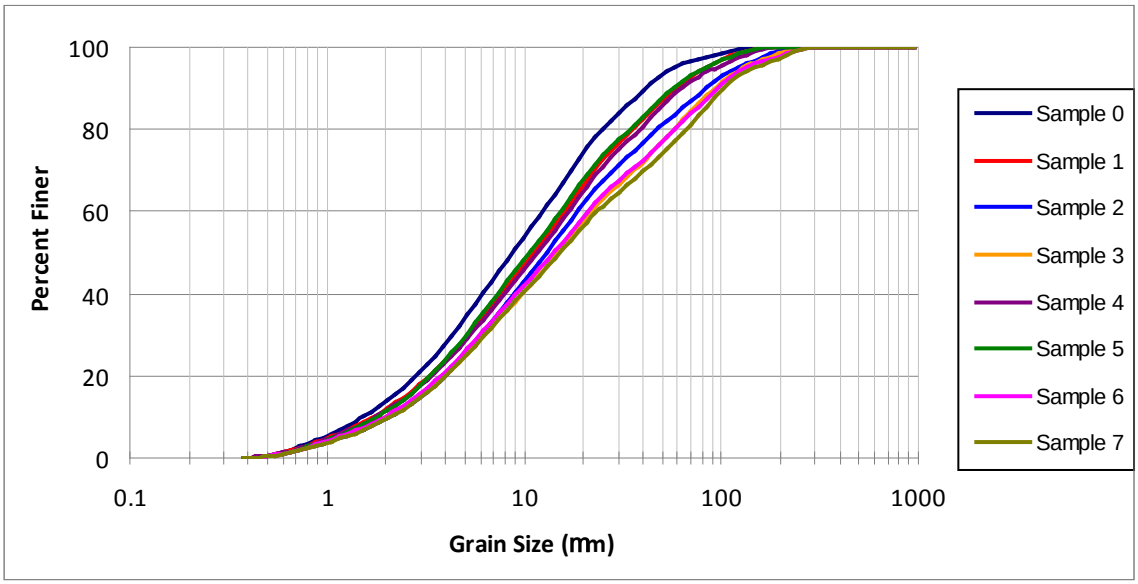


Figure A-3b. Cumulative grain size distributions for Station 3 physical samples.

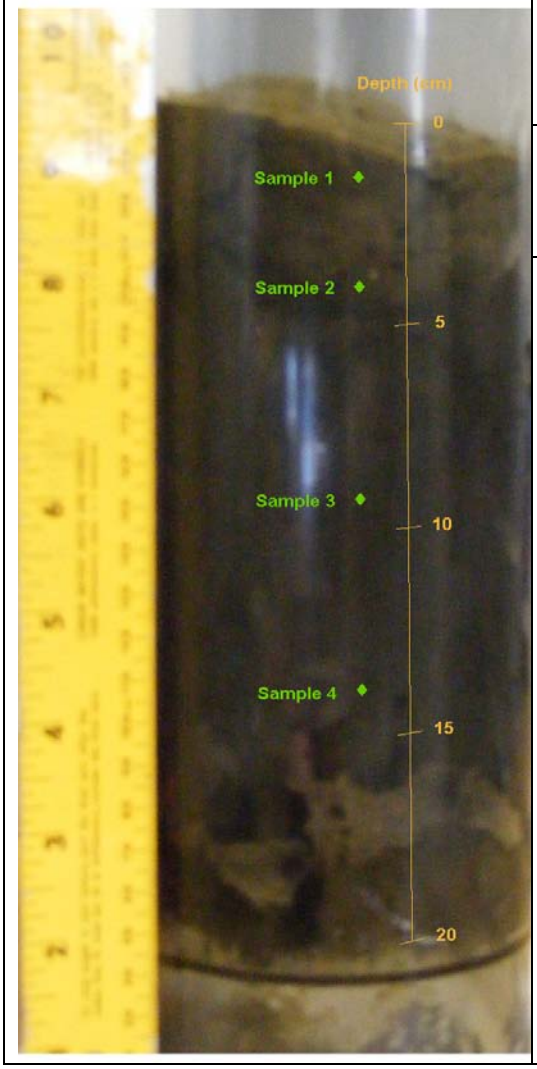
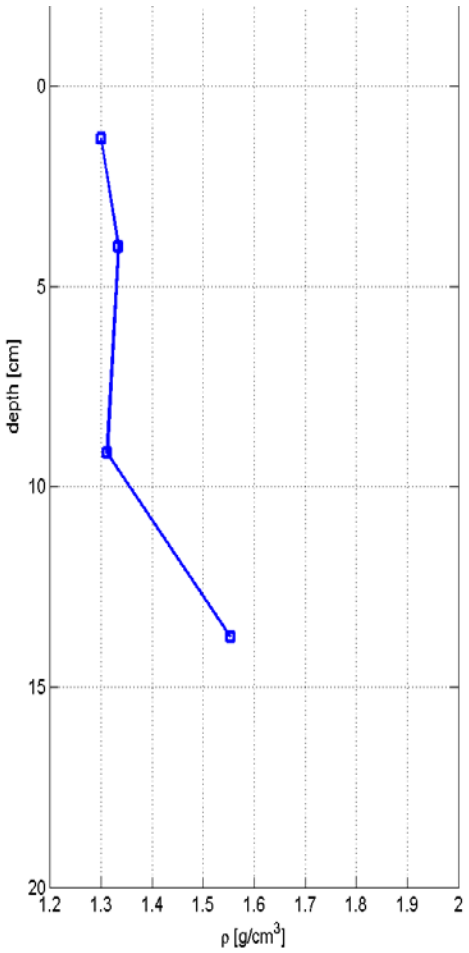
Table A- 4a. Core Description, Station 4B		
Photograph	**Description**	**Density Profile**
	Overlying Water Surface sediment is light brown in color and has a fluffy texture (2-3cm thick) Sediment throughout remainder of core is dark grey in color. A large horizontal void (2 cm in length) is apparent 2-3cm above core bottom.	

Table A 4b. Core Surface Photographs, Station 4B			
Sample 1		**Sample 3**	
Sample 2		**Sample 4**	

Table A-4c. Physical Sample Properties, Station 4B								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.82	9.83	45.82	5.11	69.21	25.68
1	1.30	1.30	1.81	10.03	48.24	5.83	68.65	25.51
2	4.00	1.33	1.77	10.28	49.59	5.92	68.55	25.53
3	9.20	1.31	1.67	10.37	45.46	4.72	69.32	25.96
4	13.80	1.55	2.02	11.43	74.18	12.13	64.25	23.63

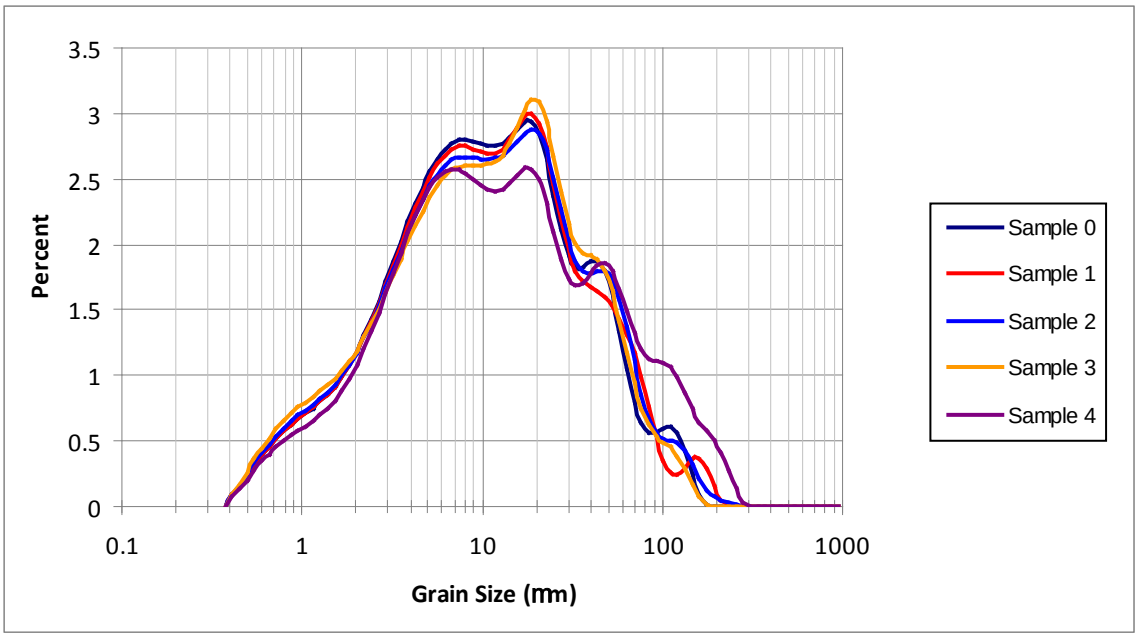


Figure A-4a. Grain size distributions for Station 4B physical samples.

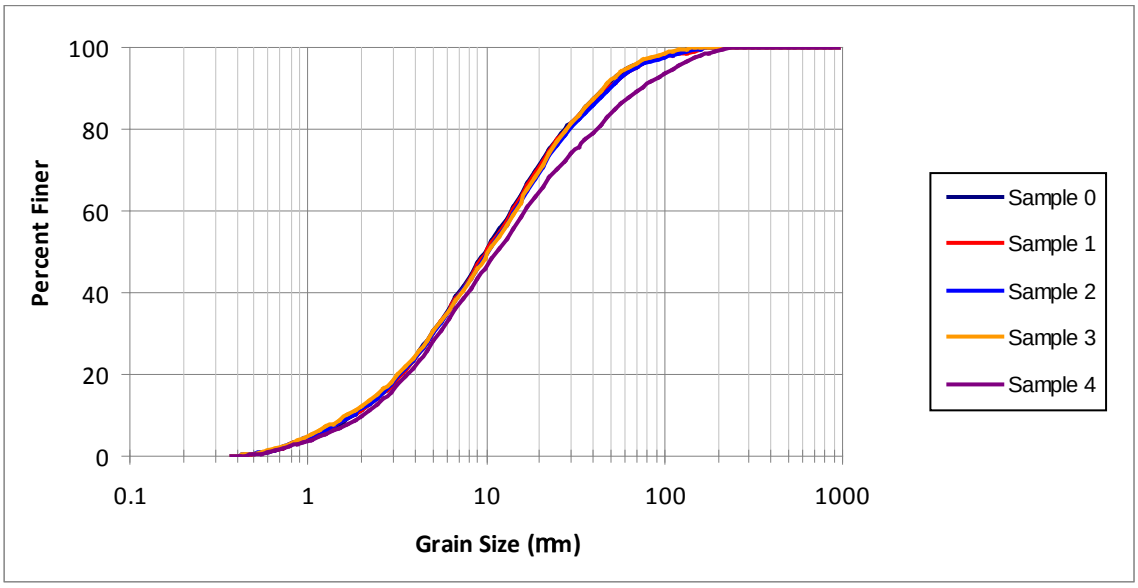


Figure A-4b. Cumulative grain size distributions for Station 4B physical samples.

Table A-5a. Core Description, Station 5

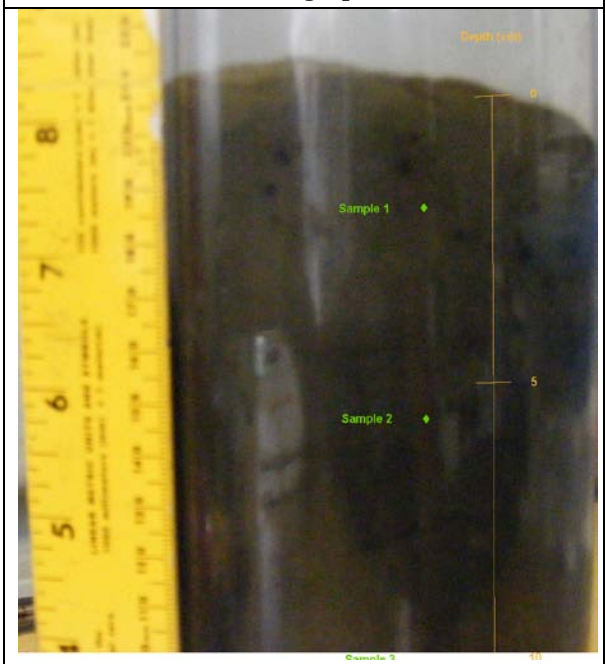
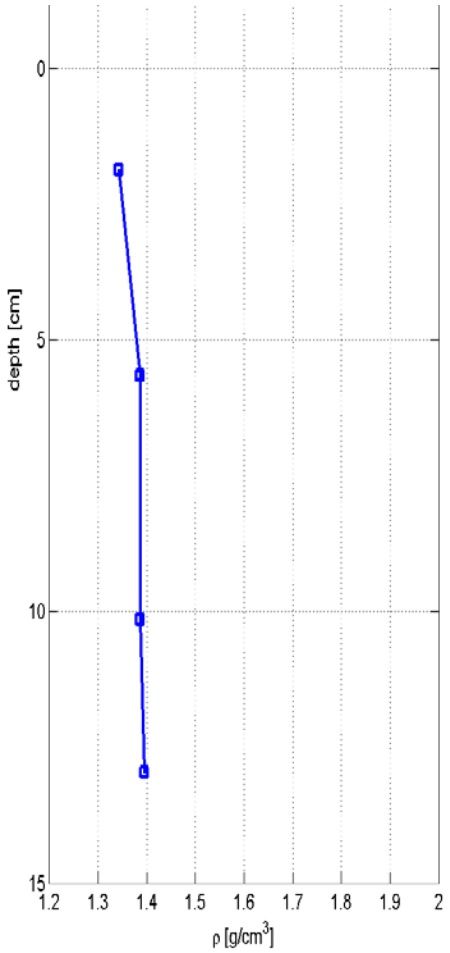
Photograph	Description	Density Profile
	Overlying Water Surface sediment is light brown and has a fluffy texture (1-2mm thick) Below surface layer and down to a depth of 4cm sediment is light grey in color. Sediment throughout remainder of core is dark grey to black in color.	

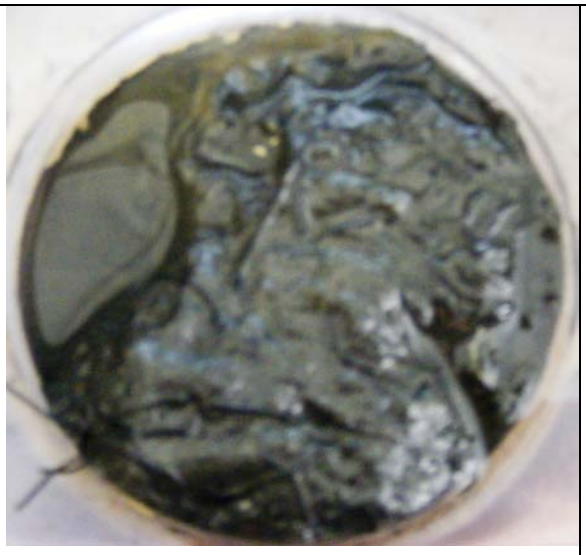
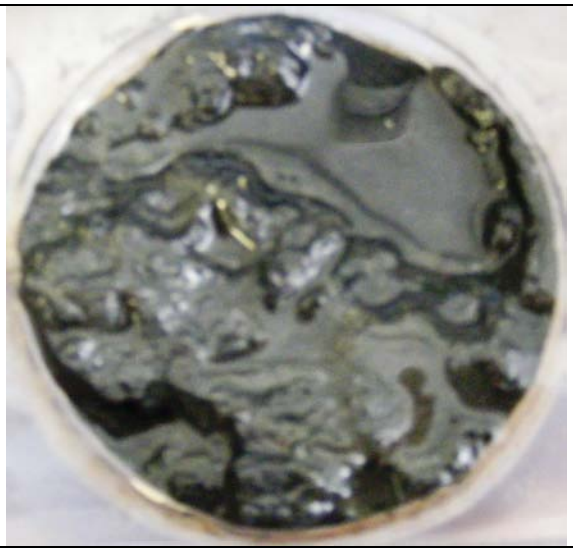
Table A-5b. Core Surface Photographs, Station 5			
Sample 1		**Sample 3**	
Sample 2		**Sample 4**	

Table A-5c. Physical Sample Properties, Station 5								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.83	12.13	64.01	10.15	65.92	23.93
1	1.90	1.34	1.79	11.24	60.54	9.28	65.70	25.02
2	5.70	1.39	1.83	11.38	65.98	10.62	64.64	24.73
3	10.10	1.39	1.91	11.32	57.97	8.21	67.77	24.02
4	12.90	1.39	1.79	10.09	54.76	7.62	66.19	26.19

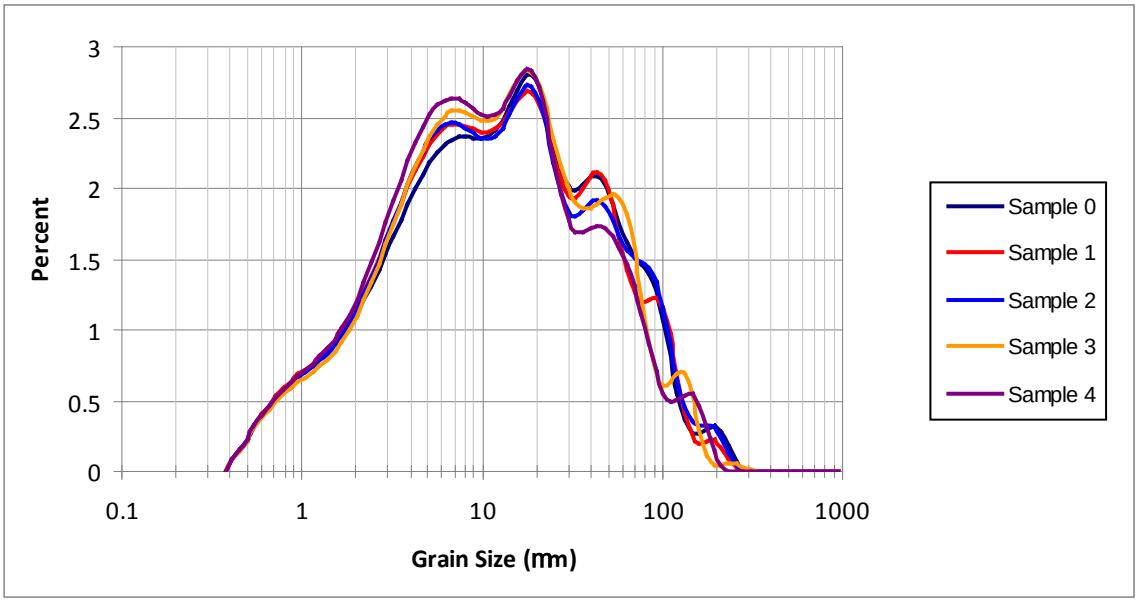


Figure A-5a. Grain size distributions for Station 5 physical samples.

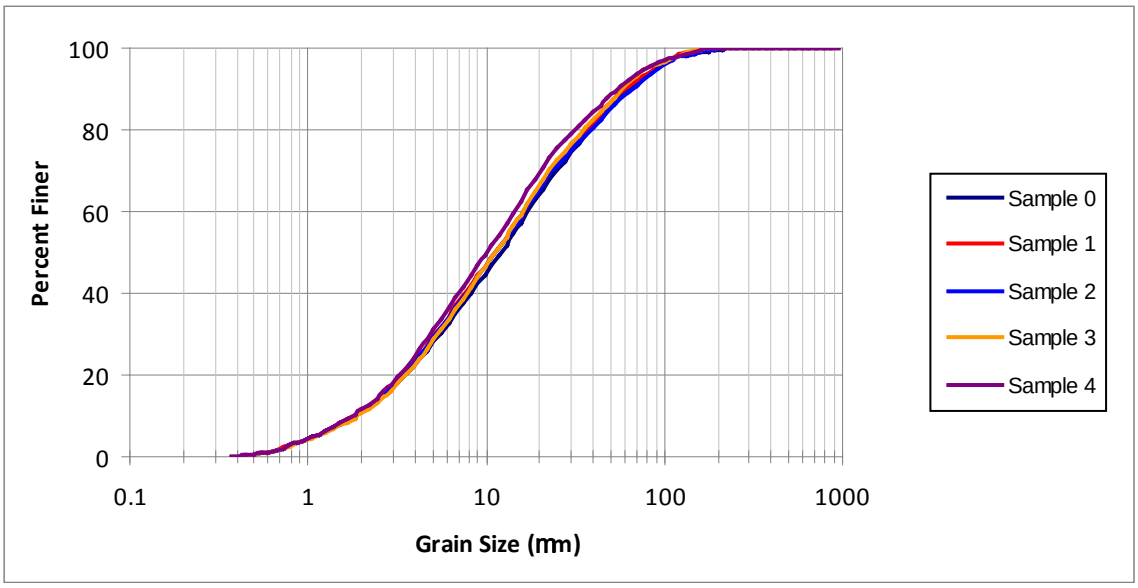


Figure A-5b. Cumulative grain size distributions for Station 5 physical samples.

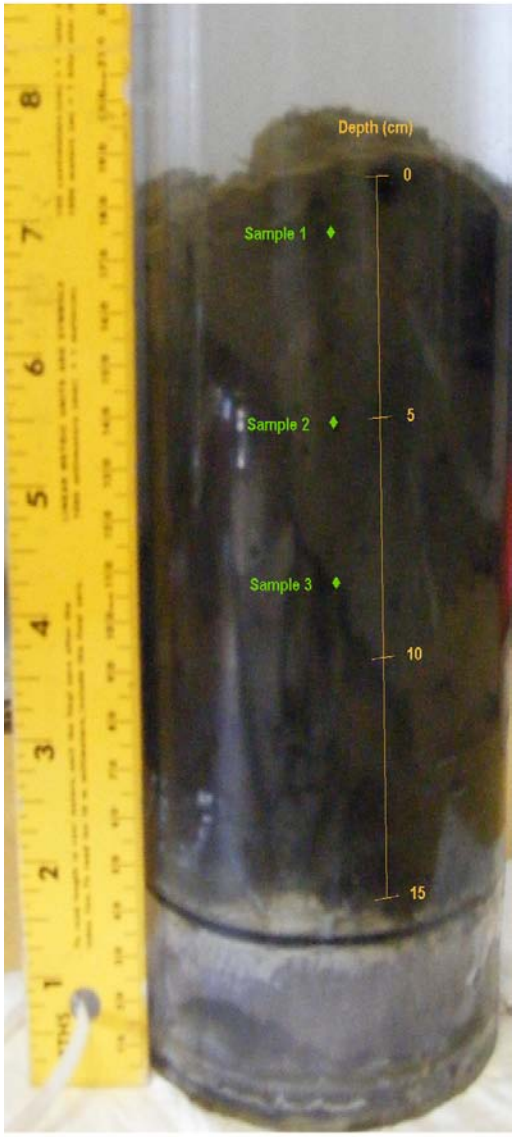
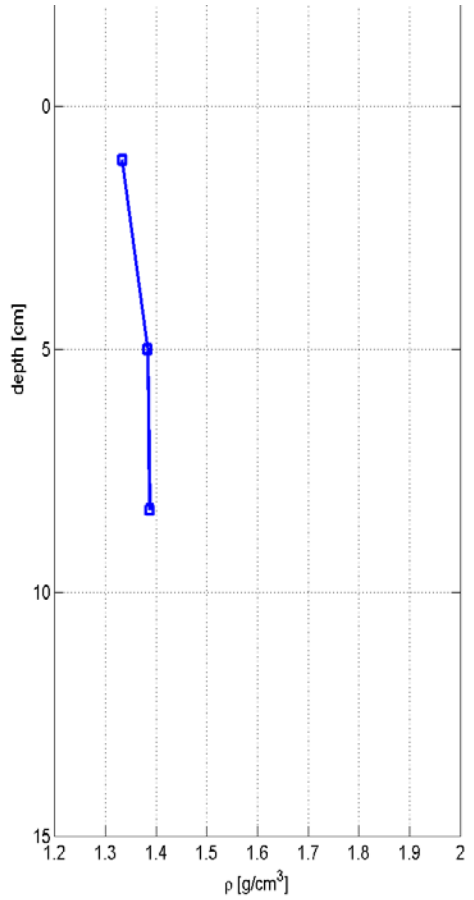
Table A-6a. Core Description, Station 6		
Photograph	**Description**	**Density Profile**
	Overlying Water Surface sediment is light brown in color with a fluffy texture. Sediment throughout the remainder of the core is light grey to black in color	

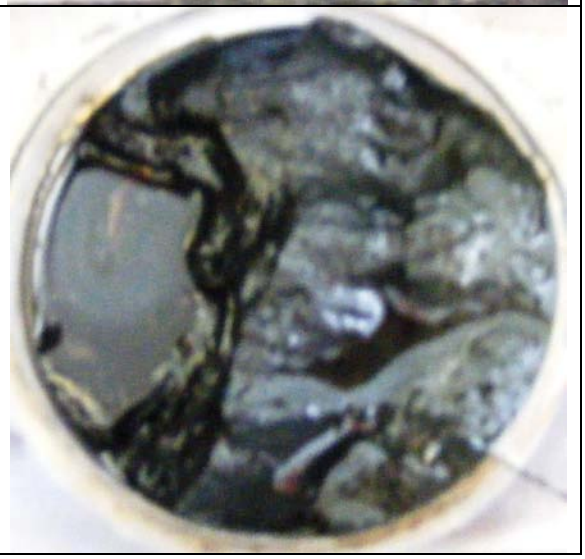
Table A-6b. Core Surface Photographs, Station 6	
Sample 1	
Sample 2	
Sample 3	

Table A-6c. Physical Sample Properties, Station 6								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.83	10.44	56.53	8.52	66.08	25.40
1	1.10	1.33	1.66	10.47	53.18	7.14	66.64	26.22
2	5.00	1.38	1.90	10.51	57.76	8.63	66.72	24.65
3	8.30	1.39	1.80	10.90	64.39	10.11	64.85	25.03

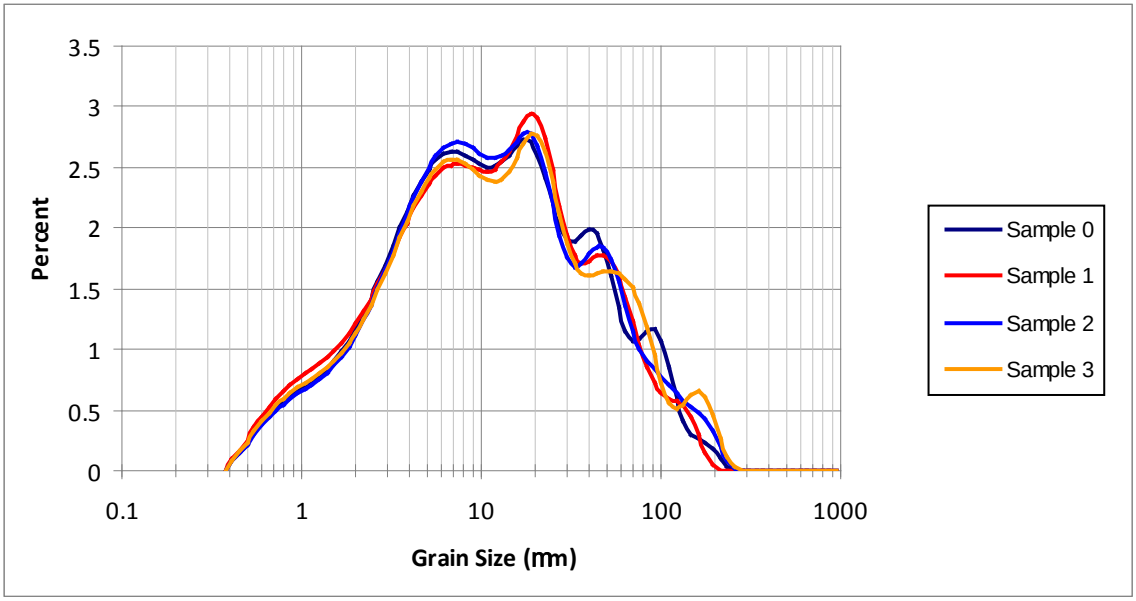


Figure A-6a. Grain size distributions for Station 6 physical samples.

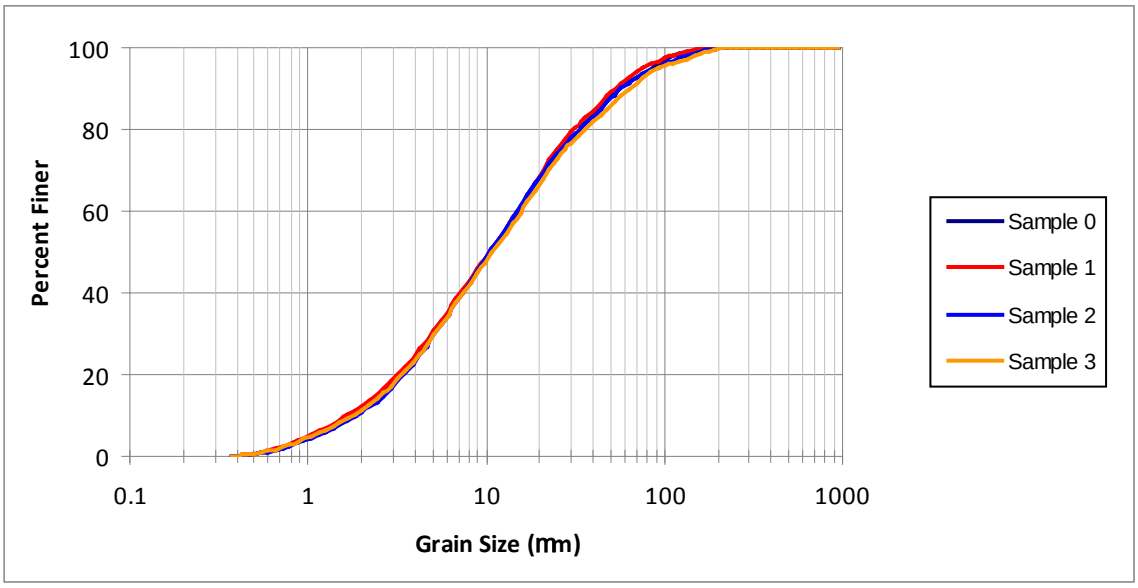


Figure A-6b. Cumulative grain size distributions for Station 6 physical samples.

Table A-7a. Core Description, Station 7A

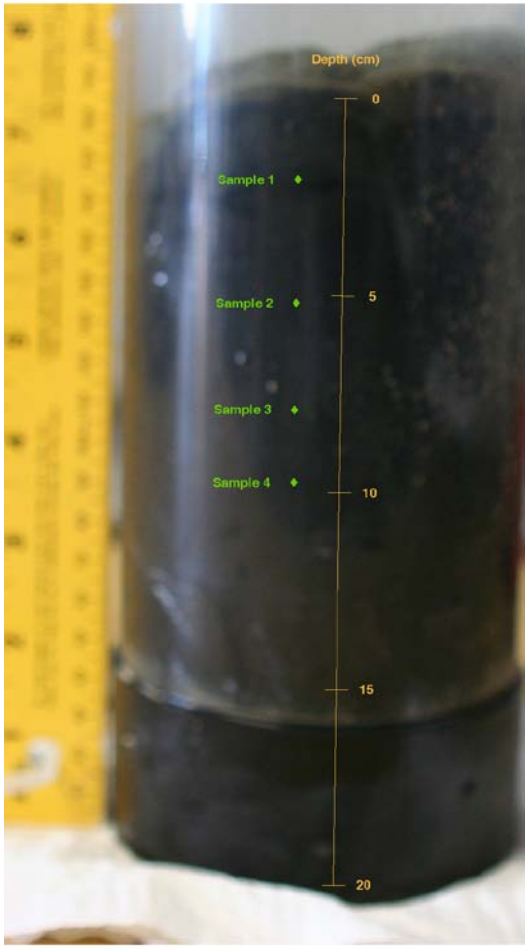
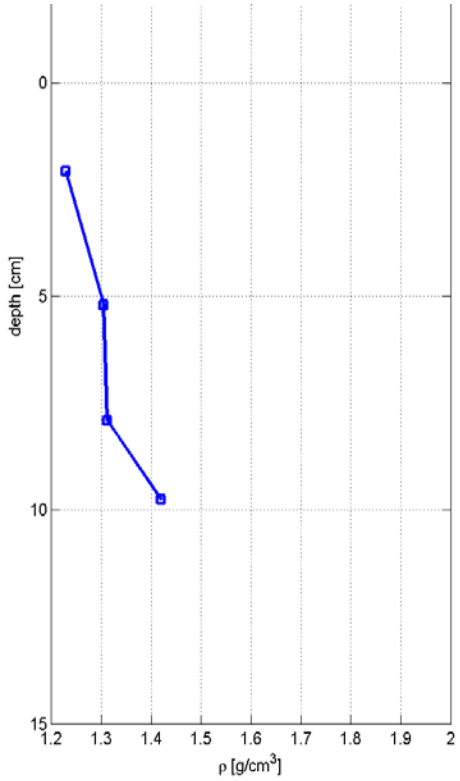
Photograph	Description	Density Profile
	Overlying water Surface sediments (0.5cm thick) are light brown in color with a fluffy texture Sediments throughout the remainder of the core are dark grey in color. Some gas voids and cracks are evident at 2cm depth down core.	

Table A-7b. Core Surface Photographs, Station 7A			
Sample 1 **Shells were removed after picture and prior to sampling**		**Sample 3** **Shells were removed after picture and prior to sampling**	
Sample 2 **Shells were removed after picture and prior to sampling**		**Sample 4** **Shells were removed after picture and prior to sampling**	

Table A-7c. Physical Sample Properties, Station 7A								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.63	9.71	44.99	4.82	67.85	27.33
1	2.10	1.23	1.49	7.95	41.93	4.19	64.44	31.37
2	5.20	1.30	1.59	9.28	40.24	2.91	69.19	27.90
3	7.90	1.31	1.78	10.31	55.44	8.04	66.08	25.89
4	9.80	1.42	1.86	11.38	56.77	8.05	67.48	24.47

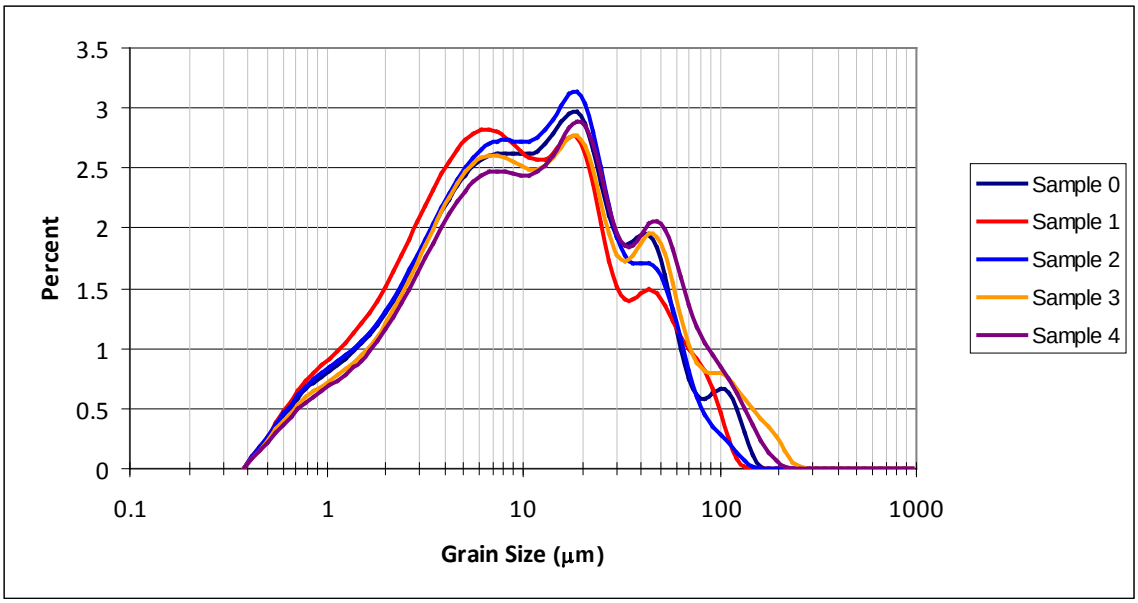


Figure A-7a. Grain size distributions for Station 7A physical samples.

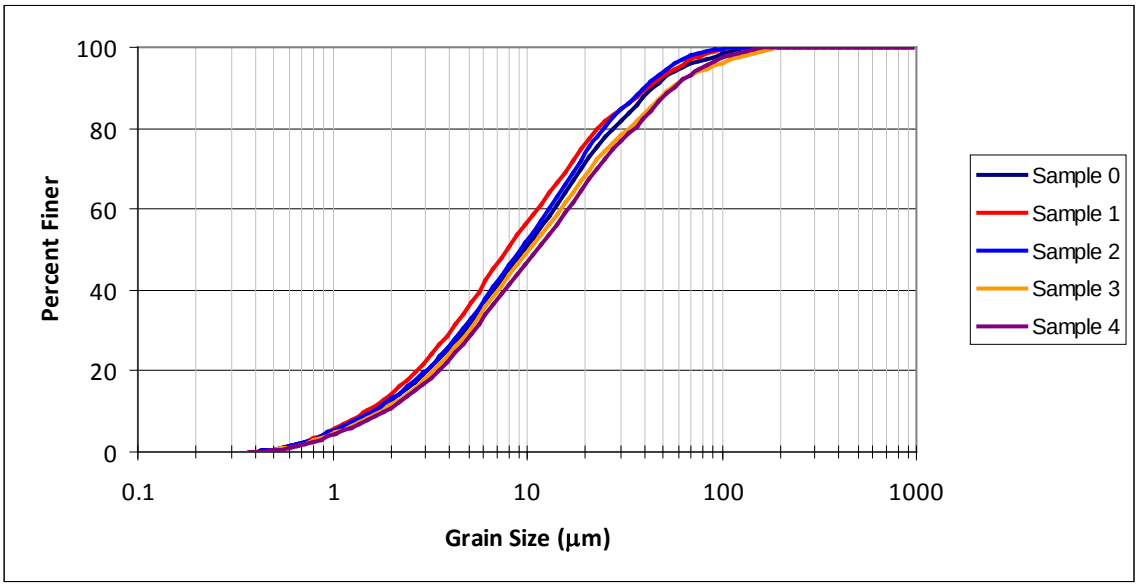


Figure A-7b. Cumulative grain size distributions for Station 7A physical samples.

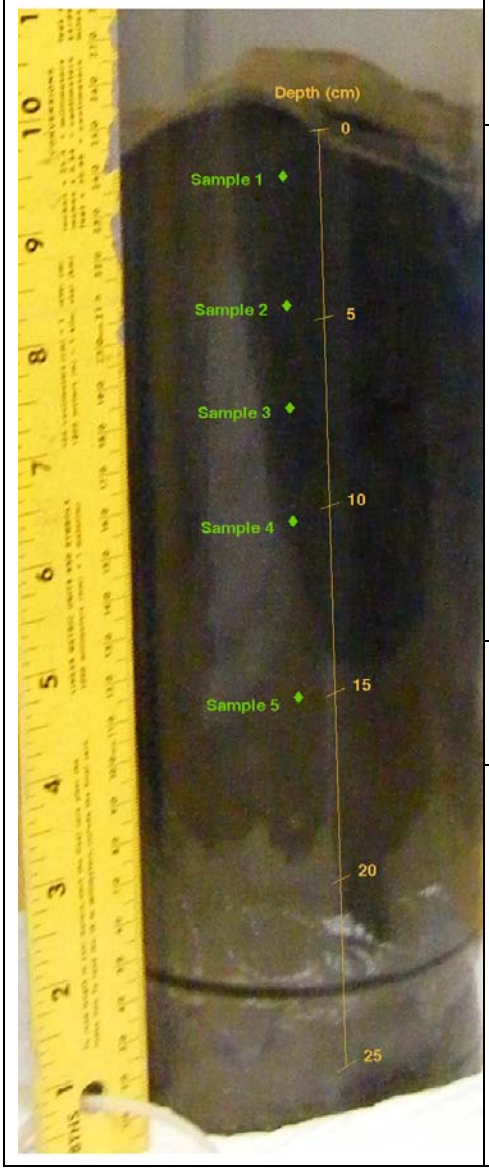
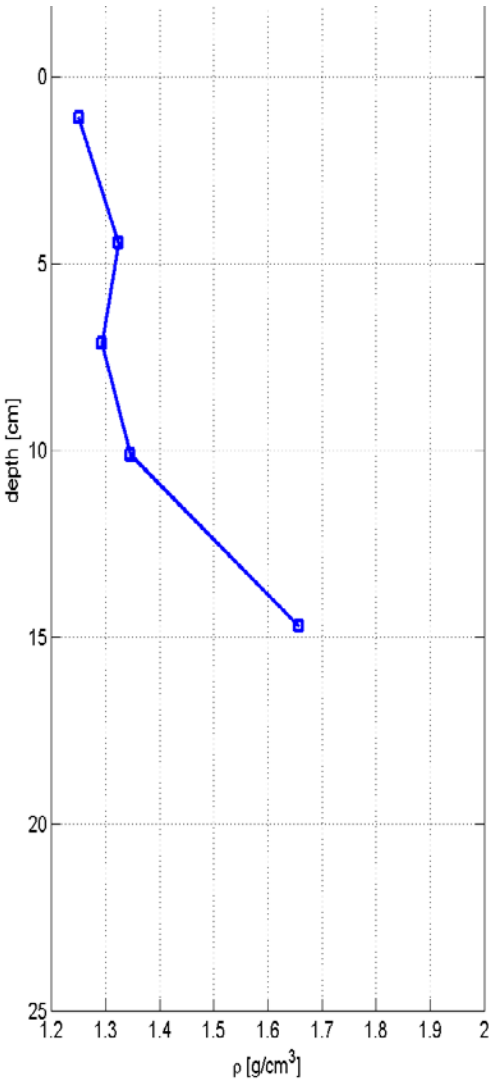
Table A-8a. Core Description, Station 7B		
Photograph	**Description**	**Density Profile**
	Overlying water Surface sediments are light brown in color with a fluffy texture. Some pieces of broken bivalve shells are visible at core surface. Below the surface layer, and down to a depth of 14-16cm, the sediment is predominately dark grey to black in color. A 1cm wide gas void is visible at a depth of 6cm down core. Below 16cm and down to the bottom of the core the sediment is predominately light grey and brown in color.	

Table A-8b. Core Surface Photographs, Station 7B

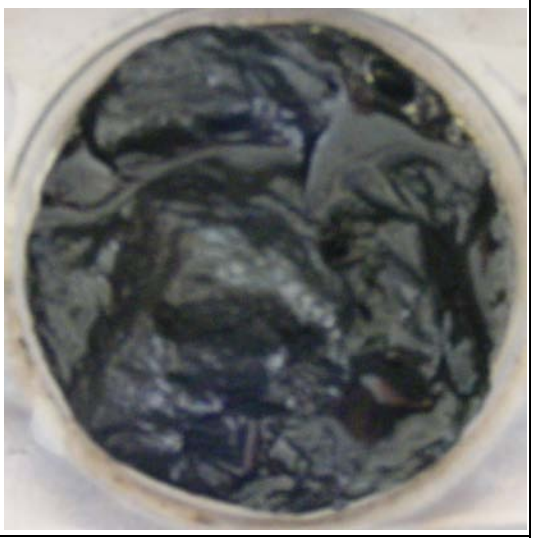
Sample 1 **Shells were removed after picture and prior to sampling**		**Sample 3**	
Sample 2		**Sample 5**	

Table A-8c. Physical Sample Properties, Station 7B

Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.73	10.25	49.21	5.26	68.56	26.18
1	1.10	1.25	1.65	8.87	45.41	4.40	67.23	28.38
2	4.50	1.32	1.69	9.37	47.29	5.49	66.99	27.52
3	7.10	1.29	1.72	9.33	48.53	4.96	67.86	27.18
4	10.10	1.34	1.92	12.13	58.46	8.68	67.81	23.51
5	14.70	1.66	2.57	25.25	95.52	24.13	59.66	16.22

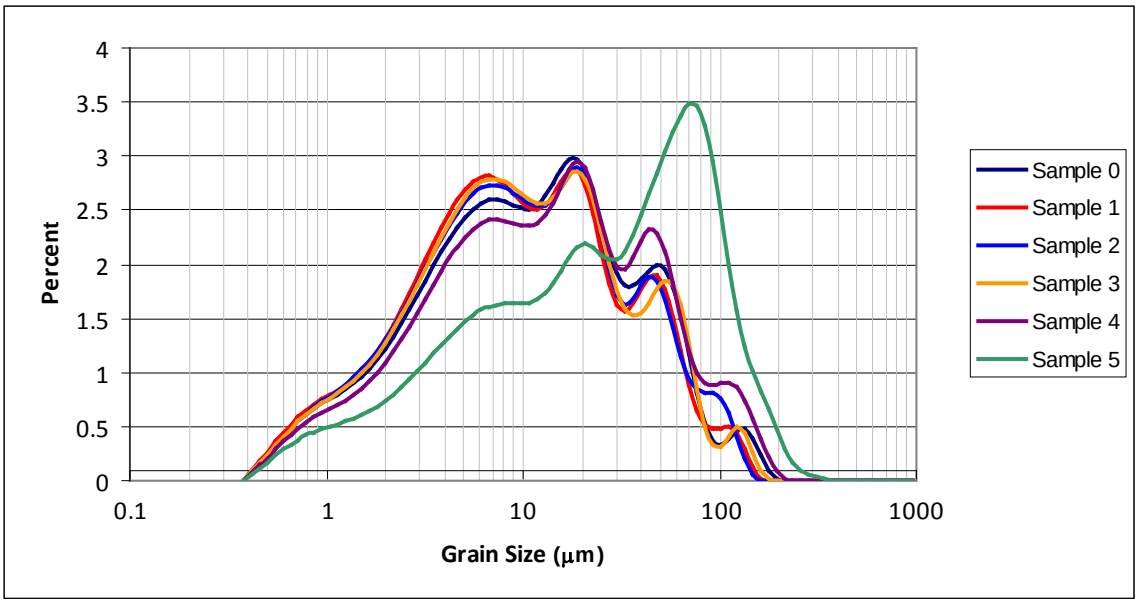


Figure A-8a. Grain size distributions for Station 7B physical samples.

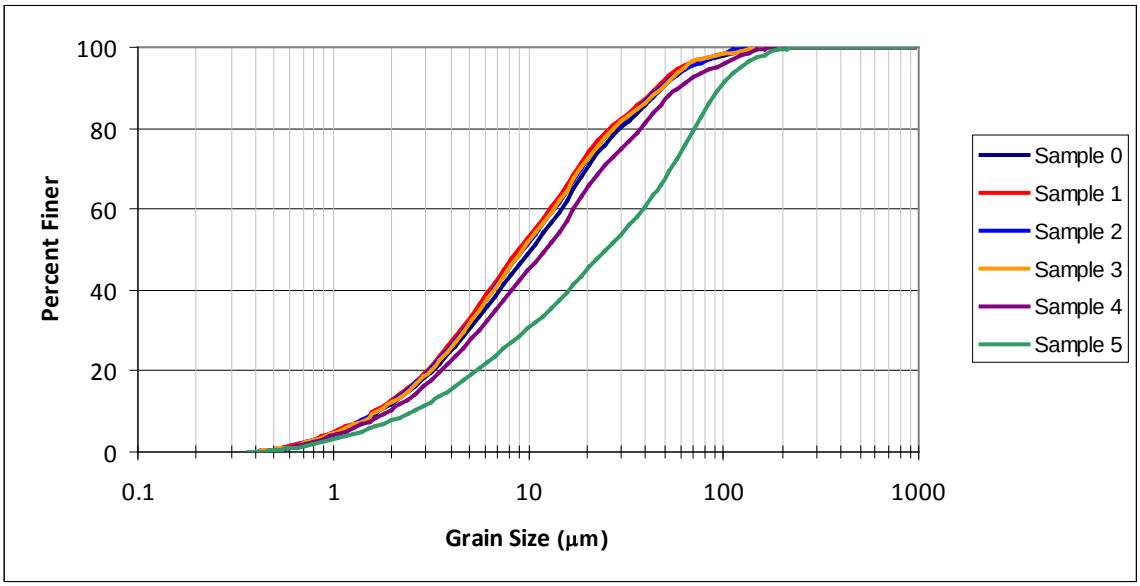


Figure A-8b. Cumulative grain size distributions for Station 7B physical samples.

Table A-9a. Core Description, Station 8A

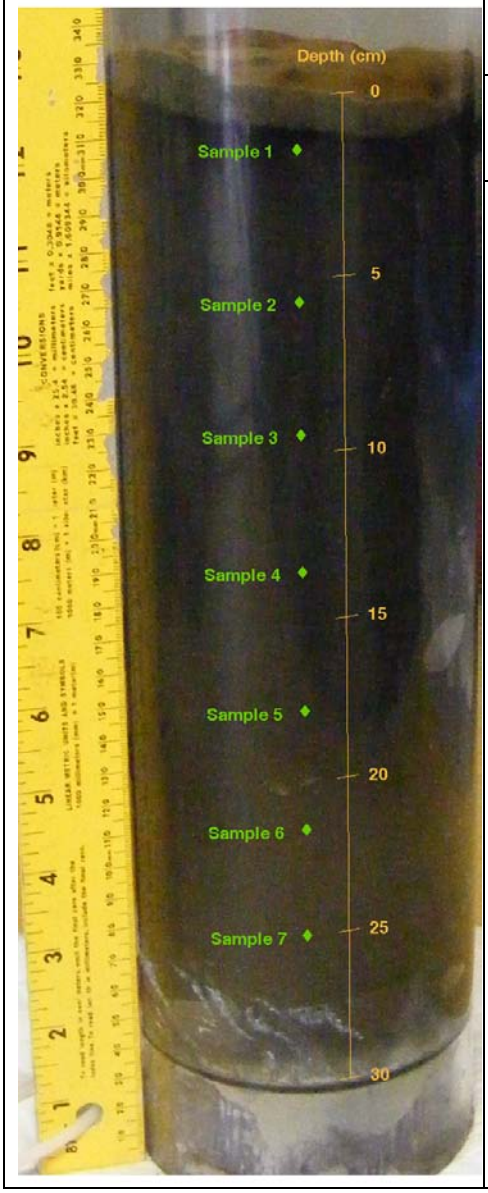
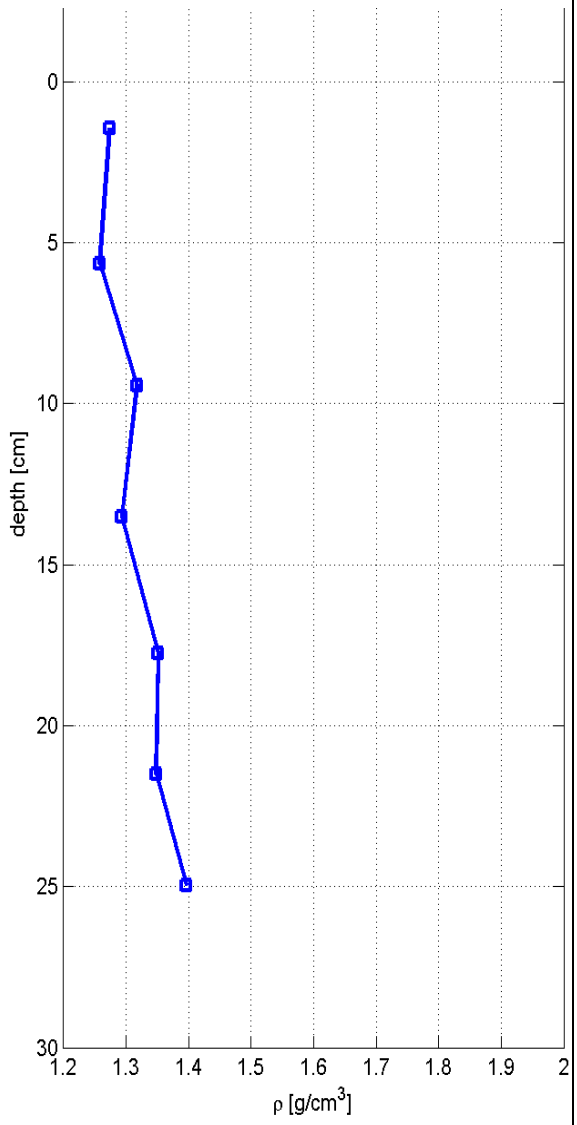
Photograph	Description	Density Profile
	Overlying water The surface sediments and down to 1cm is predominately light brown in color with a fluffy texture. Sediment throughout the remainder of the core is dark grey in color. Small cracks and air voids are apparent at many depths throughout the core.	

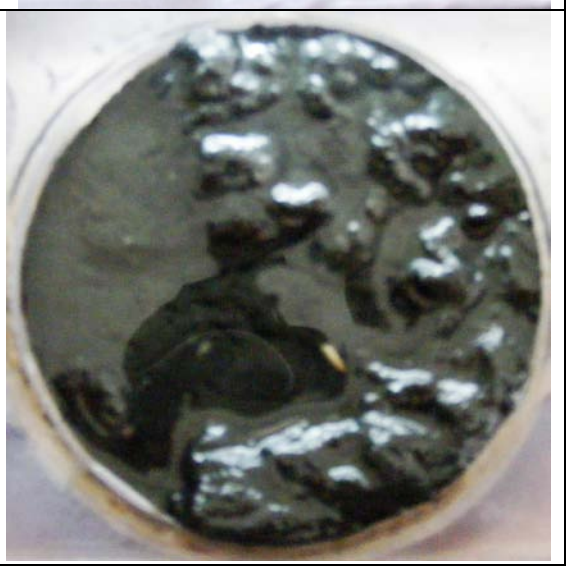
Table A-9b. Core Surface Photographs, Station 8A			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3		**Sample 6**	

Table A-9b. Core Surface Photographs, Station 8A (cont.)	
Sample 7	

Table A-9c. Physical Sample Properties, Station 8A

Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.89	12.03	51.21	6.69	70.19	23.11
1	1.50	1.27	1.77	10.74	44.50	4.17	70.64	25.19
2	5.70	1.23	1.85	10.36	50.19	6.45	68.37	25.18
3	9.50	1.32	1.80	11.15	52.24	7.12	68.04	24.84
4	13.50	1.29	1.80	11.18	50.97	6.40	68.89	24.71
5	17.80	1.35	2.05	10.40	47.55	5.24	71.28	23.48
6	21.50	1.35	1.72	10.62	54.91	7.61	66.45	25.95
7	25.00	1.40	1.97	12.75	64.33	10.23	67.44	22.33

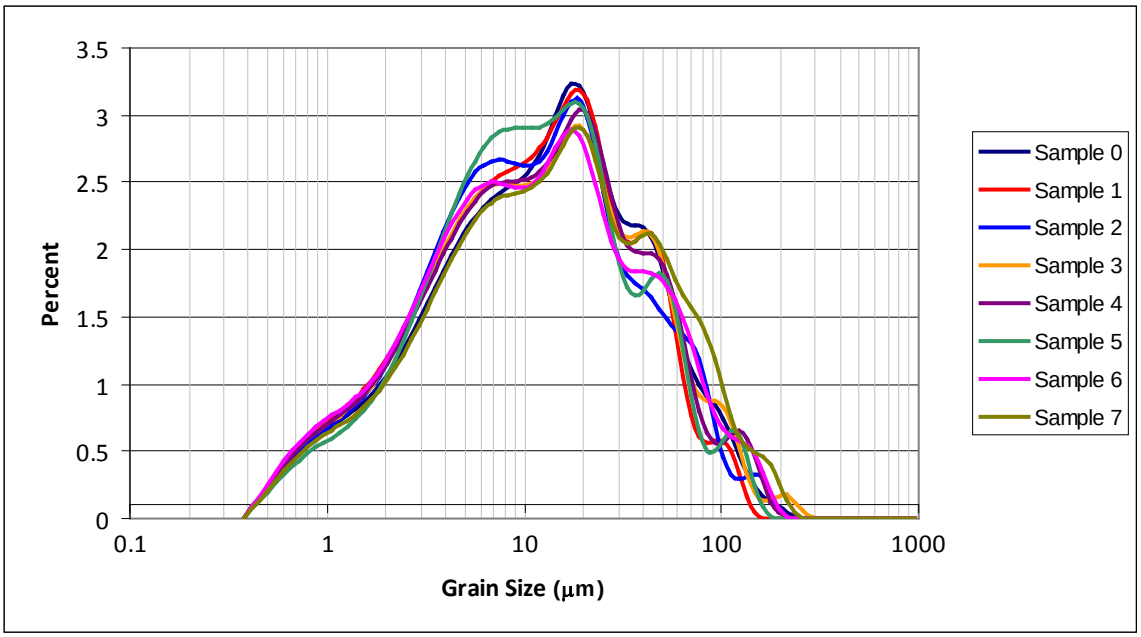


Figure A-9a. Grain size distributions for Station 8A physical samples.

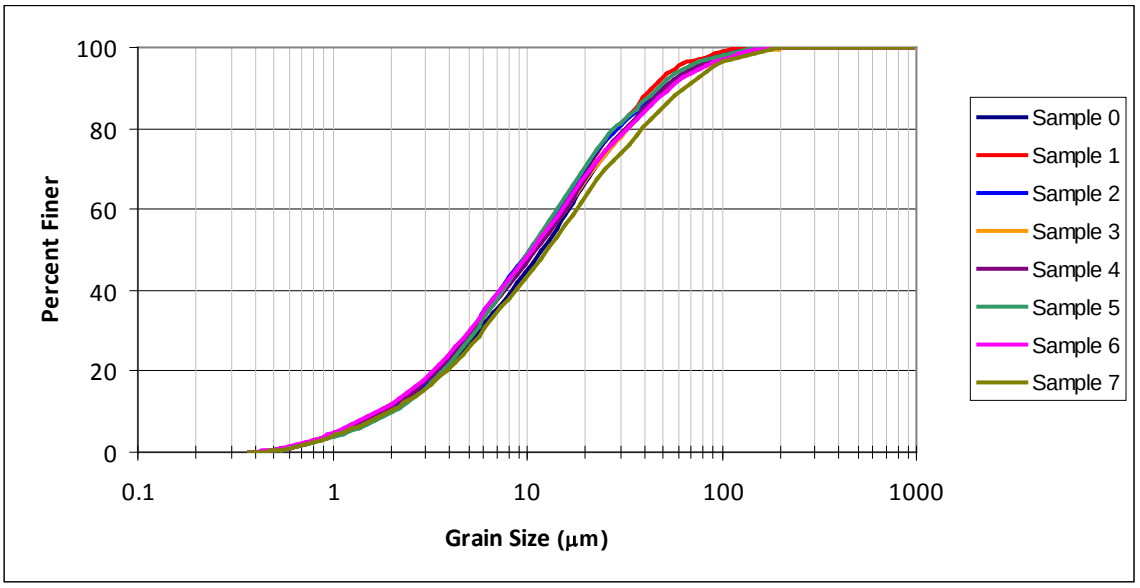


Figure A-9b. Cumulative grain size distributions for Station 8A physical samples.

Table A-10a. Core Description, Station 8B

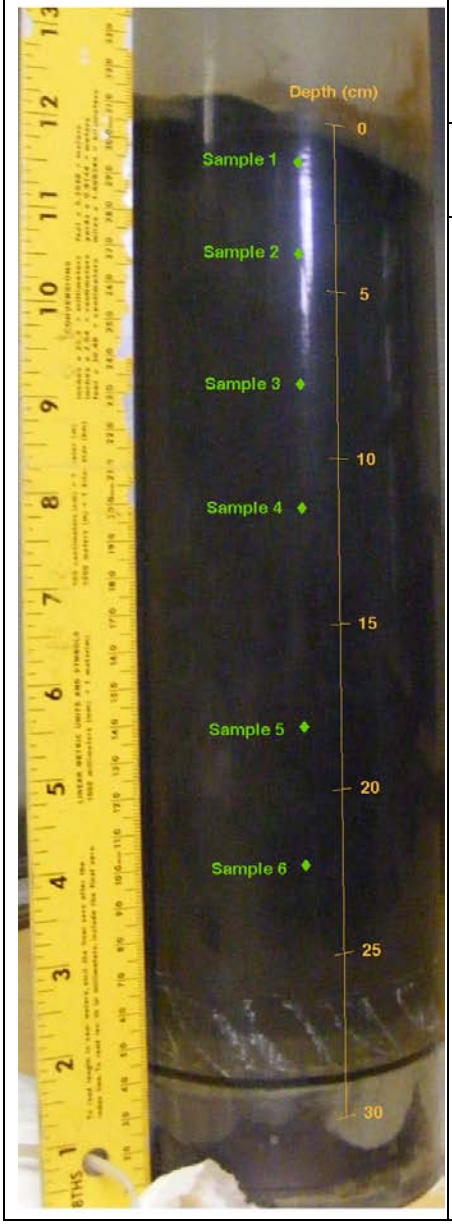
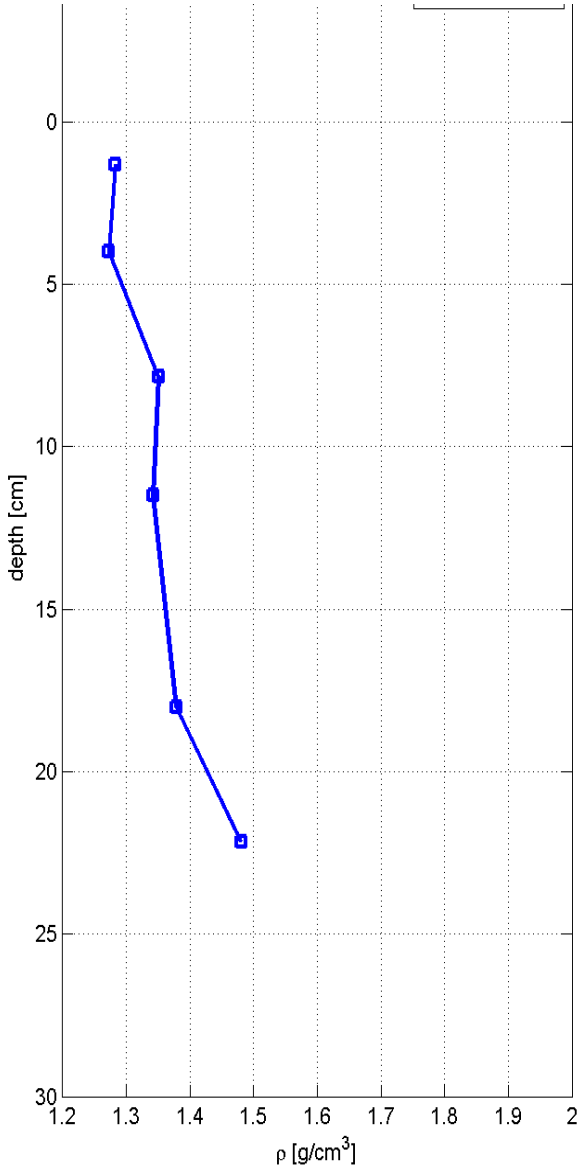
Photograph	Description	Density Profile
	Overlying water Surface sediments and down to 0.5cm are predominately light brown in color with a fluffy texture. Sediment throughout the remainder of the core is dark grey in color. No large cracks or gas voids are apparent.	

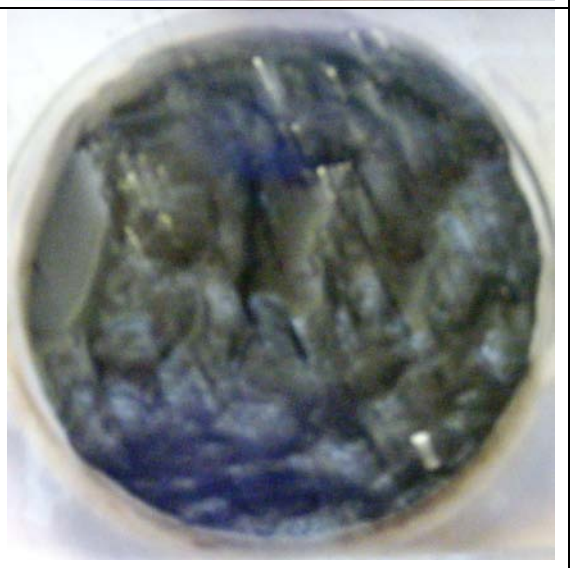
Table A-10b. Core Surface Photographs, Station 8B			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3		**Sample 6**	

Table A-10c. Physical Sample Properties, Station 8B								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		1.96	11.02	50.95	5.97	70.18	23.85
1	1.30	1.28	1.76	11.14	47.52	4.96	70.37	24.67
2	4.00	1.27	1.67	10.11	45.60	4.96	68.71	26.33
3	7.80	1.35	1.77	10.55	51.03	6.32	68.30	25.38
4	11.50	1.34	1.77	10.31	52.14	6.95	67.07	25.99
5	18.00	1.38	1.84	10.25	51.84	6.69	68.06	25.25
6	22.10	1.48	1.93	10.51	55.49	7.90	67.80	24.30

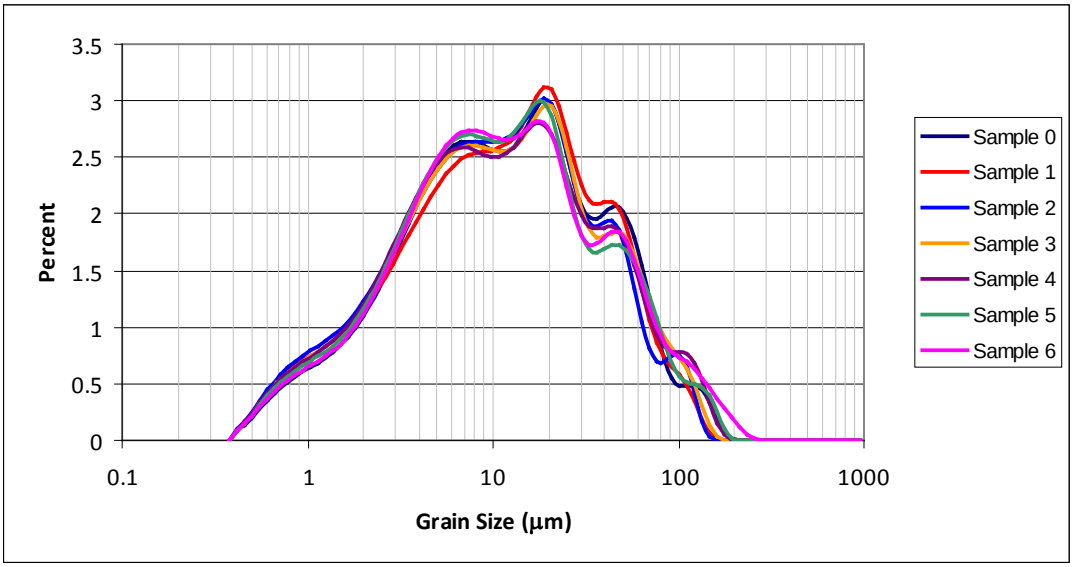


Figure A-10a. Grain size distributions for Station 8B physical samples.

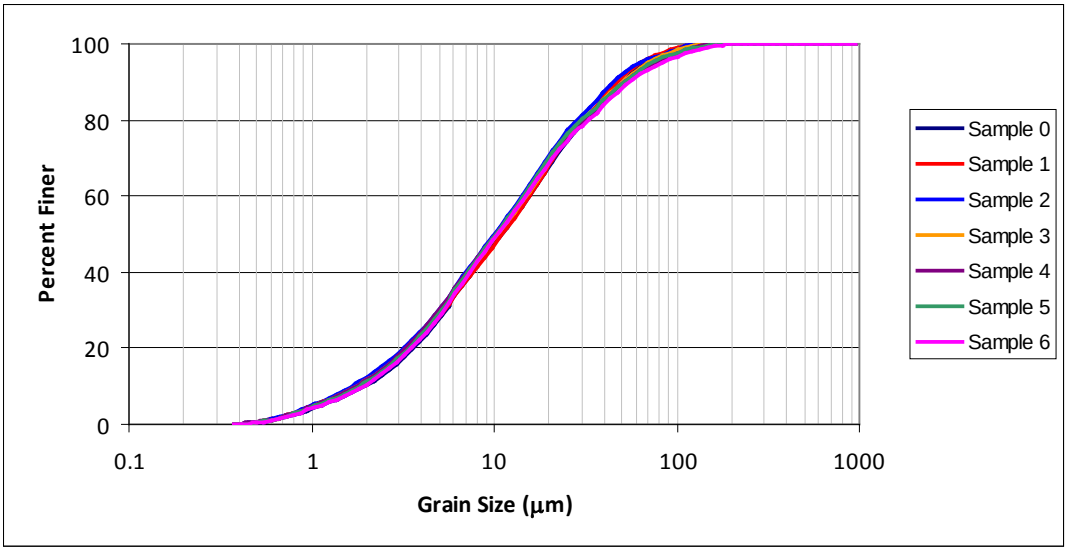


Figure A-10b. Cumulative grain size distributions for Station 8B physical samples

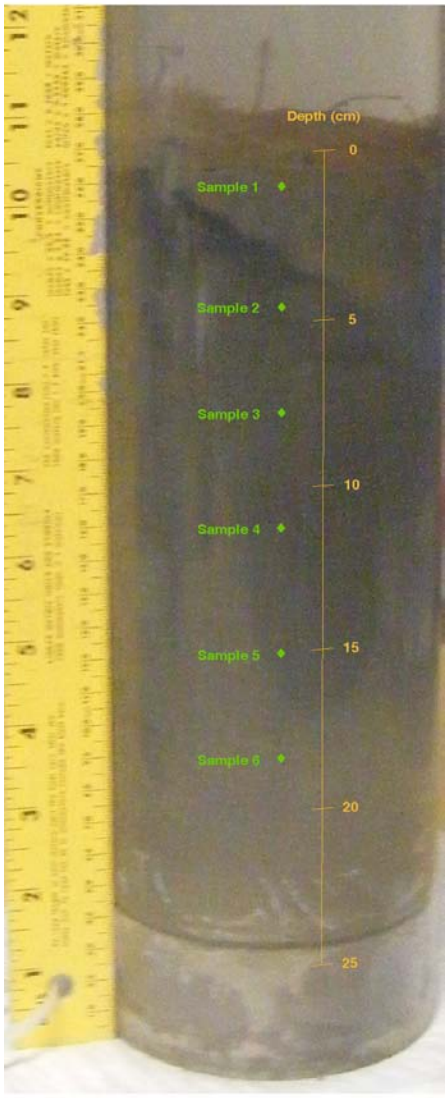
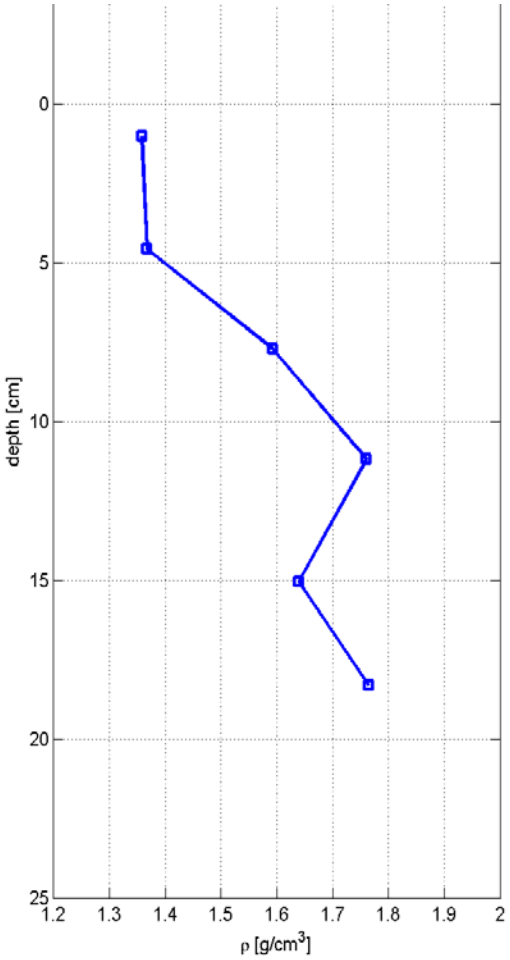
Table A-11a. Core Description, Station 9		
Photograph	**Description**	**Density Profile**
	Overlying water Surface sediments are predominately light brown in color with a fluffy texture. Plant/root-like material is visible at the core surface. Below the surface and down to a depth of 3cm the sediment is light grey to brown in color. Sediment throughout the remainder of the core is dark grey in color.	

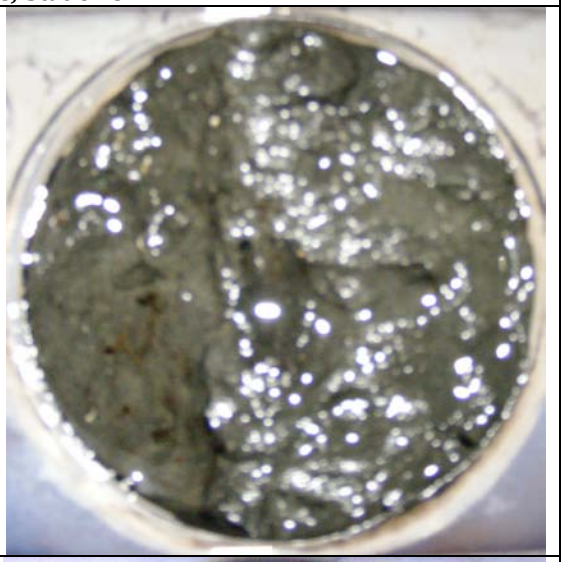
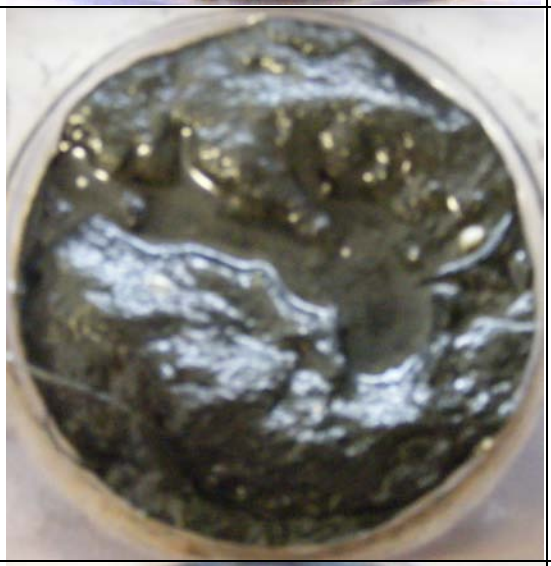
Table A-11b. Core Surface Photographs, Station 9			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3		**Sample 6**	

Table A-11c. Physical Sample Properties, Station 9								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		2.09	13.57	81.64	14.76	63.37	21.86
1	1.00	1.36	2.11	13.71	79.96	14.30	64.15	21.55
2	4.50	1.37	1.68	11.02	61.46	9.41	64.90	25.69
3	7.70	1.59	2.43	18.52	99.24	20.75	61.13	18.12
4	11.20	1.76	3.29	35.91	137.16	35.41	51.50	13.09
5	15.00	1.64	3.06	33.12	130.70	33.57	52.56	13.87
6	18.30	1.76	2.79	25.98	117.94	29.62	54.76	15.62

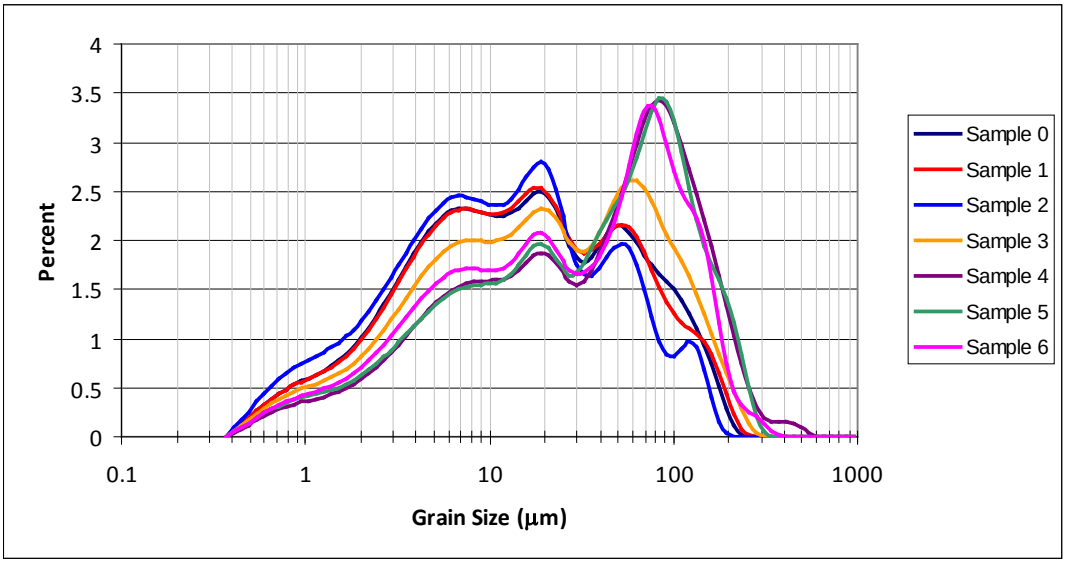


Figure A-11a. Grain size distributions for Station 9 physical samples.

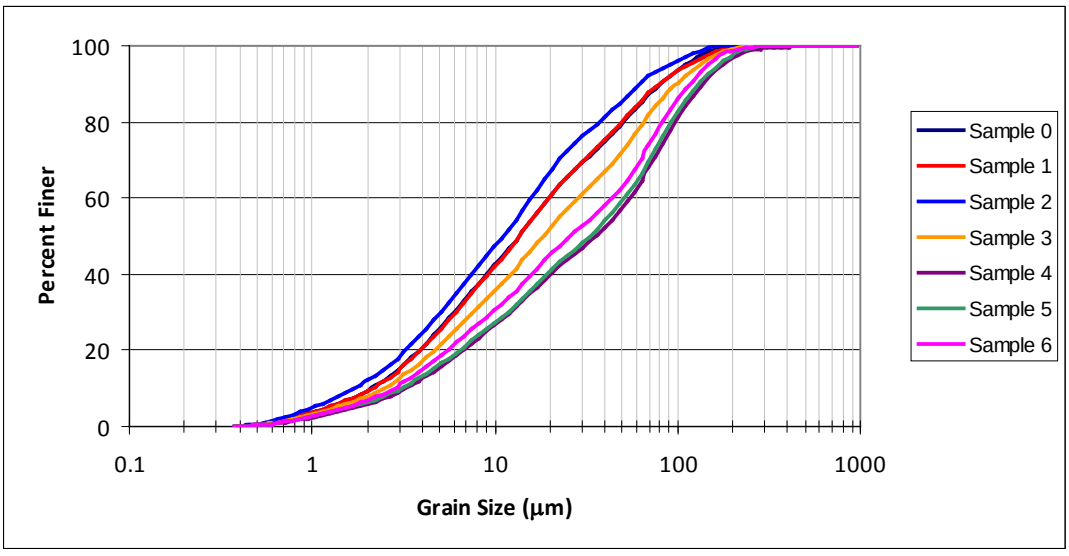


Figure A-11b. Cumulative grain size distributions for Station 9 physical samples.

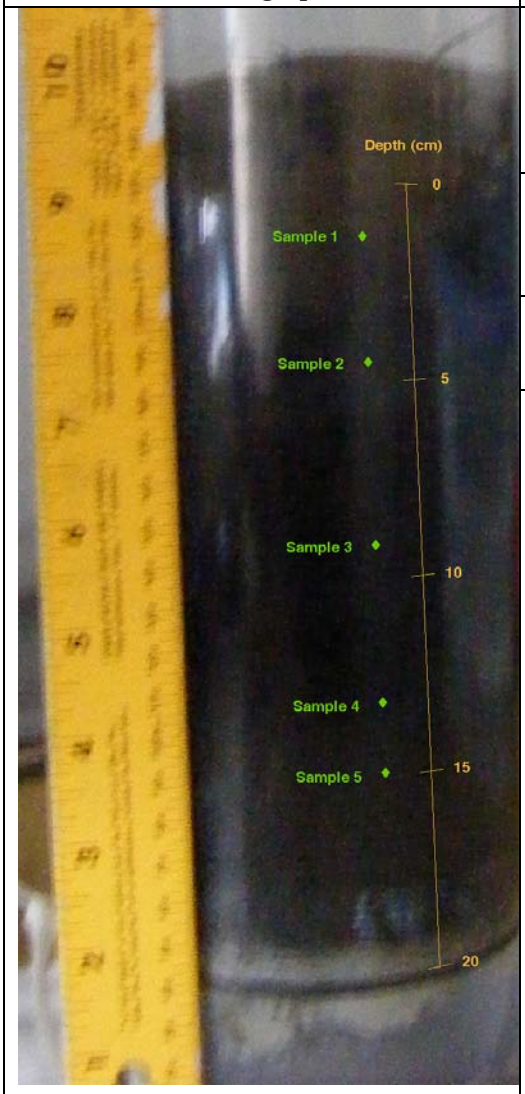
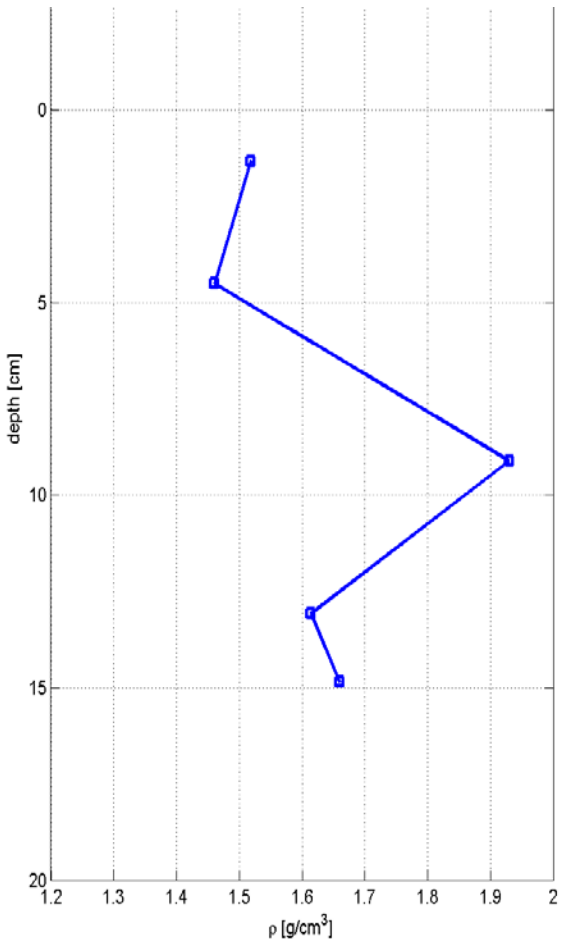
Table A-12a. Core Description, Station 10		
Photograph	**Description**	**Density Profile**
	Overlying water Surface sediments are predominately light brown in color with a fluffy texture. Plant material is visible at the core surface Below the surface and down to a depth of 4cm the sediment is light grey in color. Sediment throughout the remainder of the core is dark grey in color.	

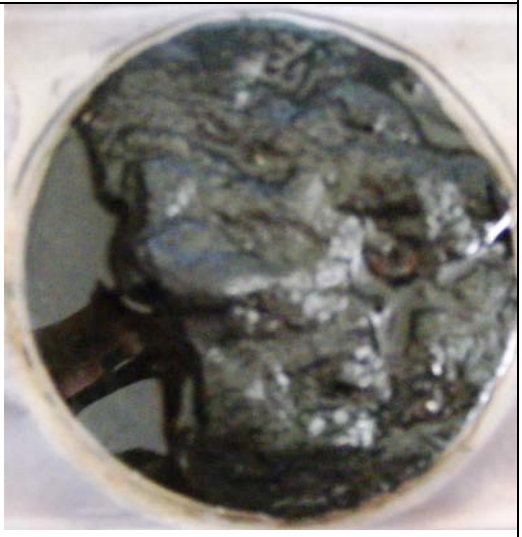
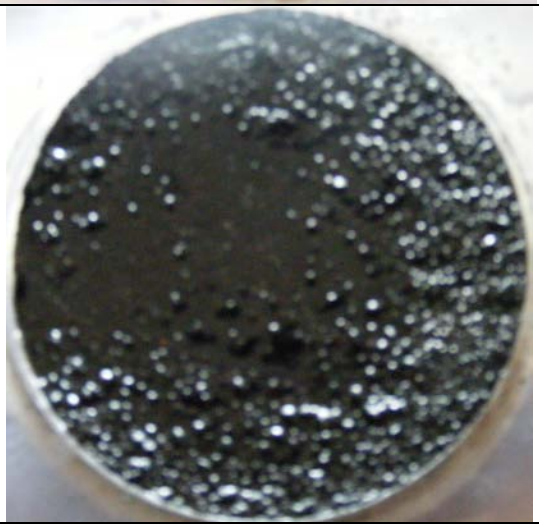
Table A-12b. Core Surface Photographs, Station 10			
Sample 1		**Sample 4**	
Sample 2		**Sample 5**	
Sample 3 **This region of the core is dominated by small black granular sediment (possibly coal).** **No cohesive behavior observed.**			

Table A-12c. Physical Sample Properties, Station 10								
Sample #	Depth (cm)	Bulk Density (g/cm^3)	d_{10} (μm)	d_{50} (μm)	d_{90} (μm)	% Sand	% Silt	% Clay
0	0.00		2.59	14.96	104.40	18.13	63.76	18.10
1	1.30	1.52	1.86	12.84	107.84	17.75	58.71	23.54
2	4.50	1.46	1.83	12.02	93.53	15.43	60.16	24.41
3	9.10	1.93	1.94	15.16	41.88	0.44	79.89	19.67
4	13.10	1.61	2.44	16.22	138.20	22.61	58.38	19.00
5	14.80	1.66	2.36	17.46	189.53	27.04	53.88	19.08

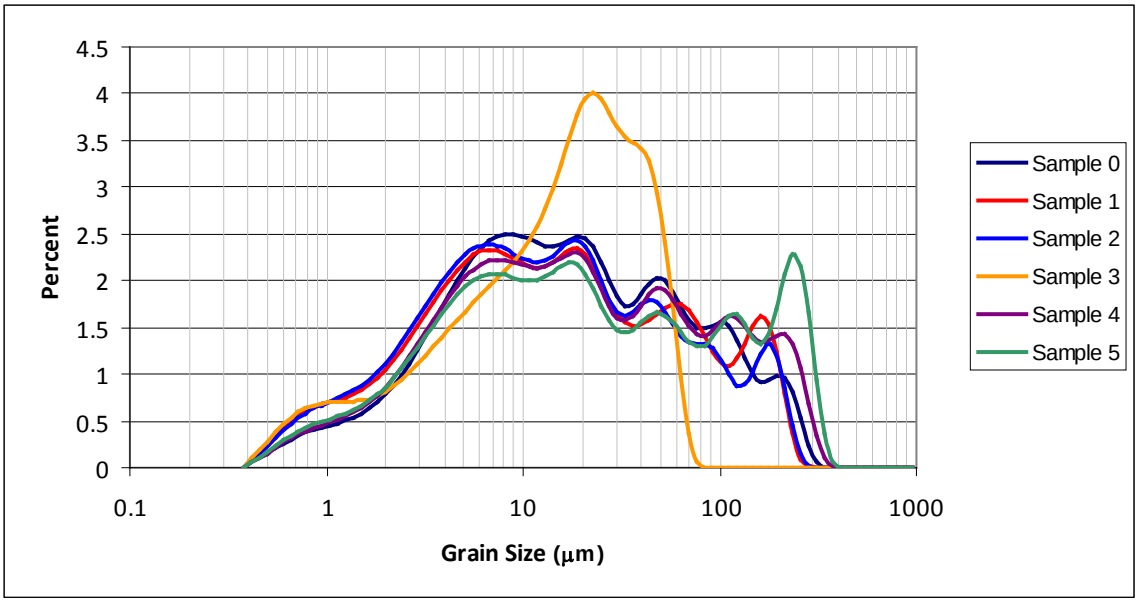


Figure A-12a. Grain size distributions for Station 10 physical samples.

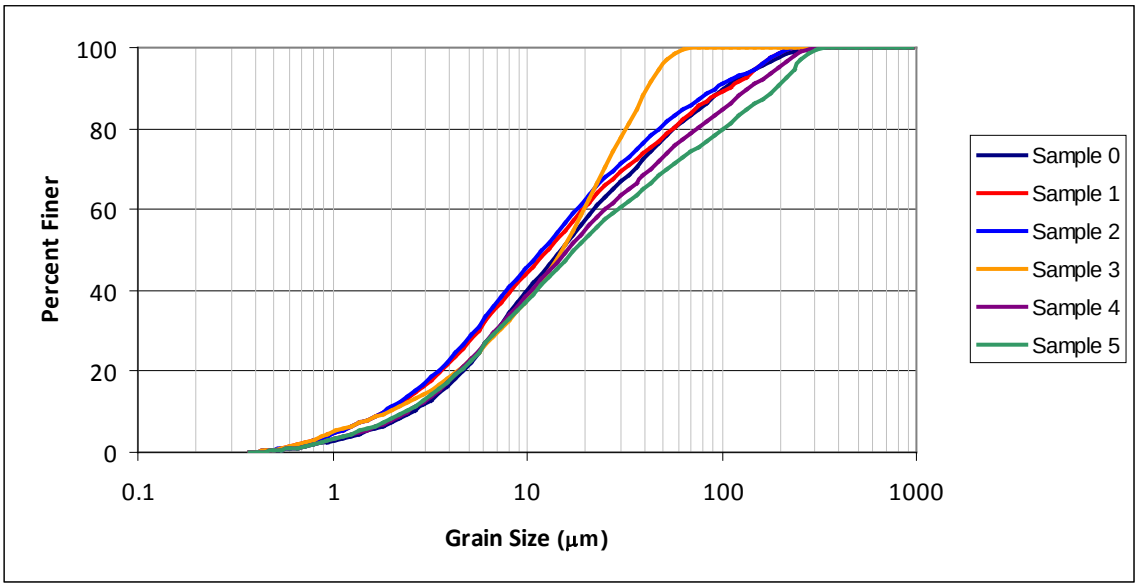


Figure A-12b. Cumulative grain size distributions for Station 10 physical samples.

Appendix B. Sedflume Erosion Rate Analysis for Individual Stations

This Appendix contains results of Sedflume erosion rate analysis. Erosion rate vs depth plots, which present sediment layers that were identified based on density, grain size and erosion rate data are provide for all stations. Erosion Rate vs Shear Stress plots are presented for each identified layer; along with Erosion Rate vs Density plots for those layers that showed a correlation to density.

Station 1

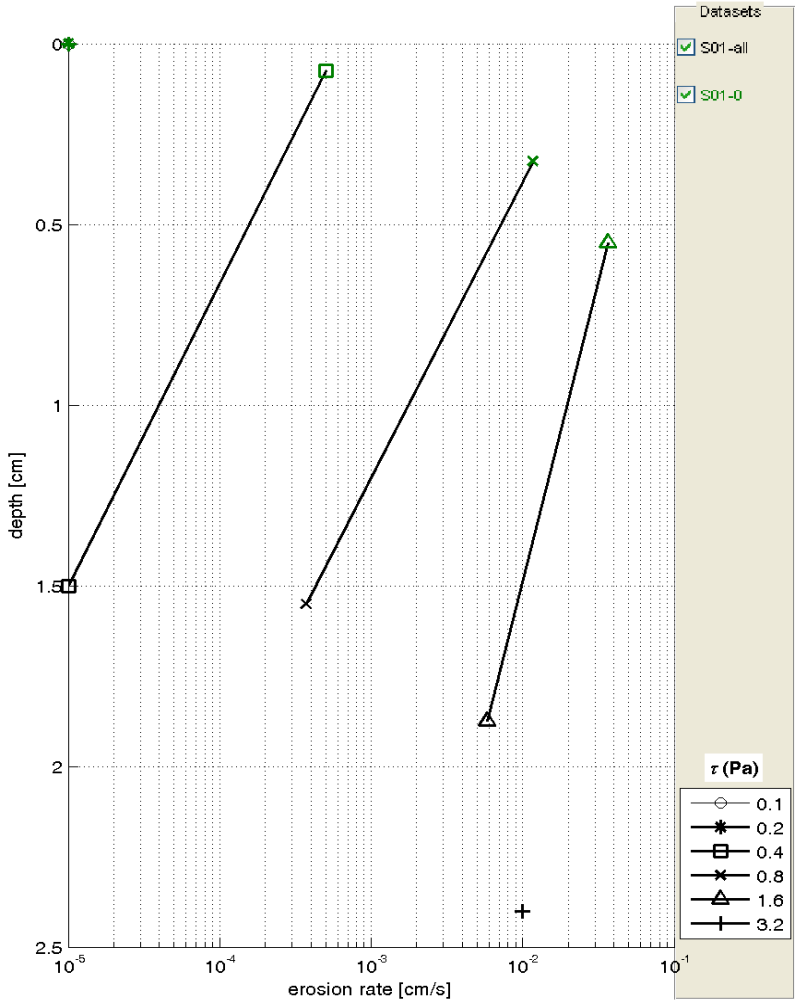


Figure B-1. Erosion rate versus depth and applied shear stress for Station 1. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Core failure occurred after the second sequence so no further layers were identified.

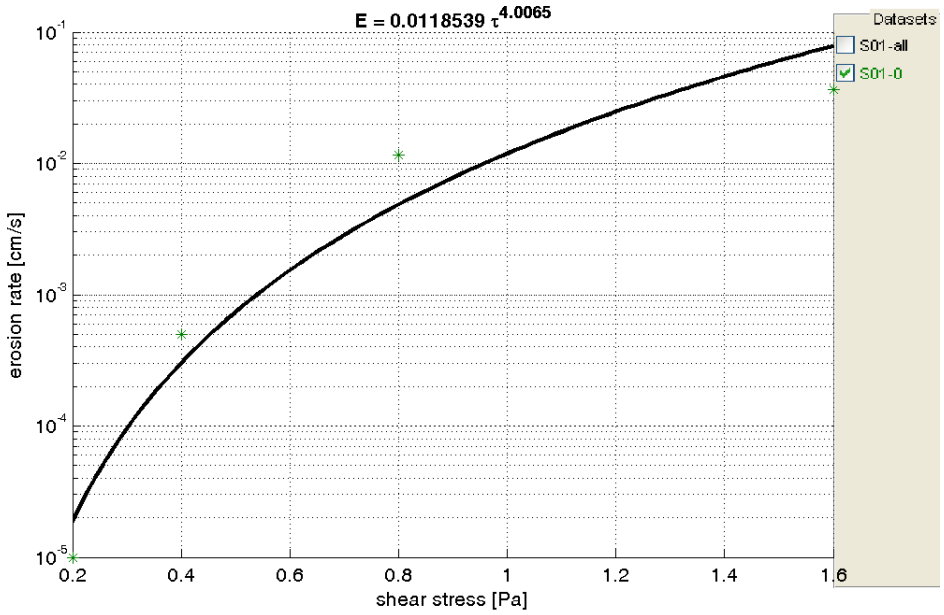


Figure B-2. Station 1, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data.

Station 2

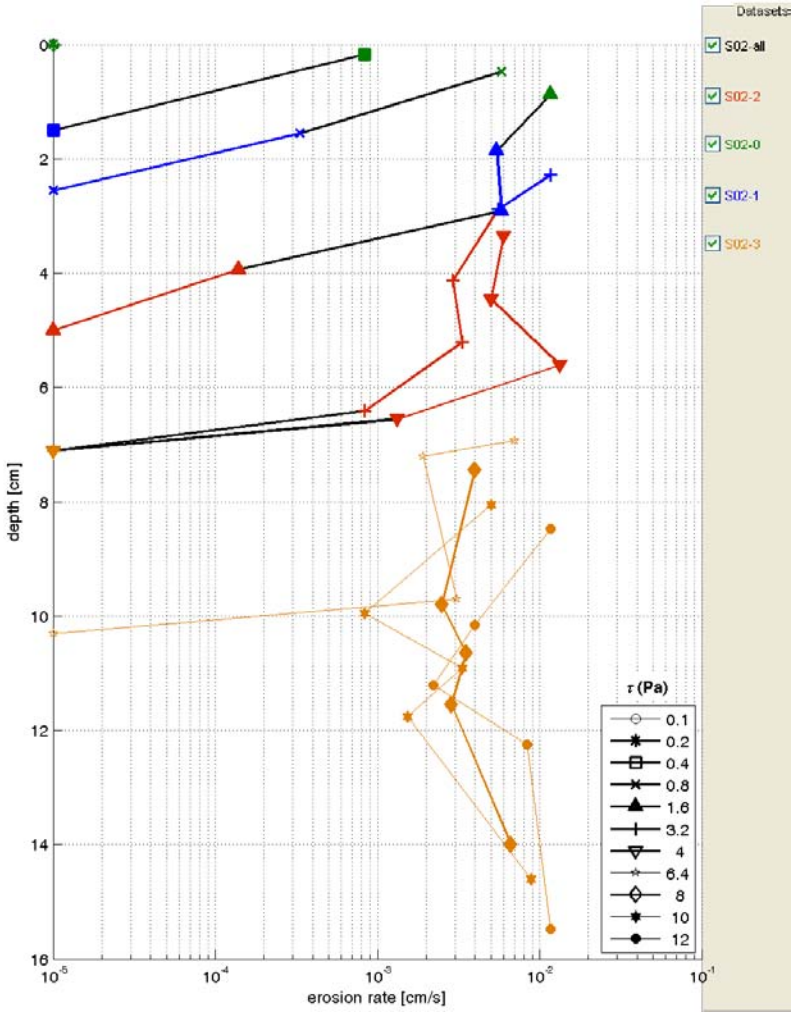


Figure B-3. Erosion rate versus depth and applied shear stress for Station 2. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue), 2(red), and 3(orange) were determined based on density, grain size and erosion rate data.

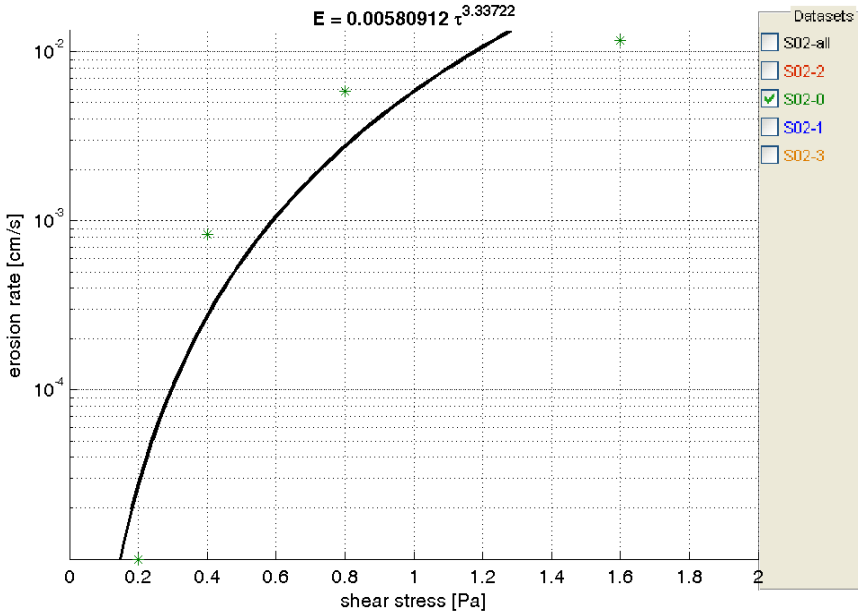


Figure B-4. Station 2, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data.

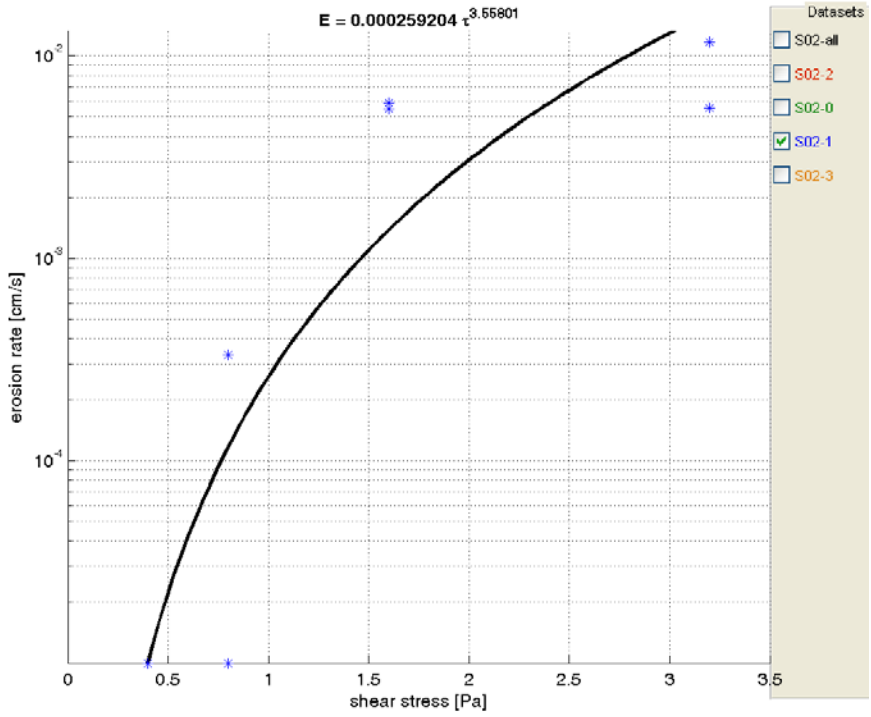


Figure B-5. Station 2, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data.

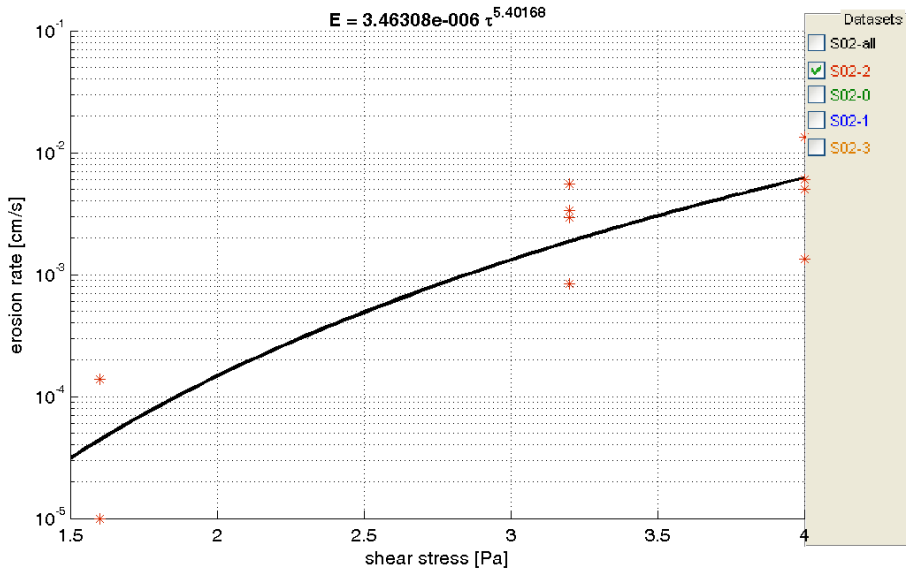


Figure B-6. Station 2, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

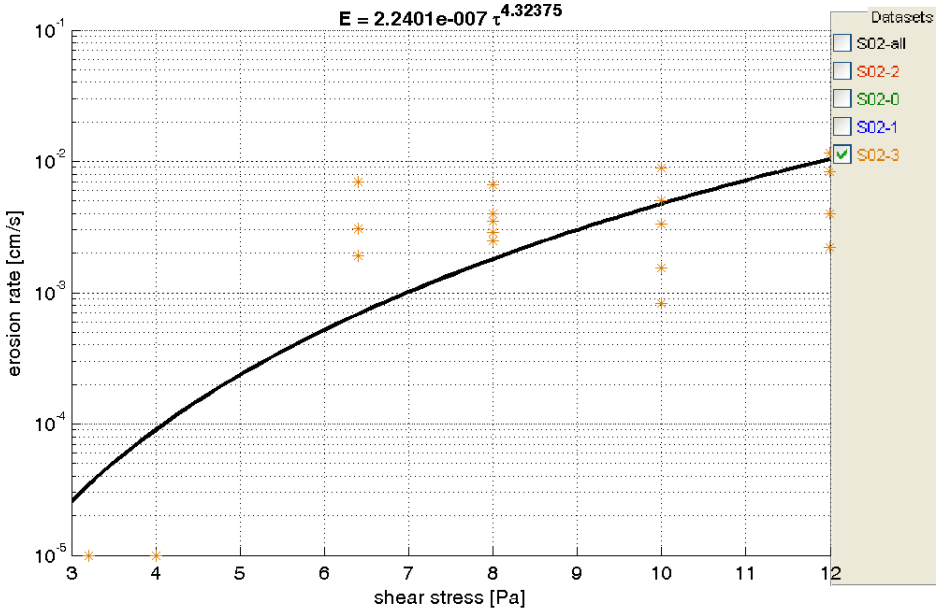


Figure B-7. Station 2, Layer 3 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

Station 3

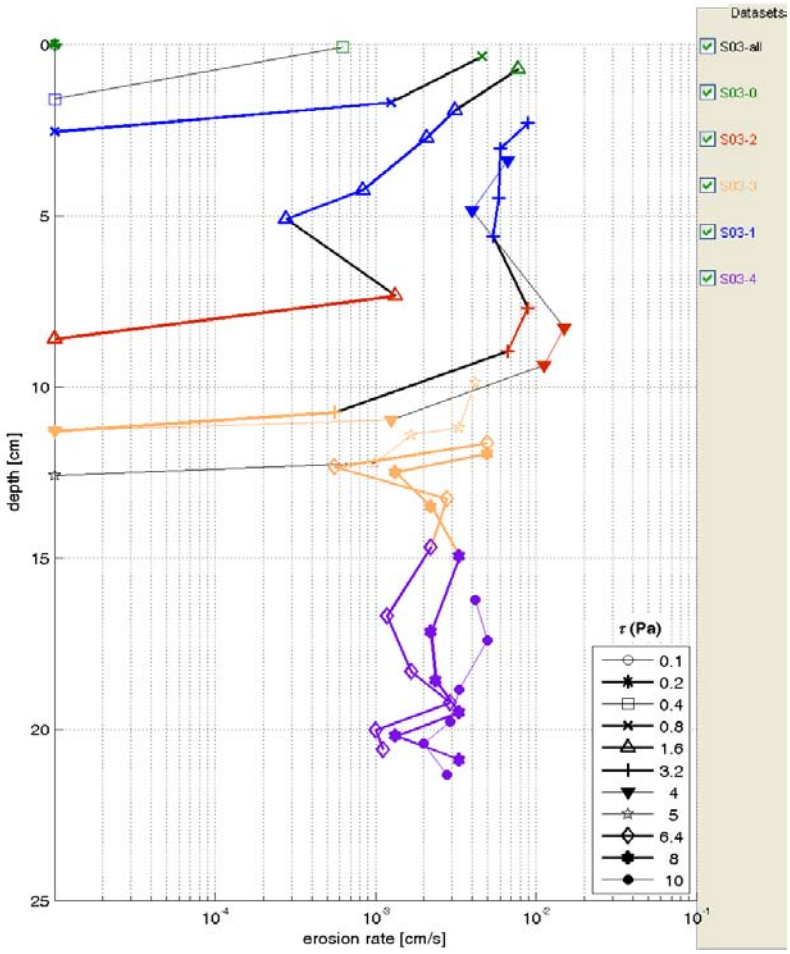


Figure B-8. Erosion rate versus depth and applied shear stress for Station 3. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue), 2(red), 3(orange), and 4(purple) were determined based on density, grain size and erosion rate data.

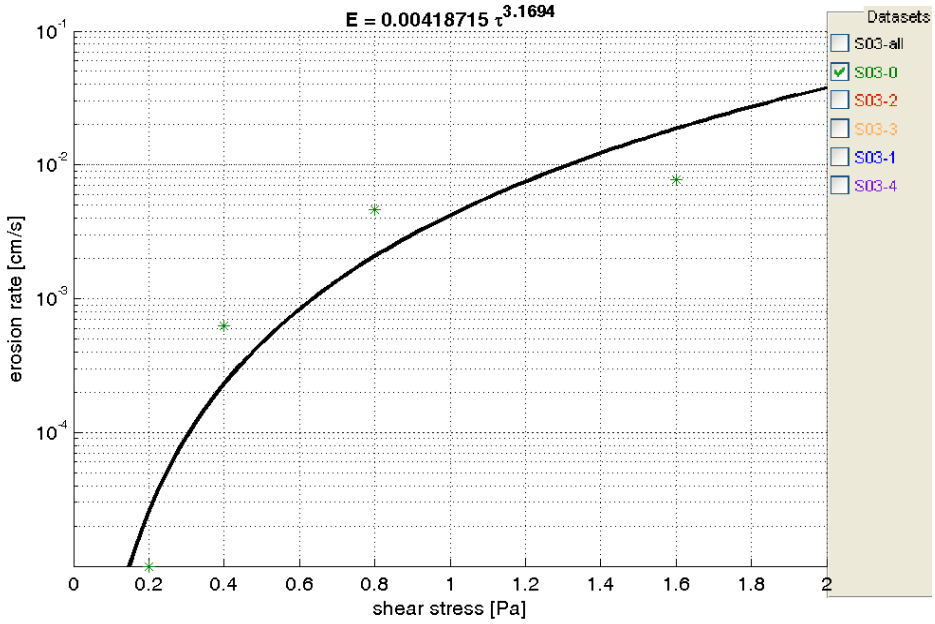


Figure B-9. Station 3, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

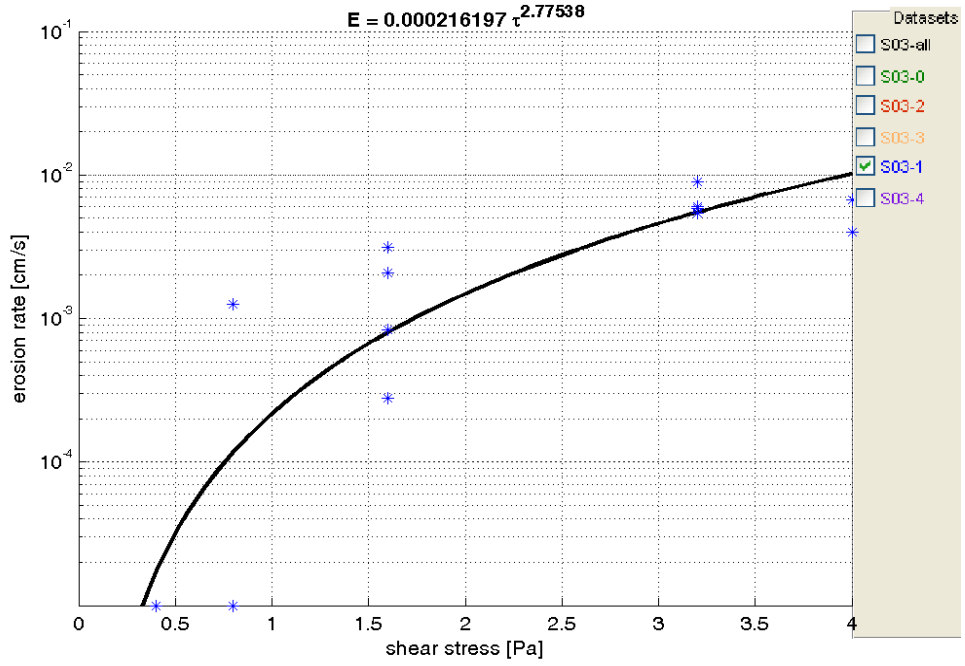


Figure B-10. Station 3, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

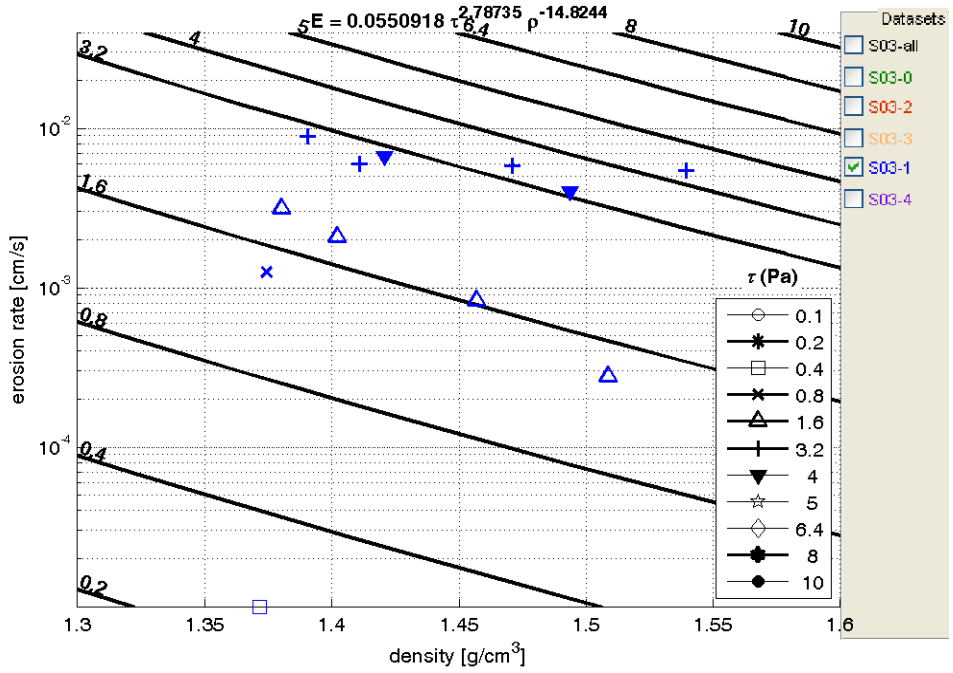


Figure B-11. Station 3, Layer 1 erosion rate vs. density. Lines show optimized function values for each value of shear stress.

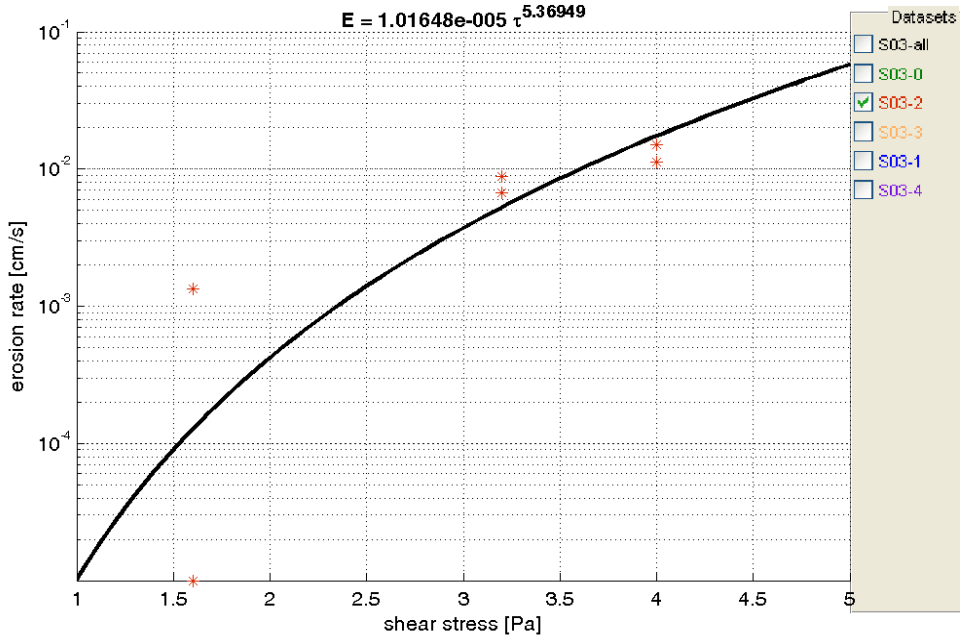


Figure B-12. Station 3, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

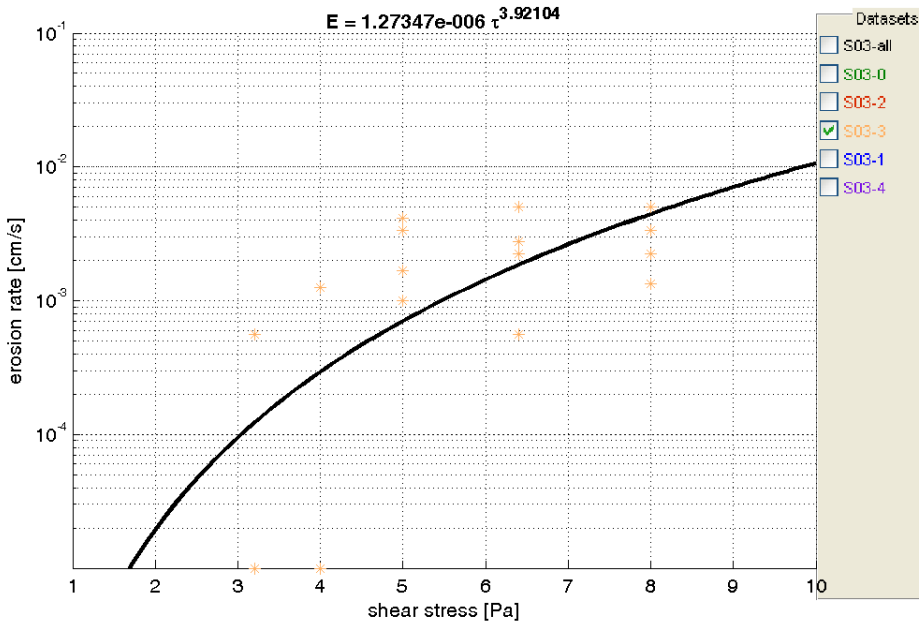


Figure B-13. Station 3, Layer 3 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

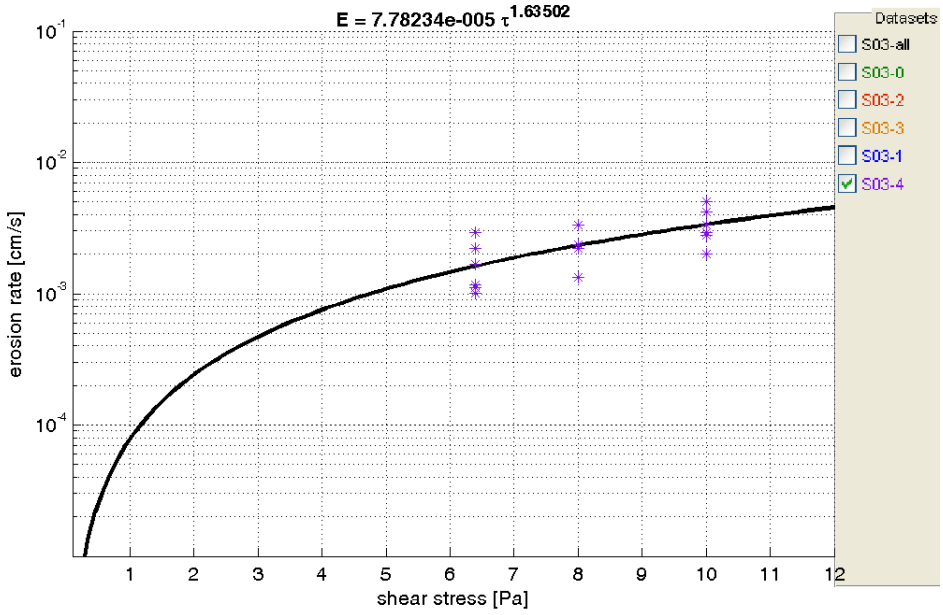


Figure B-14. Station 3, Layer 4 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

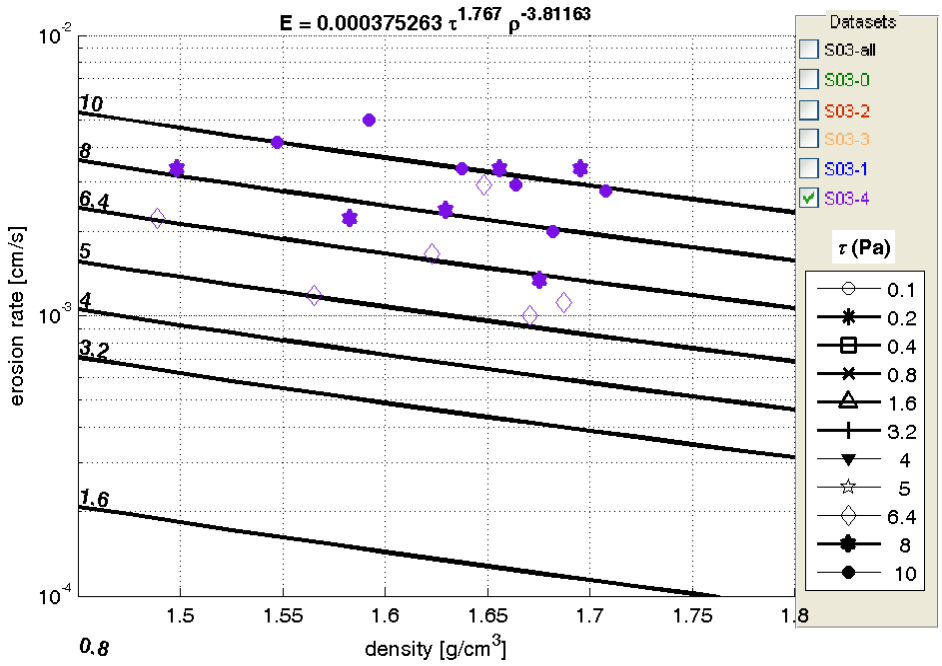


Figure B-15. Station 3, Layer 4 erosion rate vs. density. Lines show optimized function values for each value of shear stress.

Station 4B

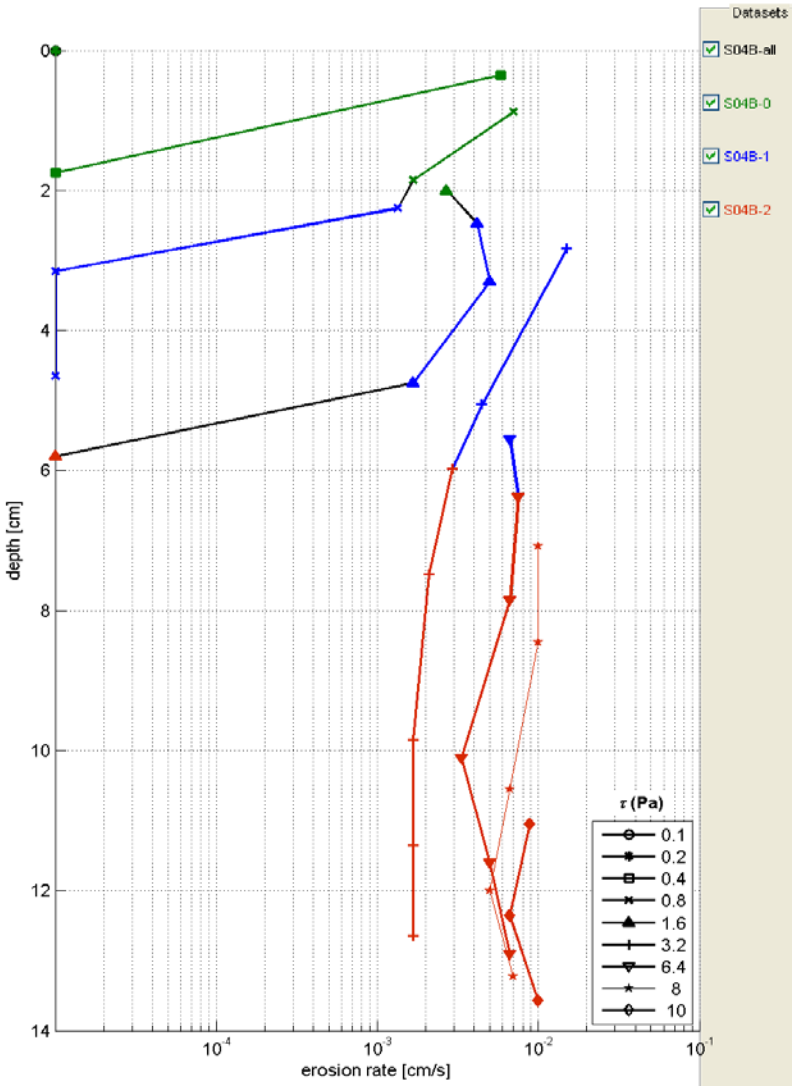


Figure B-16. Erosion rate versus depth and applied shear stress for Station 4B. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) and 2(red) were determined based on density, grain size and erosion rate data.

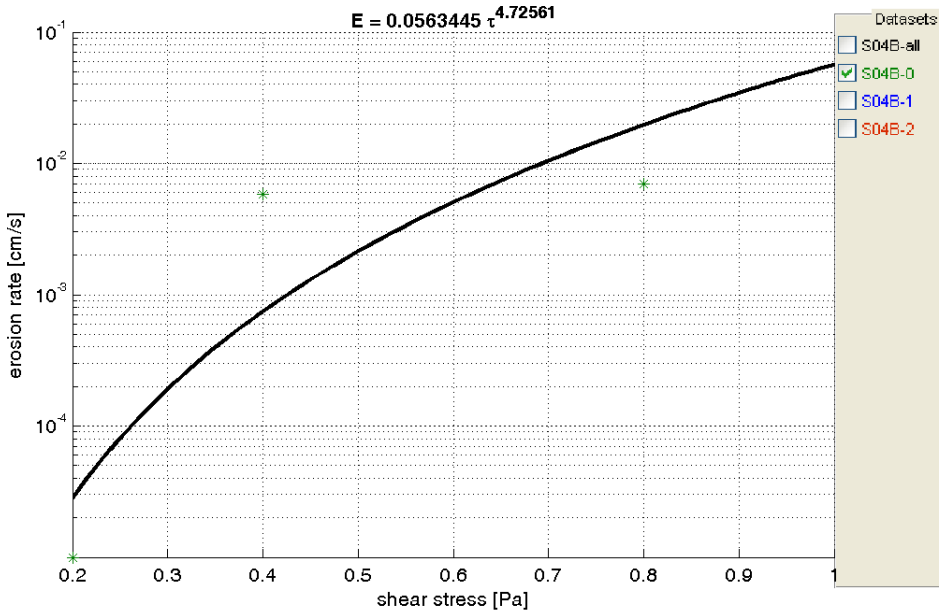


Figure B-17. Station 4B, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

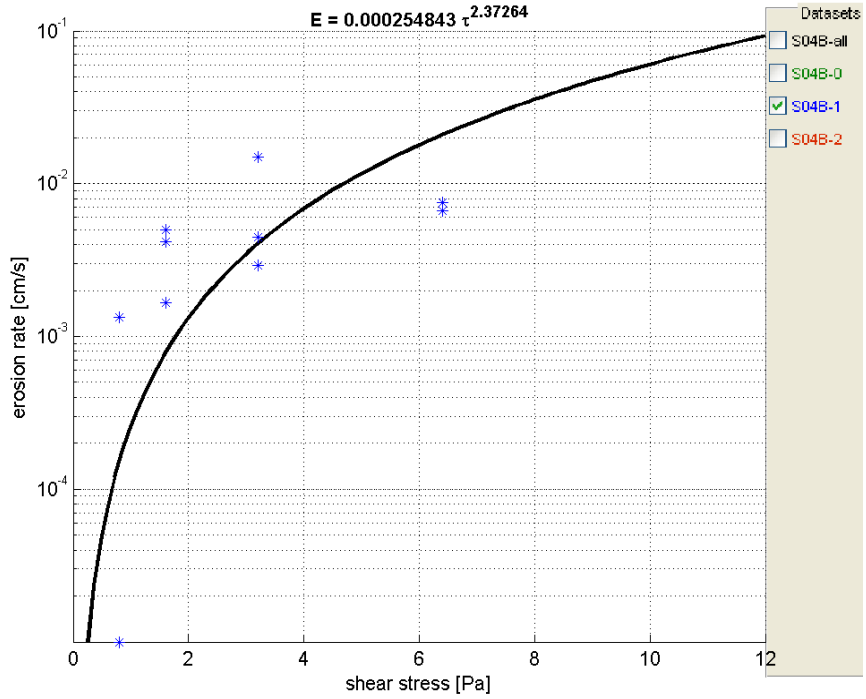


Figure B-18. Station 4B, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

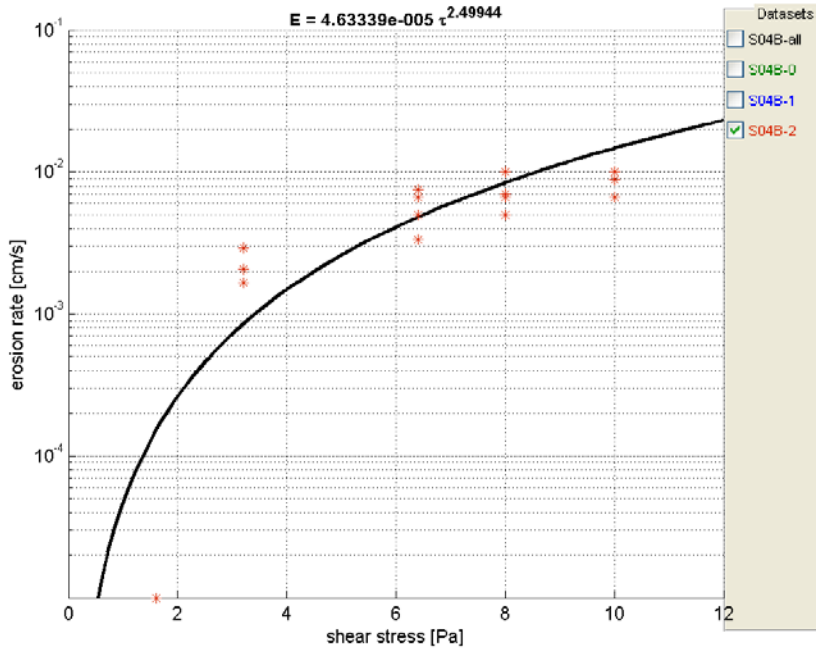


Figure B-19. Station 4B, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 5

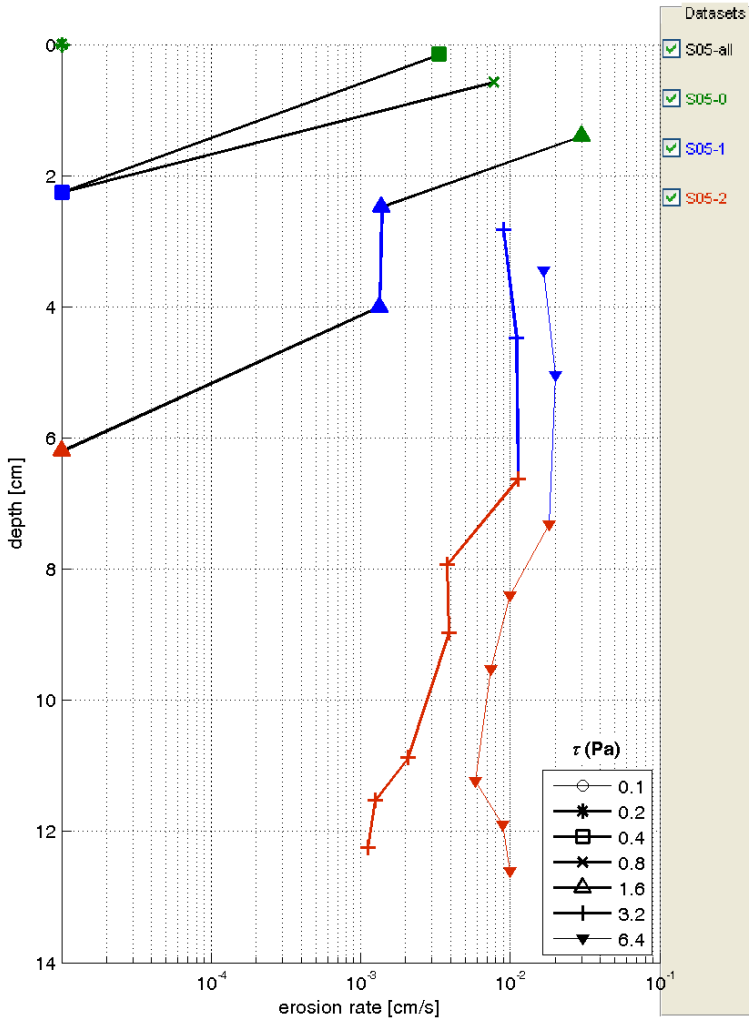


Figure B-20. Erosion rate versus depth and applied shear stress for Station 5. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) and 2(red) were determined based on density, grain size and erosion rate data.

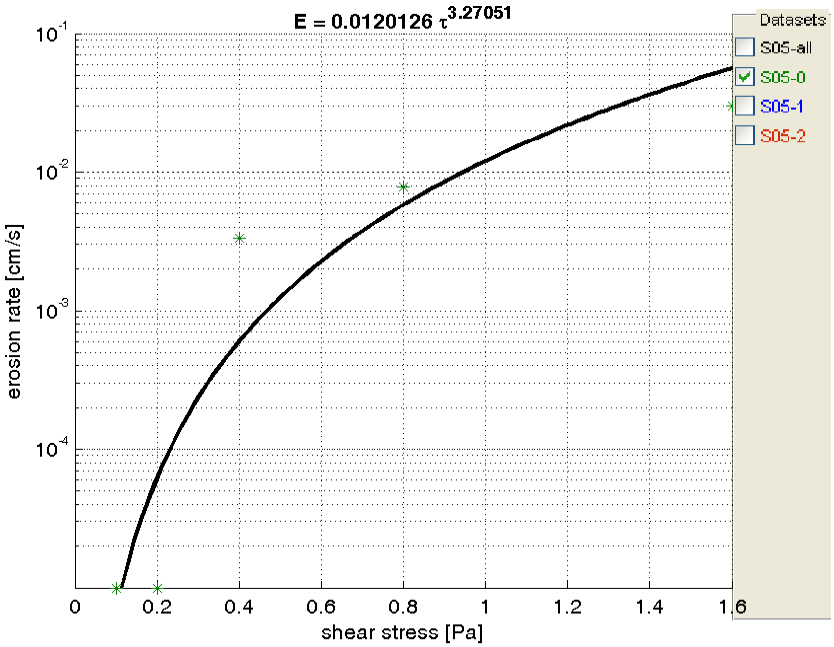


Figure B-21. Station 5, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

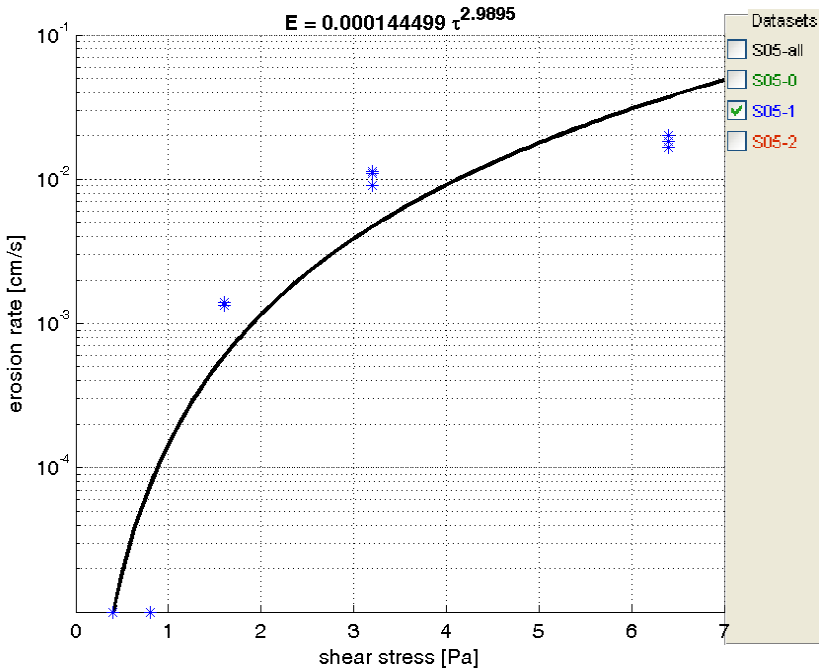


Figure B-22. Station 5, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

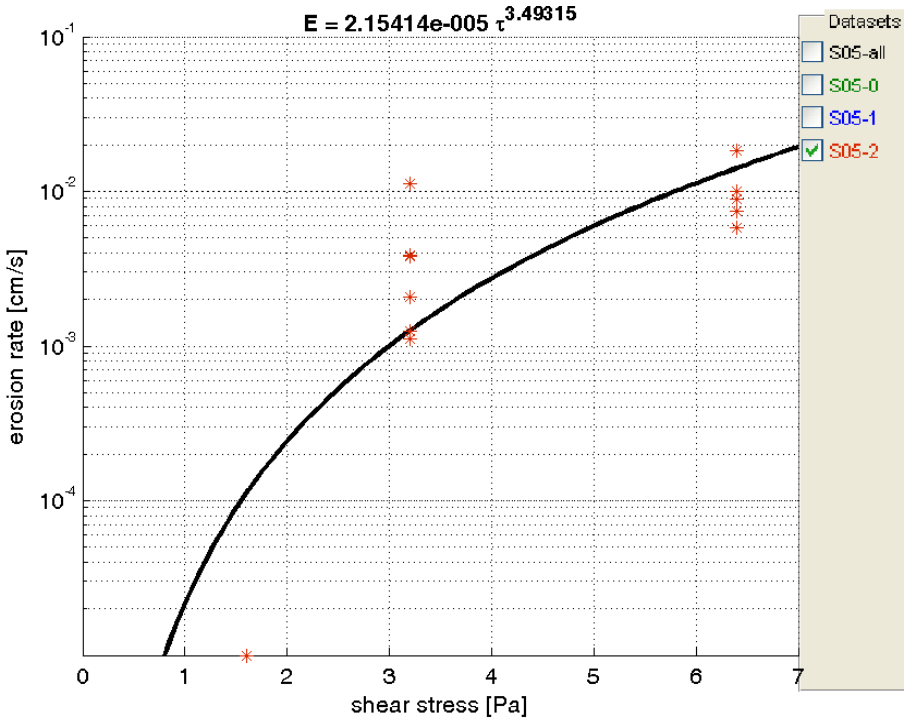


Figure B-23. Station 5, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

Station 6

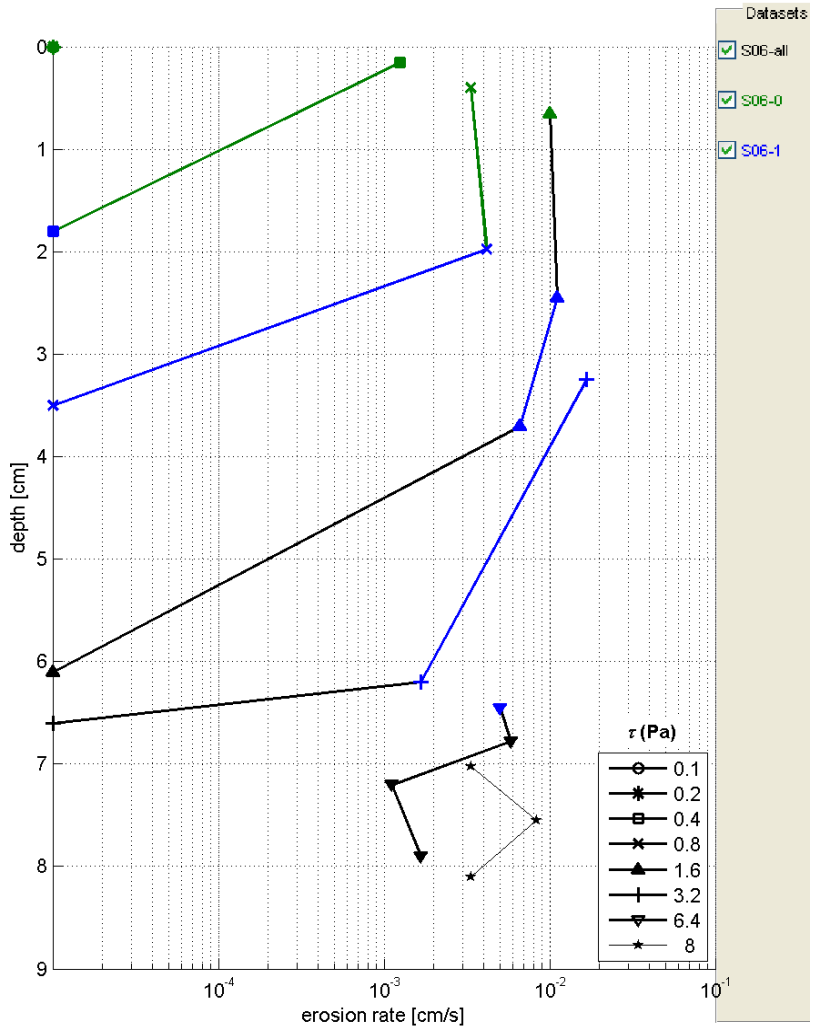


Figure B-24. Erosion rate versus depth and applied shear stress for Station 6. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) was determined based on density, grain size and erosion rate data.

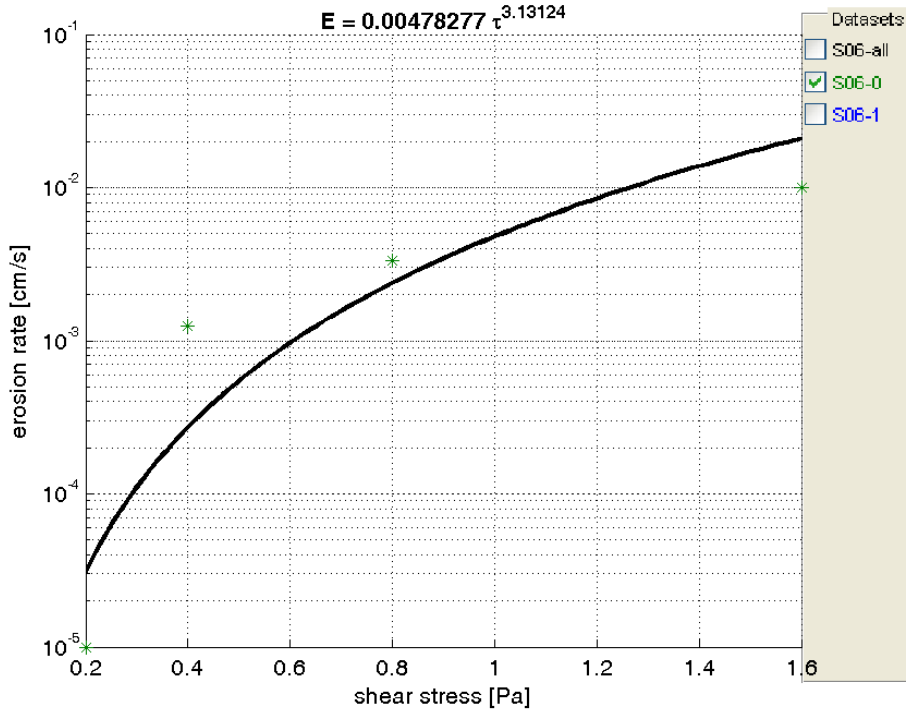


Figure B-25. Station 6, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

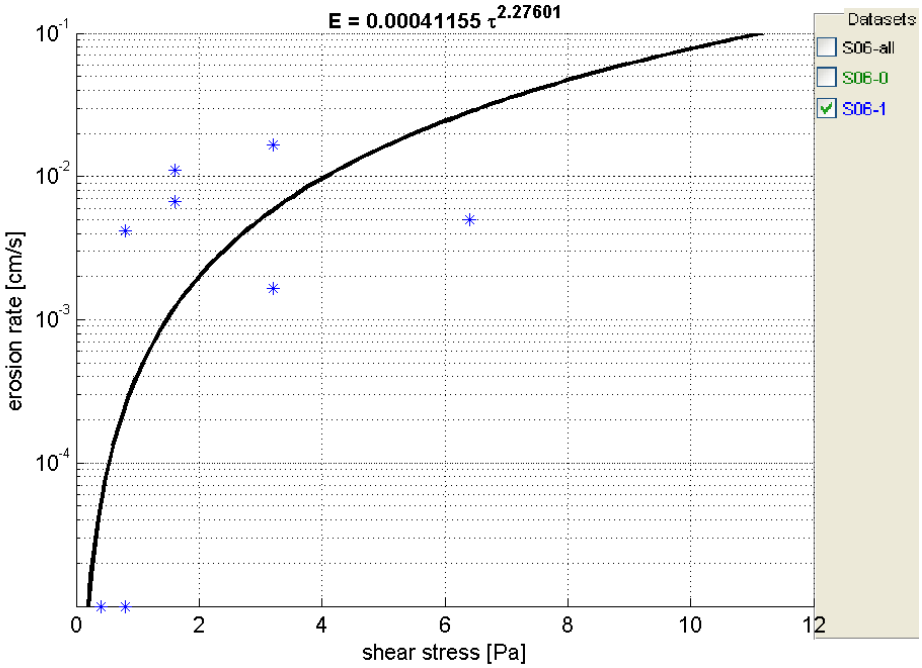


Figure B-26. Station 6, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 7A

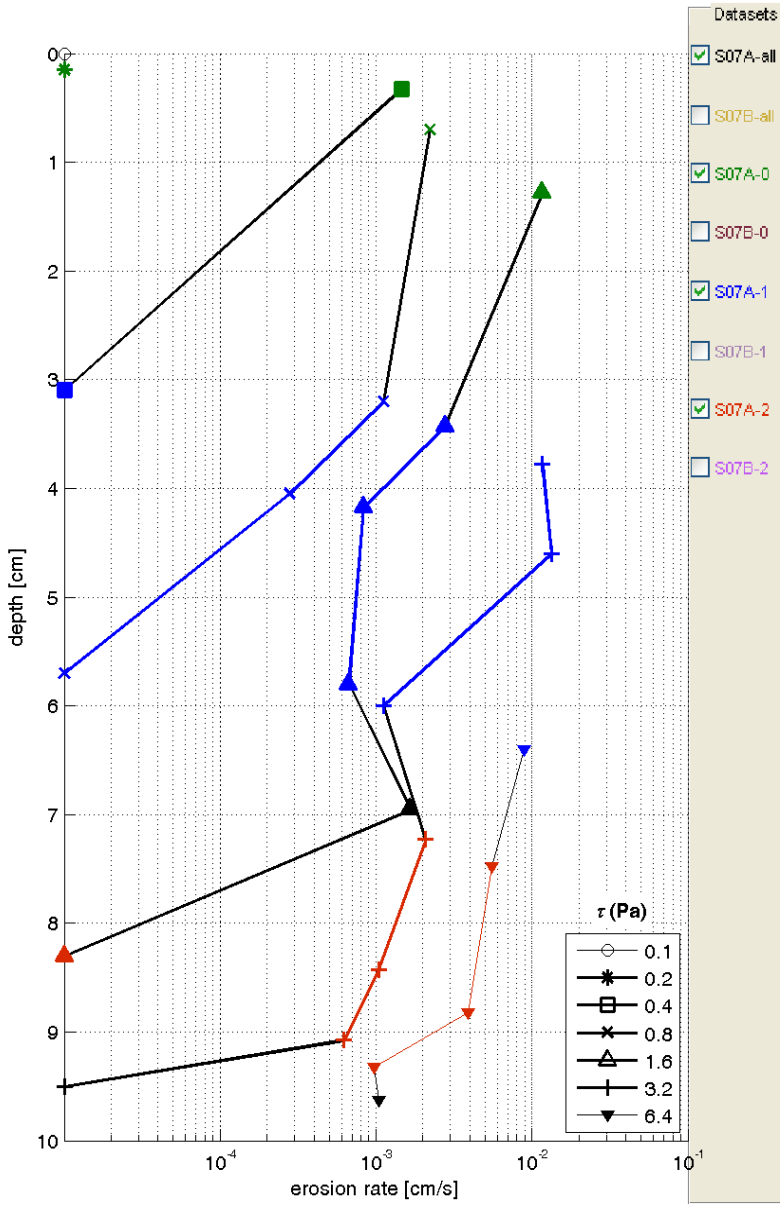


Figure B-27. Erosion rate versus depth and applied shear stress for Station 7A. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) and 2(red) were determined based on density, grain size and erosion rate data.

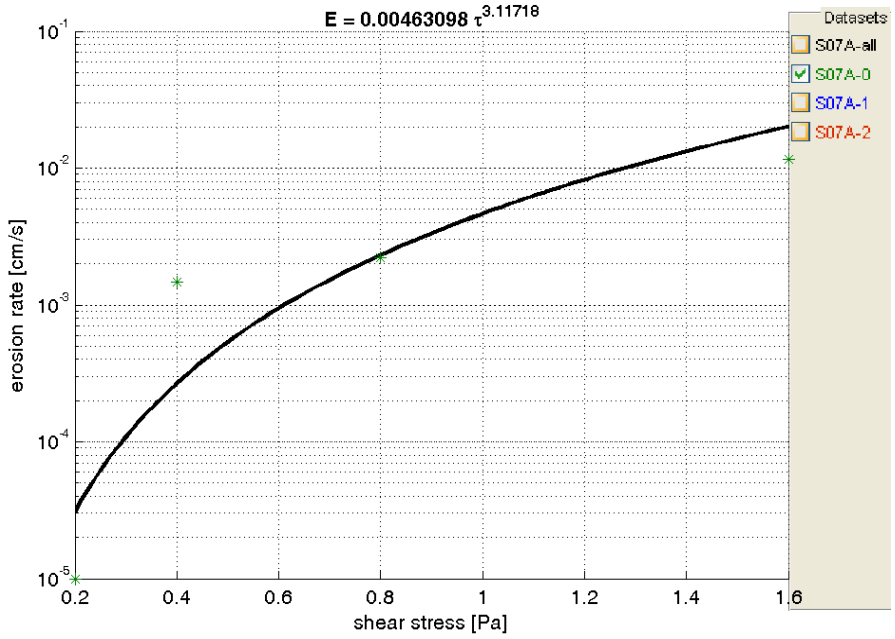


Figure B-28. Station 7A, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

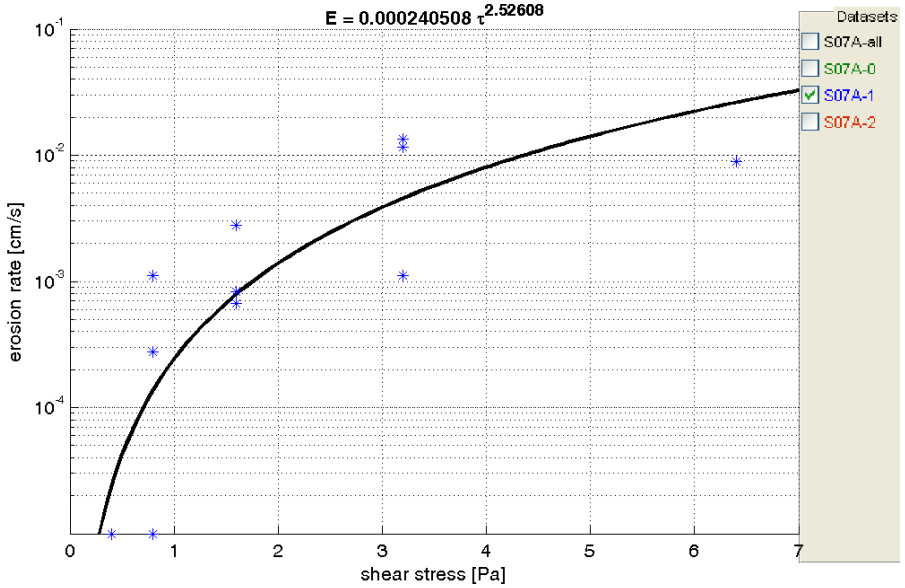


Figure B-29. Station 7A, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

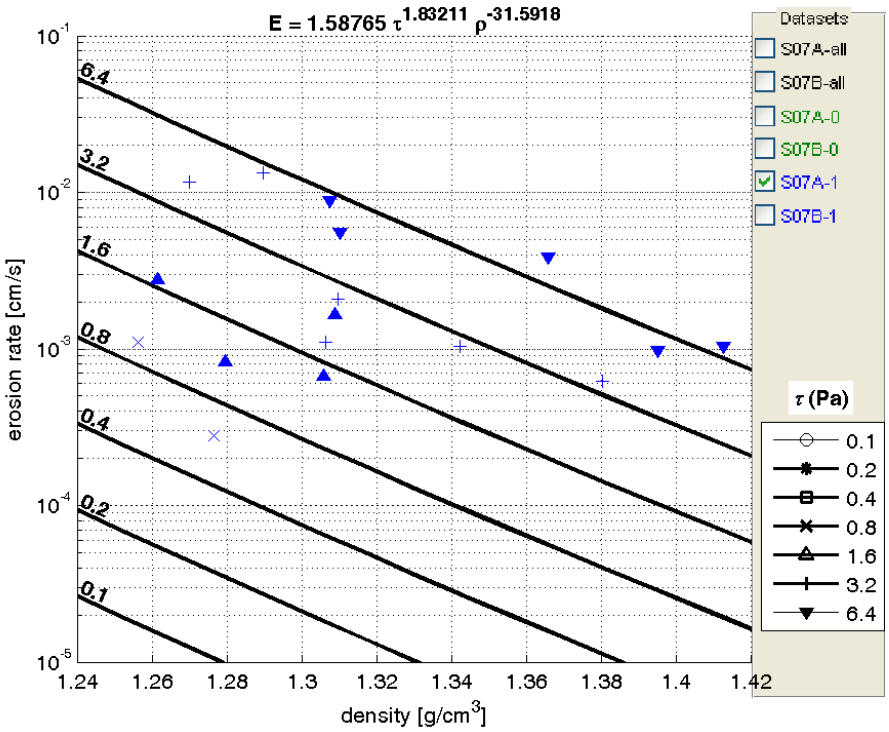


Figure B-30. Station 7A, Layer 1 erosion rate vs. density. Lines show optimized function values for each value of shear stress.

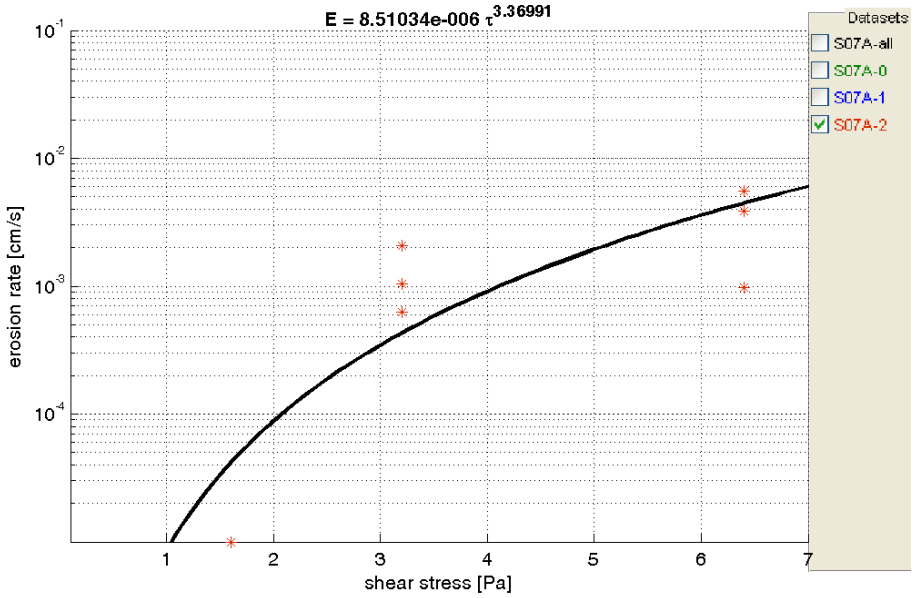


Figure B-31. Station 7A, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 7B

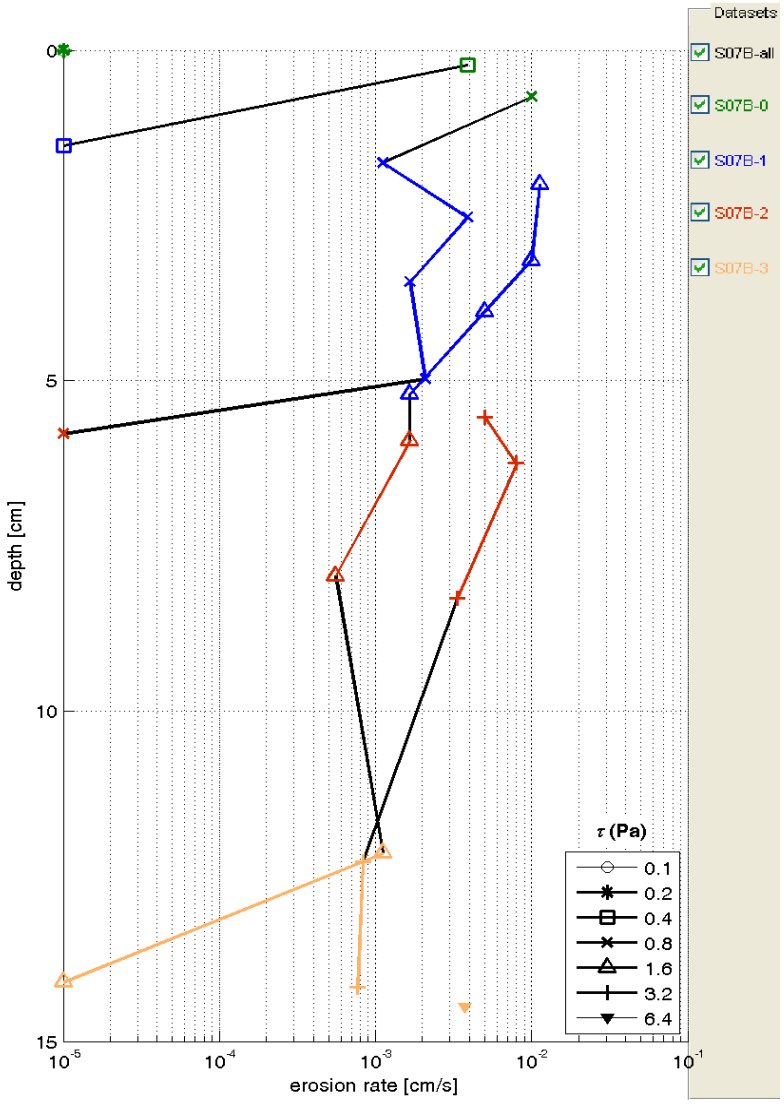


Figure B-32. Erosion rate versus depth and applied shear stress for Station 7B. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue), 2(red), and 3(orange) were determined based on density, grain size and erosion rate data.

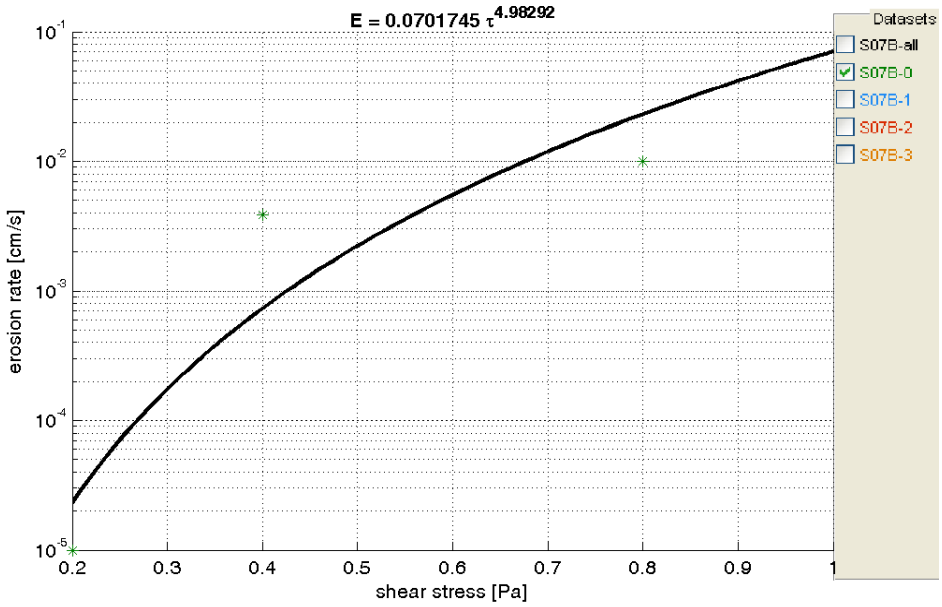


Figure B-33. Station 7B, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

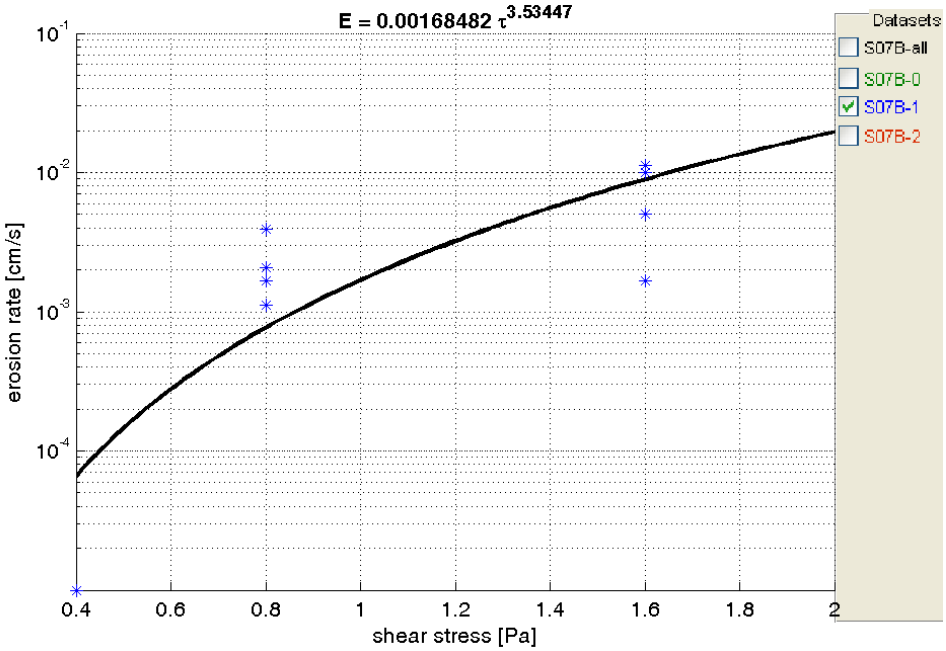


Figure B-34. Station 7B, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

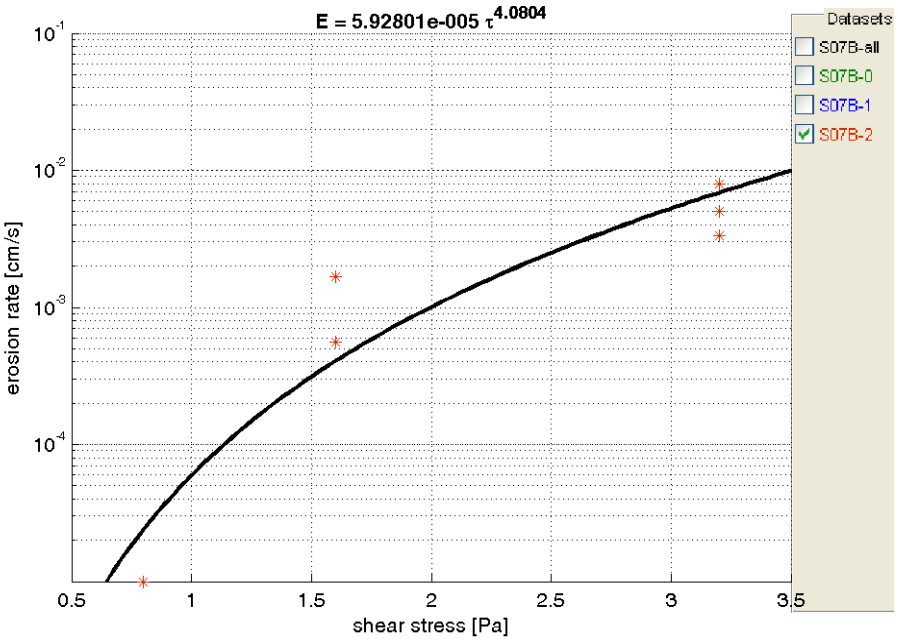


Figure B-35. Station 7B, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 8A

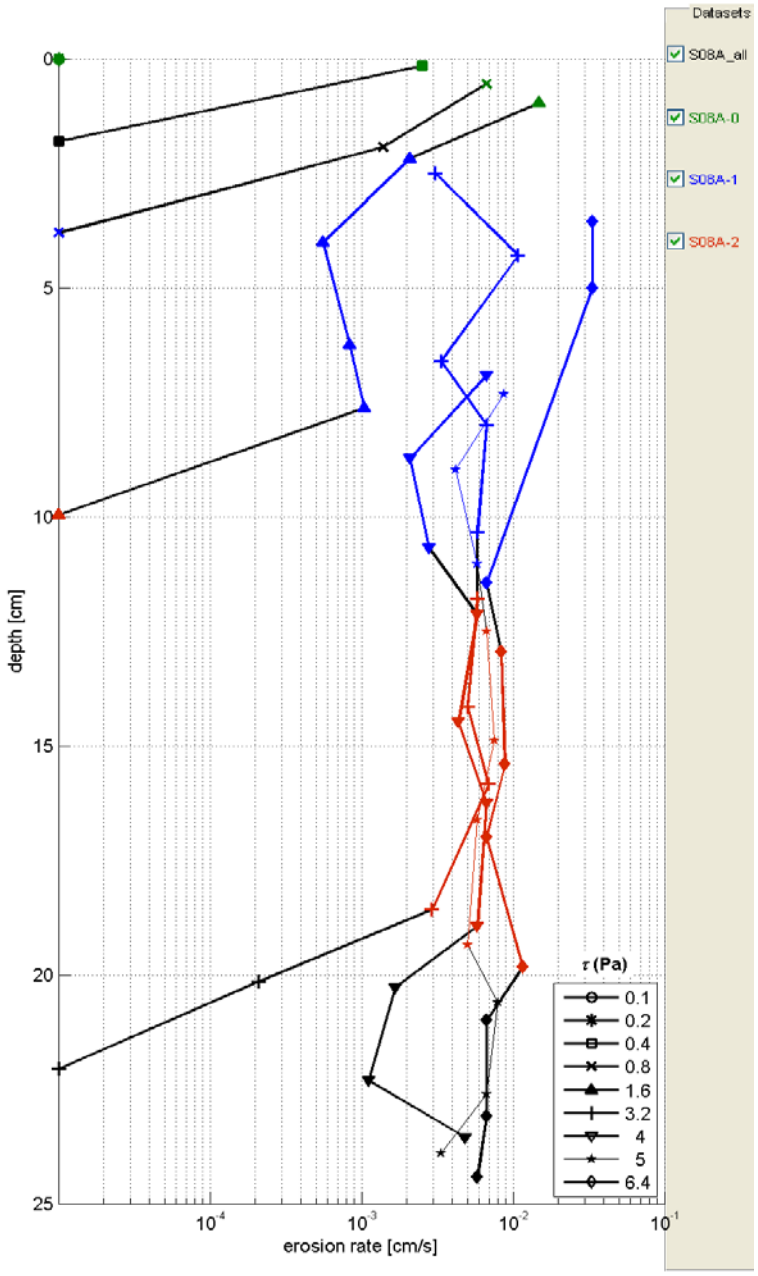


Figure B-36. Erosion rate versus depth and applied shear stress for Station 8A. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) and 2(red) were determined based on density, grain size and erosion rate data.

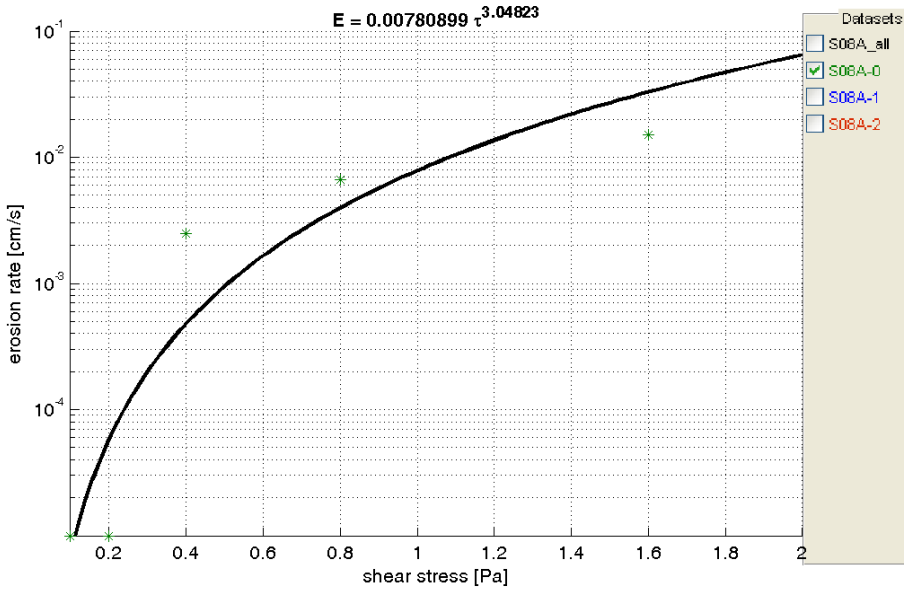


Figure B-37. Station 8A, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

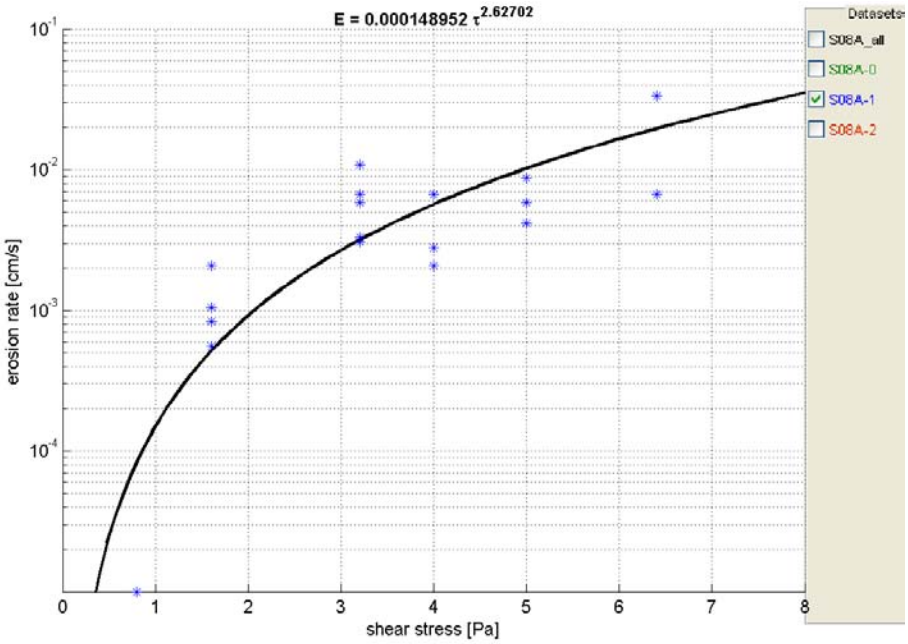


Figure B-38. Station 8A, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

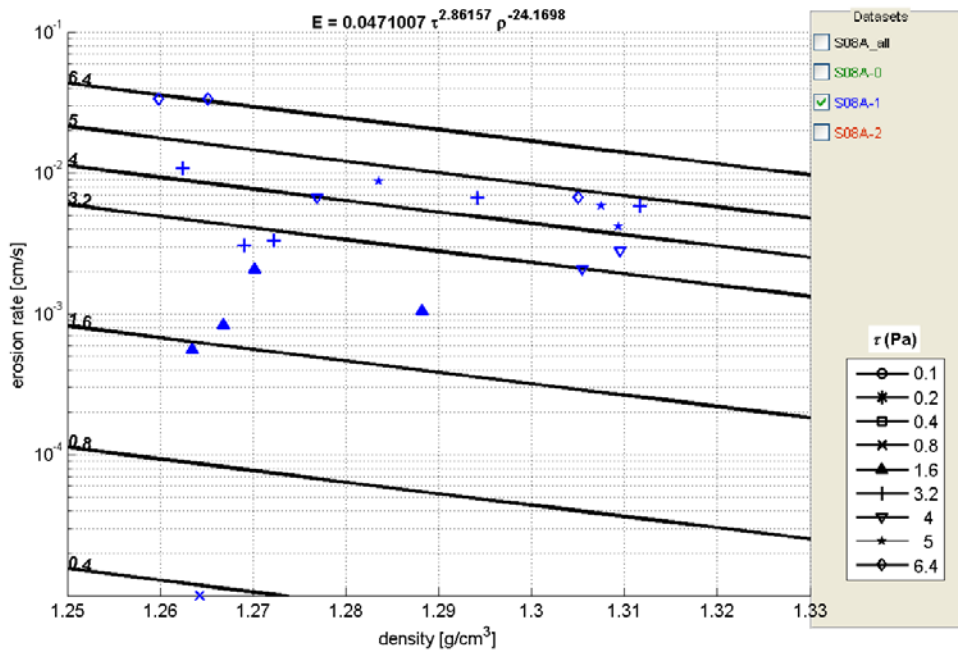


Figure B-39. Station 8A, Layer 1 erosion rate vs. density. Lines show optimized function values for each value of shear stress.

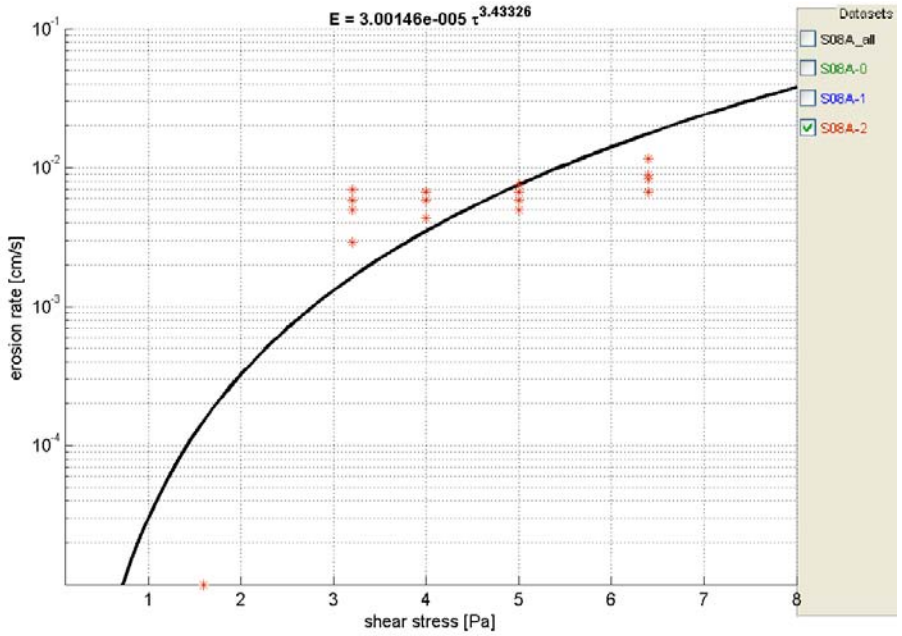


Figure B-40. Station 8A, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 8B

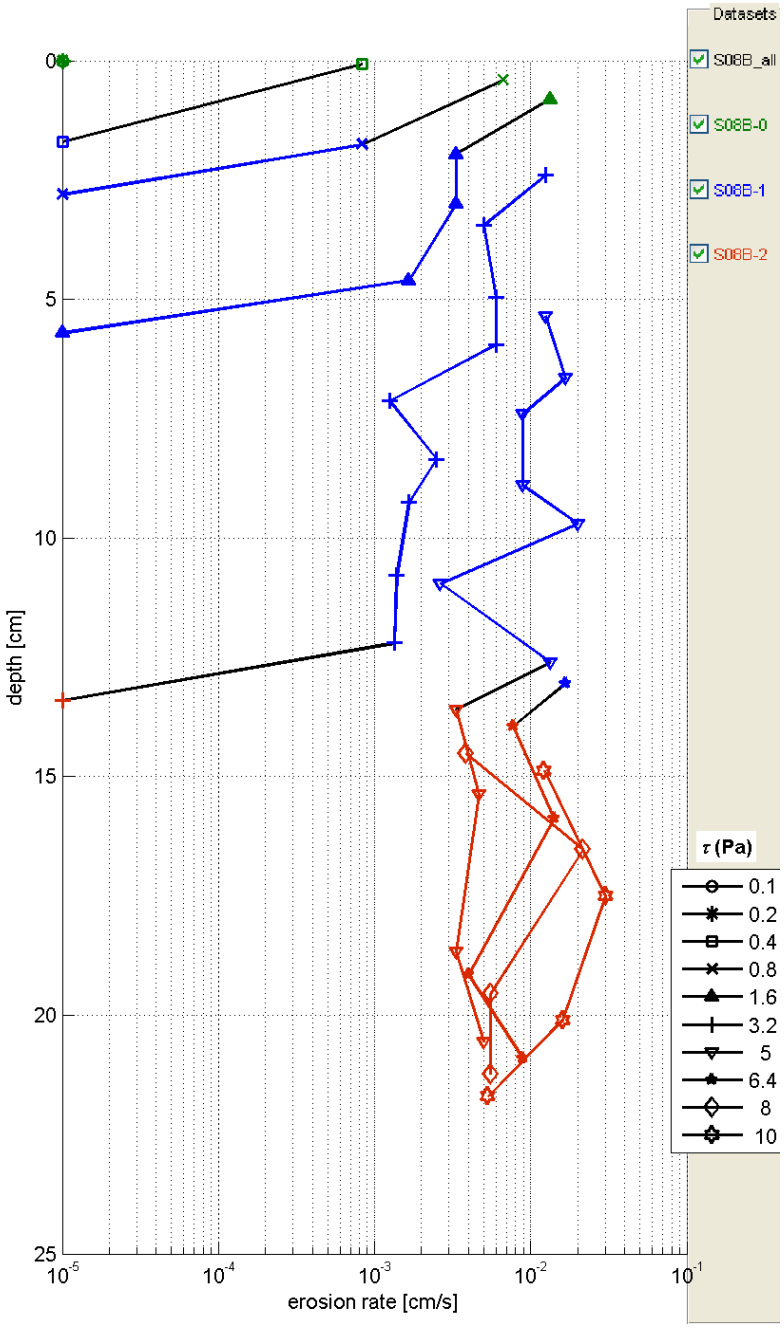


Figure B-41. Erosion rate versus depth and applied shear stress for Station 8B. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue) and 2(red) were determined based on density, grain size and erosion rate data.

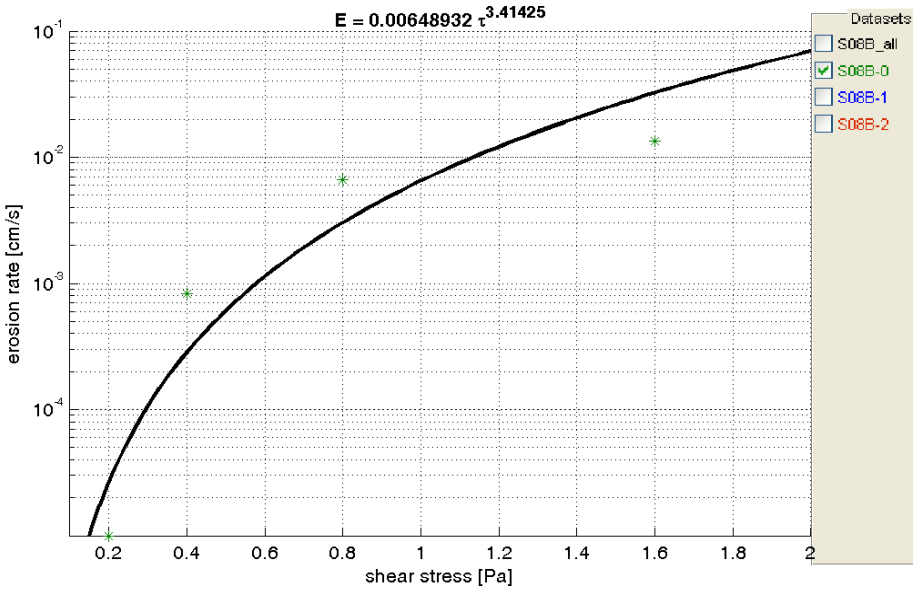


Figure B-42. Station 8B, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

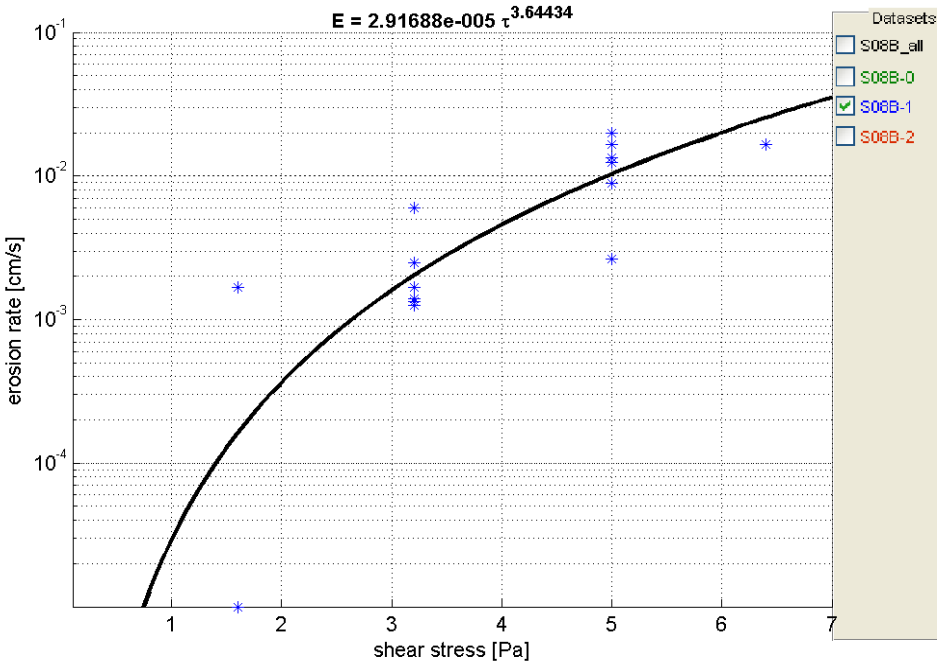


Figure B-43. Station 8B, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

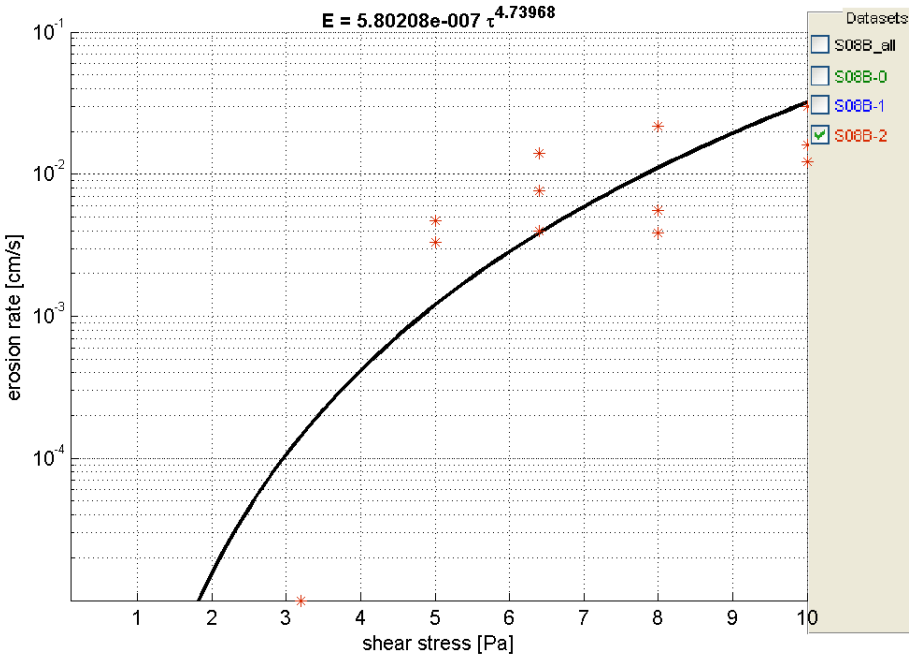


Figure B-44. Station 8B, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 9

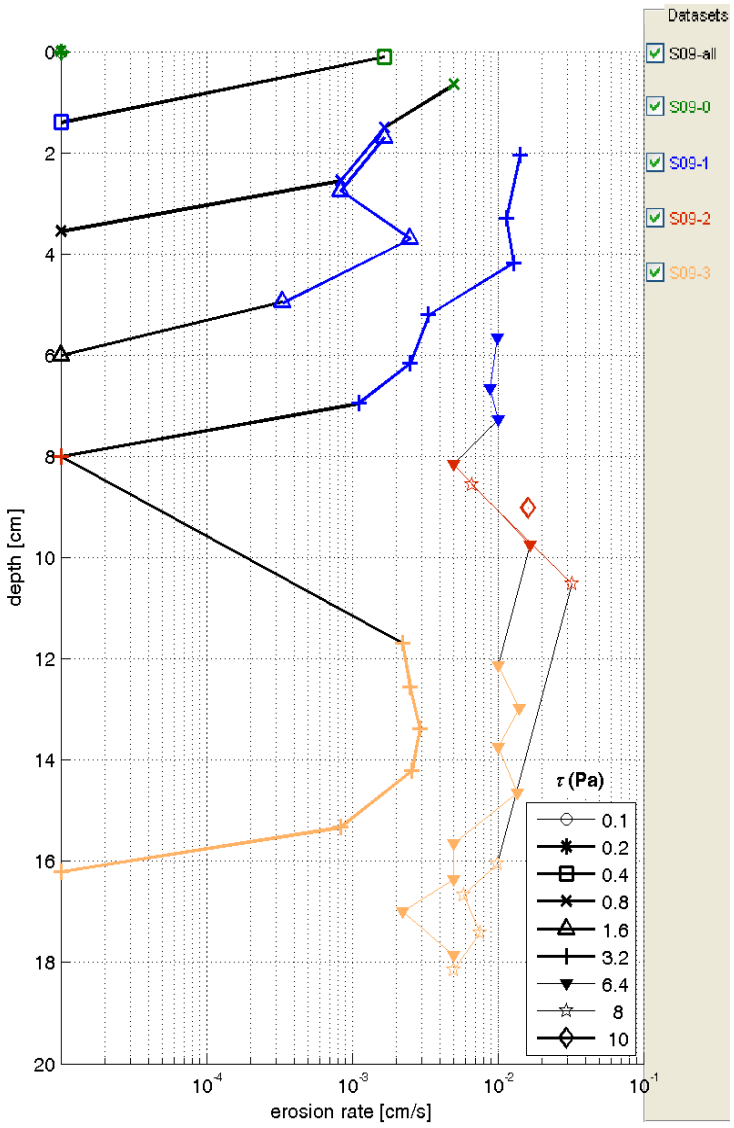


Figure B-45. Erosion rate versus depth and applied shear stress for Station 9. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue), 2(red), and 3(orange) were determined based on density, grain size and erosion rate data.

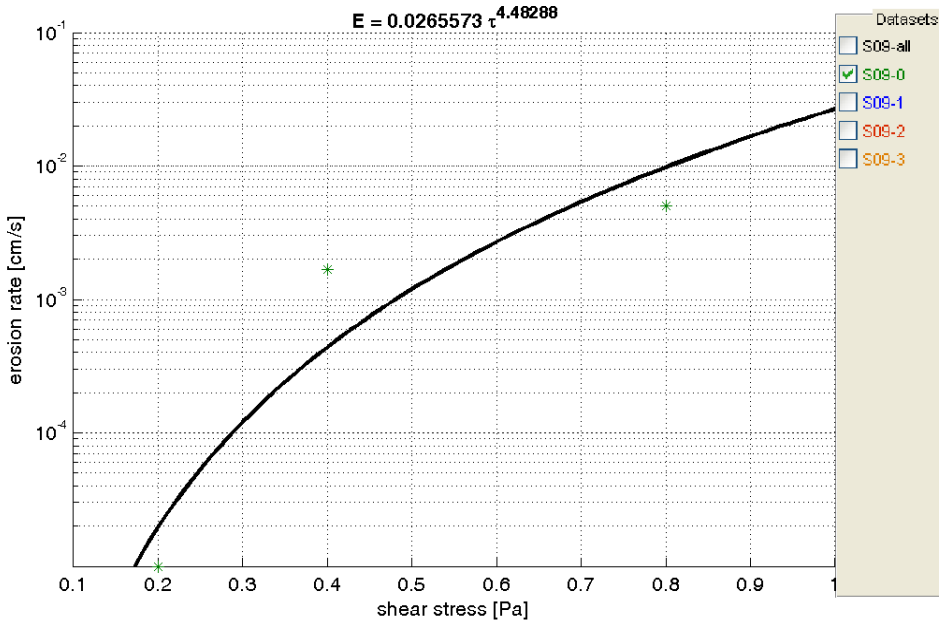


Figure B-46. Station 9, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

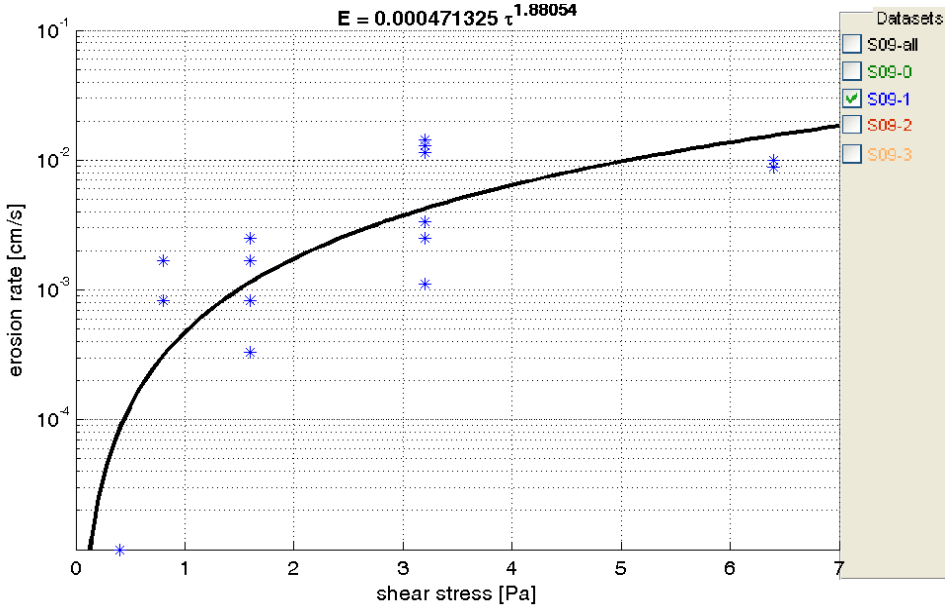


Figure B-47. Station 9, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

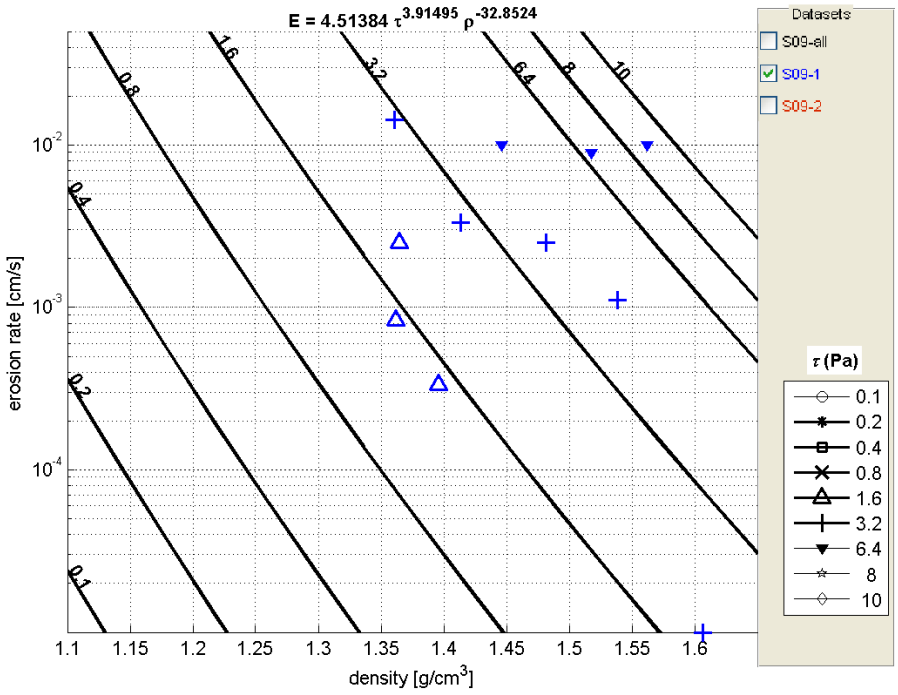


Figure B-48. Station 9, Layer 1 erosion rate vs. density. Lines show optimized function values for each value of shear stress.

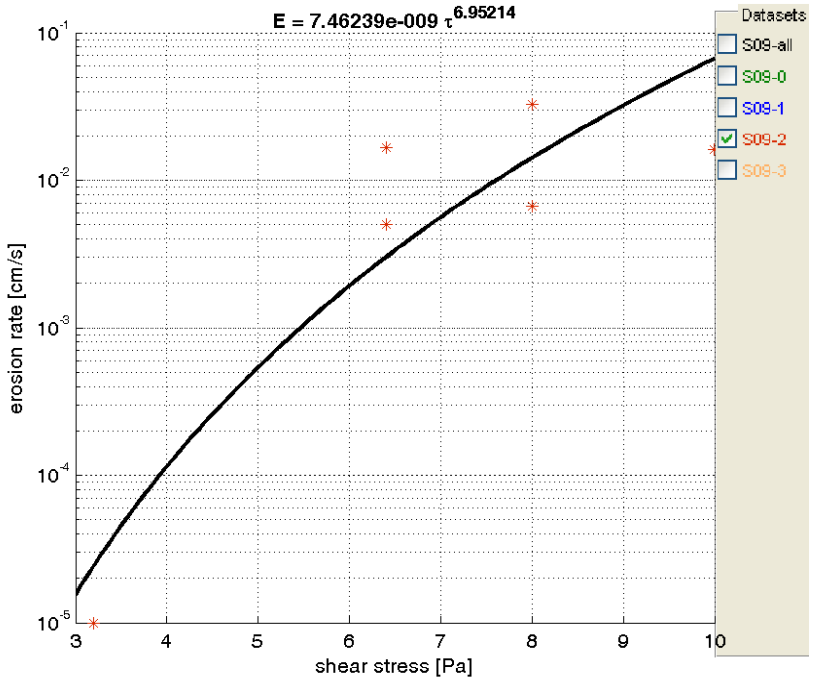


Figure B-49. Station 9, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

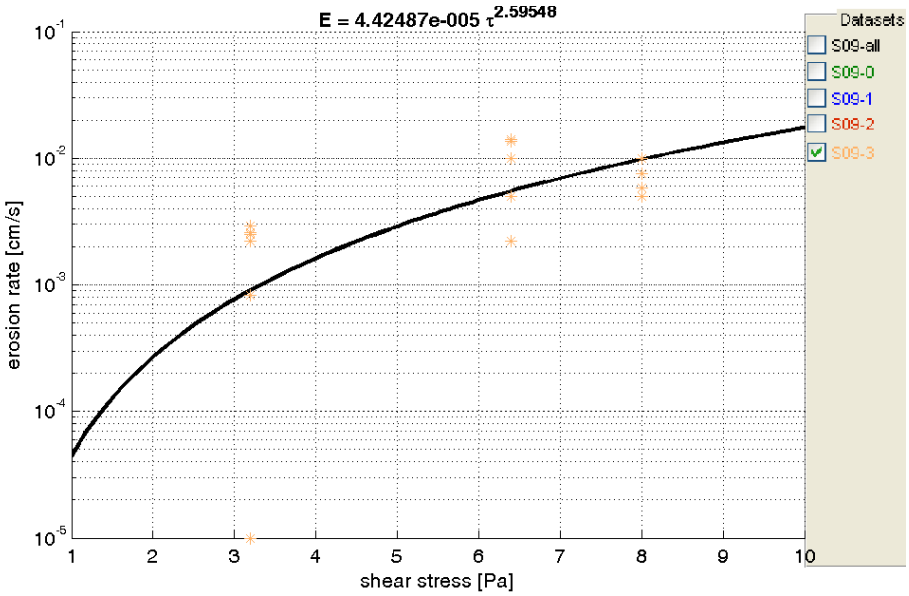


Figure B-50. Station 9, Layer 3 erosion rate vs. shear stress. Line shows best fit of $E = A \tau^n$ for data

Station 10

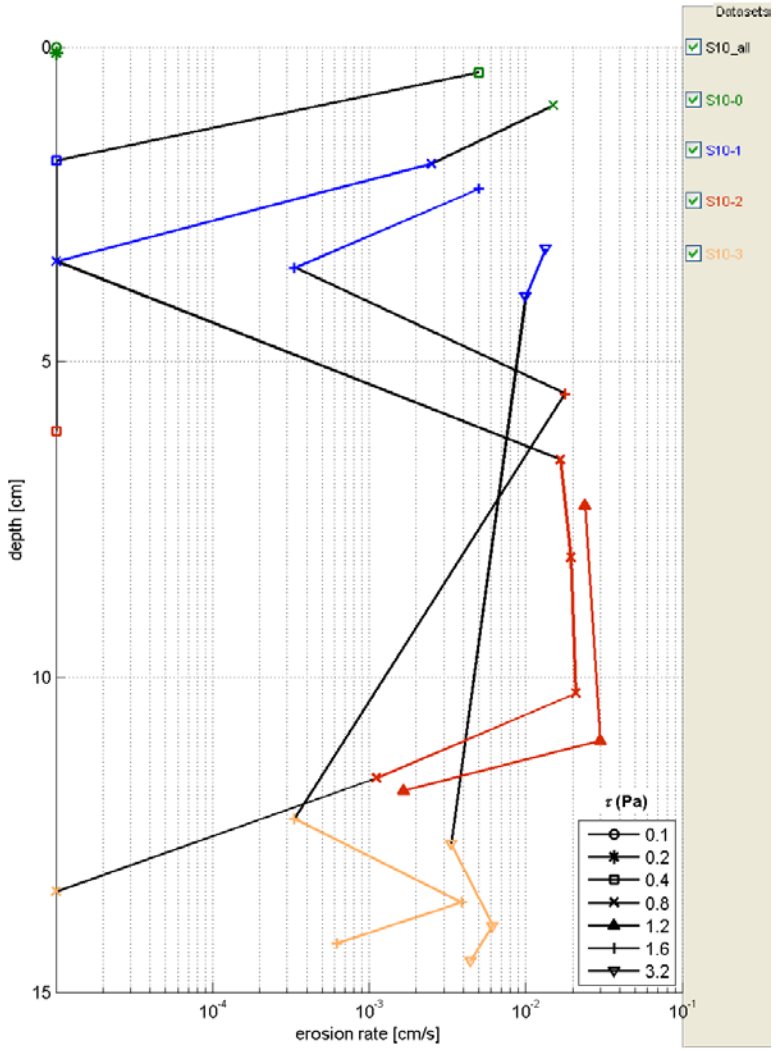


Figure B-51. Erosion rate versus depth and applied shear stress for Station 10. Layer 0 (green) is composed of surface material that was eroded in the first sequence of erosion tests. Layers 1(blue), 2(red), and 3(orange) were determined based on density, grain size and erosion rate data.

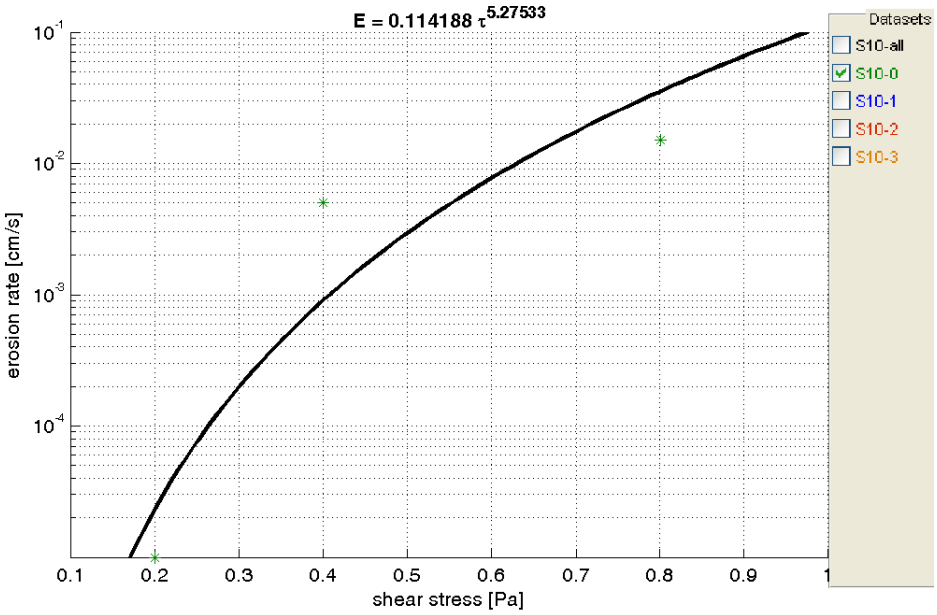


Figure B-52. Station 10, Layer 0 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

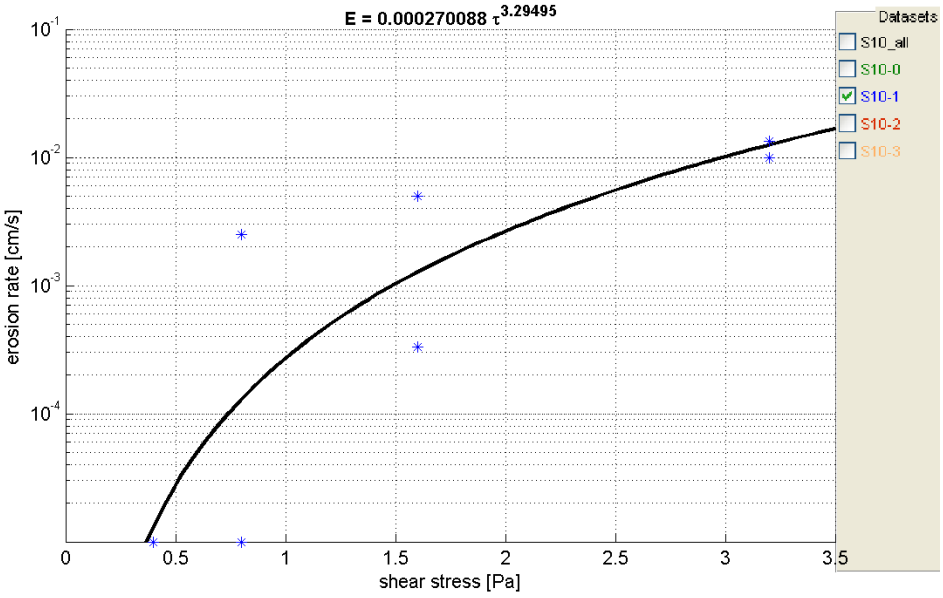


Figure B-53. Station 10, Layer 1 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

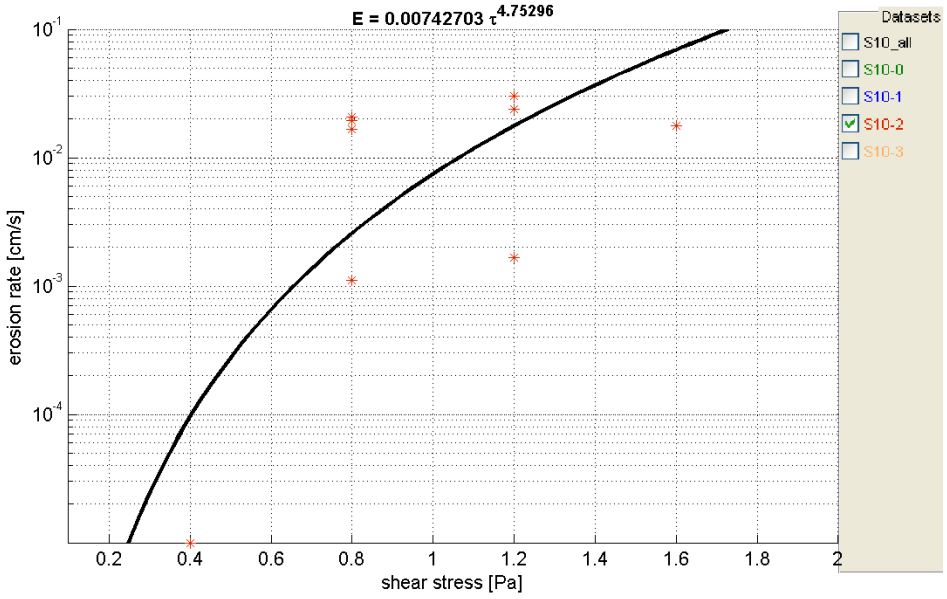


Figure B-54. Station 10, Layer 2 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

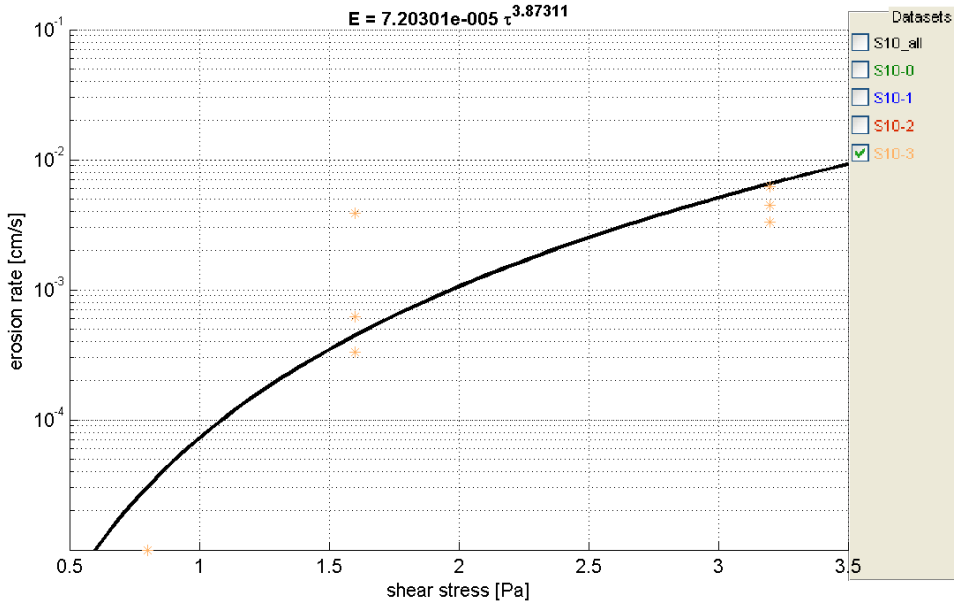


Figure B-55. Station 10, Layer 3 erosion rate vs. shear stress. Line shows best fit of $E = A\ \tau^n$ for data

Appendix C. Sedflume Erosion Rate Parameterization Analysis

This Appendix contains results of Sedflume erosion rate parameterization analysis. Erosion rate data were evaluated for relationships between erosion rate and applied shear stress. Table C-1 shows the groupings that were identified within the data collected in Coddington Cove. Figures C-1 through C-4 show the linear fit of $E = A \tau^n$ to the data for each grouping.

Table C-1. Cohesive Sediment Erosion Parameterization for SEDZLJ						
Group	Layers	Depth (cm)	τ_{cr} (Pa)	τ_{max} (Pa)	A	n
A	Layer 0 from all stations	0 - 1.5	0.2	1.6	7.8E-03	1.6
B	S3-1, S4B-1, S5-1	1.5 - 7.5	0.4	6.4	1.2E-03	1.3
C	S7A-1, S8A-1, S8B-1, S9-1	1.5 - 13	0.4	6.4	7.8E-04	1.4
D	S8A-2, S8B-2	12 - 20	1.6	10.0	1.3E-03	1.0
E	S3-2, S5-2, S7B-2	5.5 - 12.5	0.8	6.4	6.4E-04	1.6
F	S2-3, S3-3, S3-4, S7A-2, S7B-3	7 - 21	0.8	12.0	3.2E-04	1.0
G	S9-2, S9-3, S10-3	8 - 18	0.8	10.0	5.0E-04	1.4

Group A

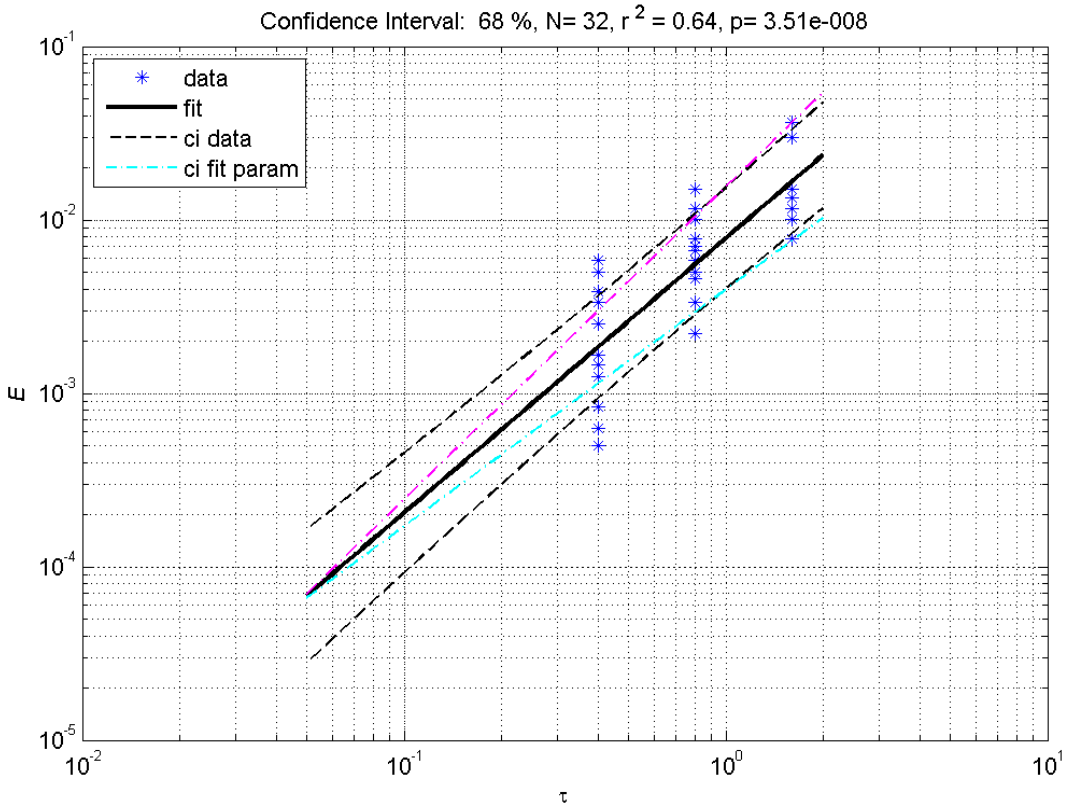


Figure C-1. Erosion rate versus applied shear stress for Group A. The solid black line represents best fit for $E = A\ \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group B

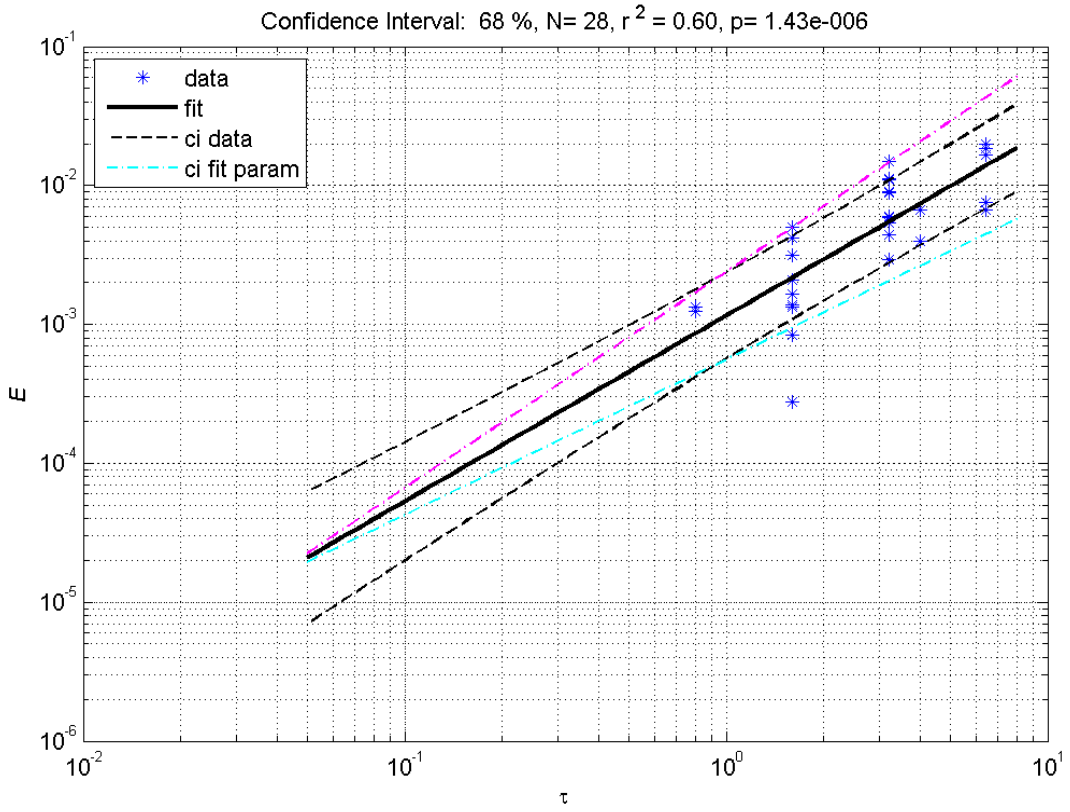


Figure C-2. Erosion rate versus applied shear stress for Group B. The solid black line represents best fit for $E = A\ \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group C

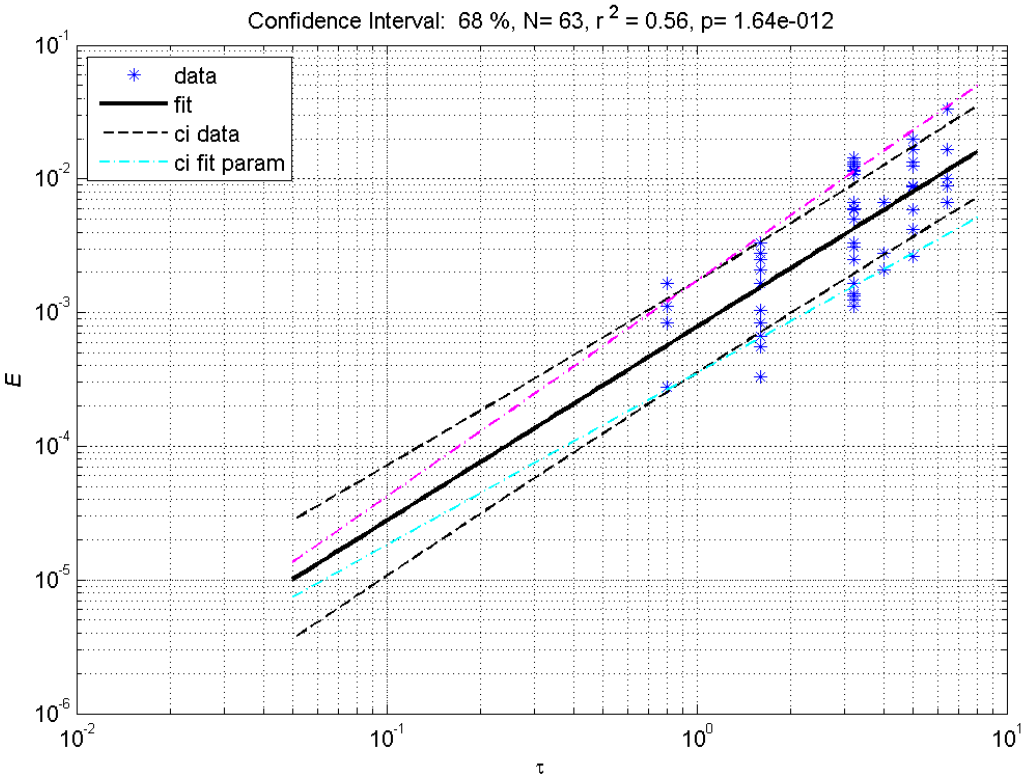


Figure C-2. Erosion rate versus applied shear stress for Group C. The solid black line represents best fit for $E = A \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group D

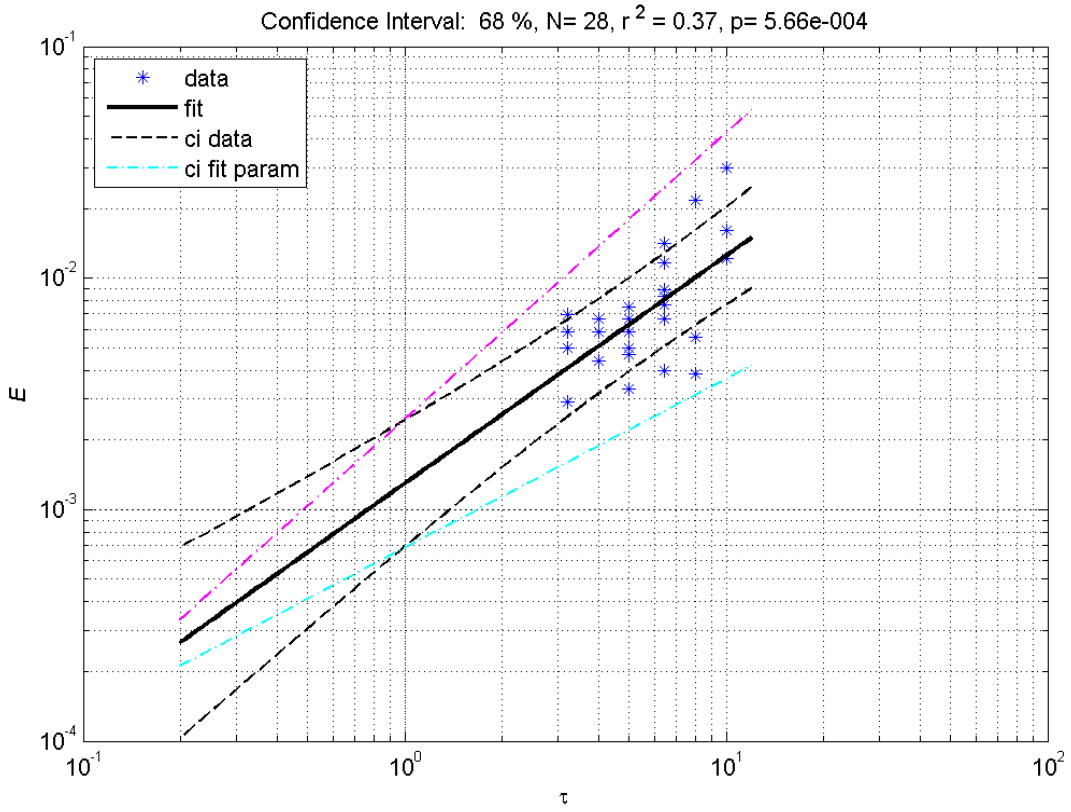


Figure C-3. Erosion rate versus applied shear stress for Group D. The solid black line represents best fit for $E = A\ \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group E

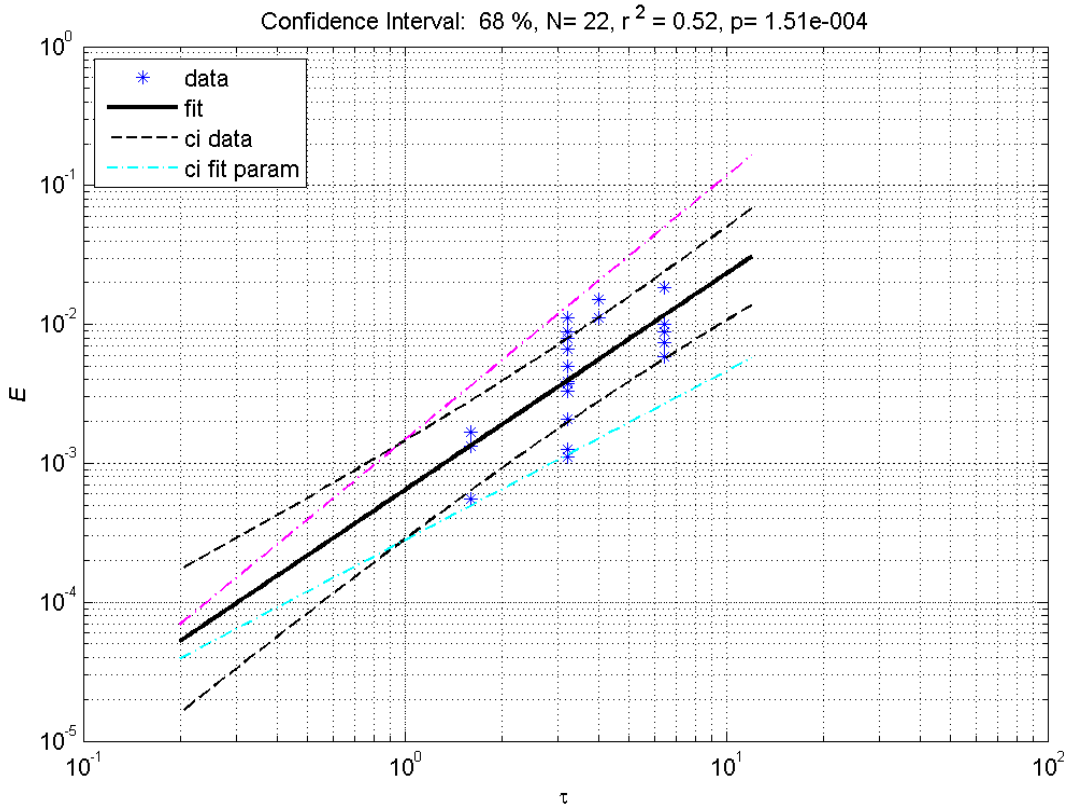


Figure C-4. Erosion rate versus applied shear stress for Group E. The solid black line represents best fit for $E = A \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group F

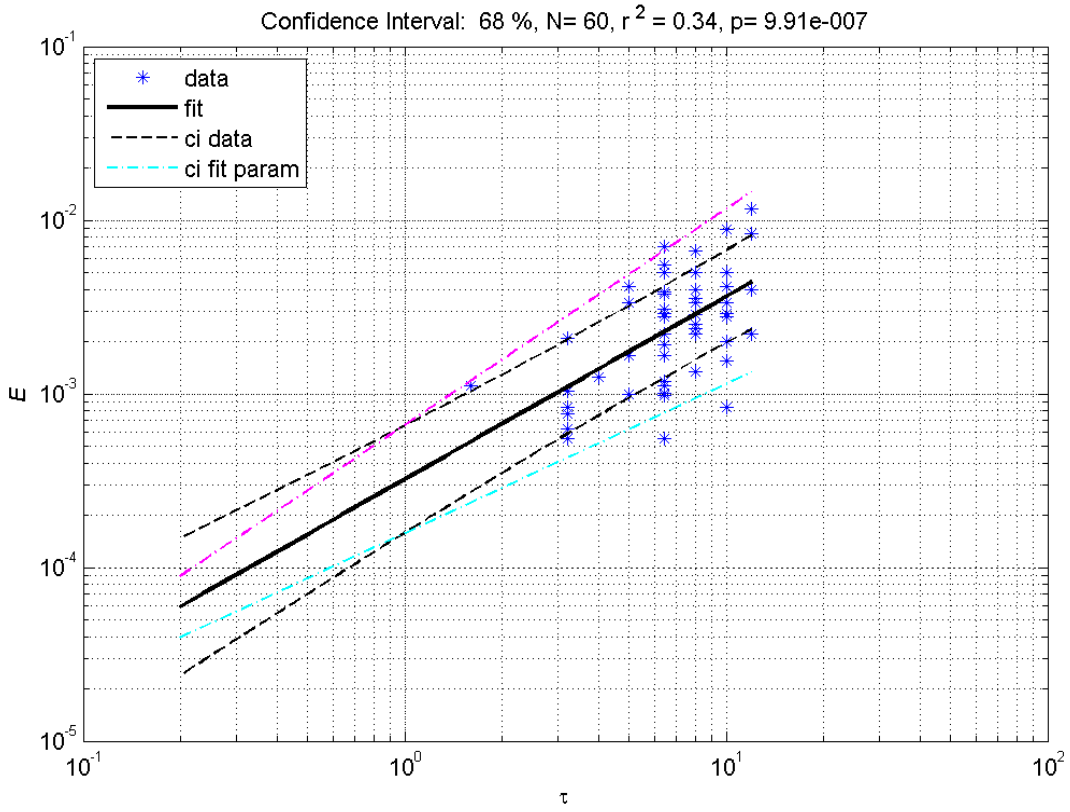


Figure C-4. Erosion rate versus applied shear stress for Group F. The solid black line represents best fit for $E = A \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

Group G

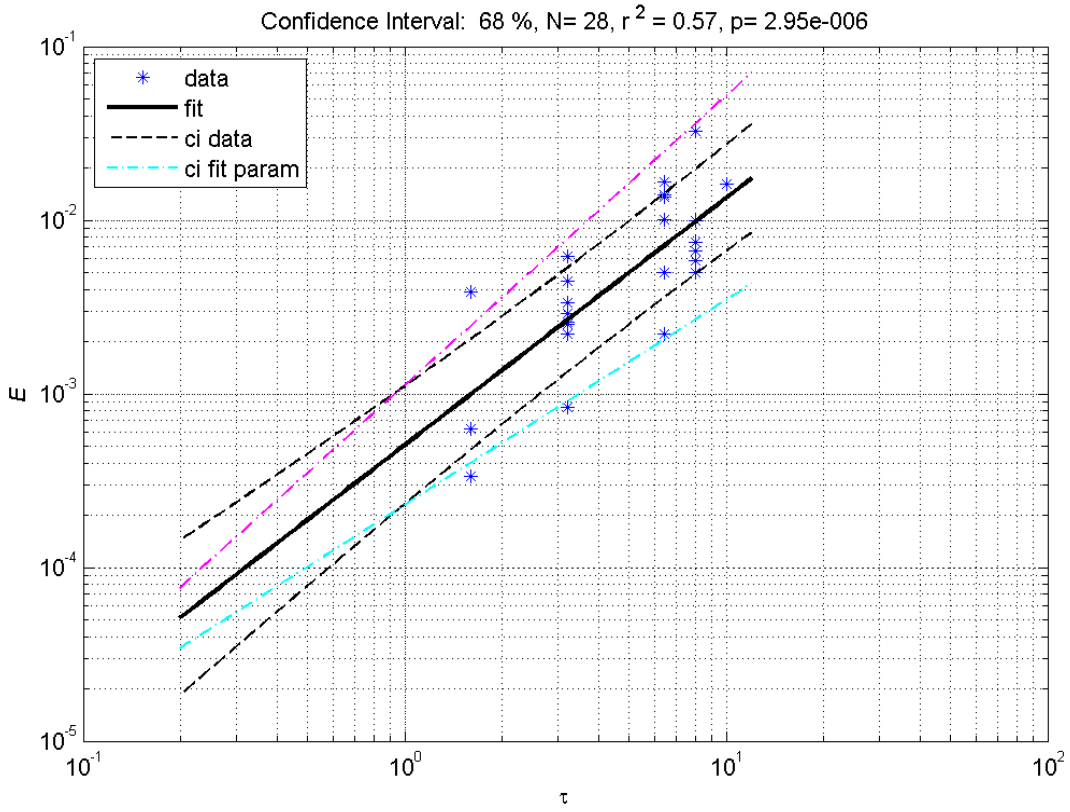


Figure C-4. Erosion rate versus applied shear stress for Group G. The solid black line represents best fit for $E = A \tau^n$ to the data. The dashed lines represent the confidence interval at 68% ($\pm\sigma$) of the data (black) and the fit parameters (pink and blue).

C4 PB ACCUMULATION RATES OF SEDIMENT CORES REPORT – FEBRUARY 2012

Report on ^{210}Pb Accumulation Rates of Sediment Cores from Derecktor Shipyard Offshore Supplemental Sediment Investigation

by

Mead A. Allison, PhD
Independent Consultant**

14 February 2012

**** permanent position:**

Senior Research Scientist and Associate Director
Institute for Geophysics
University of Texas at Austin

INTRODUCTION/METHODS

The sample results were provided pre-analyzed by a commercial laboratory for total ^{210}Pb activity by alpha spectrometry. No information was made available to examine sample preparation or analytical procedures. The alpha method of conducting ^{210}Pb geochronology yields a total activity, which is a combination of particle-reactive ^{210}Pb that is adsorbed onto particle surfaces prior to their deposition at the accumulating (harbor) site. This is "excess" Pb and tends to be preferentially attached to clay mineral particles (clay and fine silt size classes) due to their cation exchange properties. A portion of the total measured activity is also "supported" Pb derived from *in situ* decay of ^{238}U and its daughters within the crystalline lattice structure of mineral grains. It is the downcore decay of the excess component that is utilized to calculate sediment accumulation rates by this method. Since supported level is not measured directly in the alpha method (as opposed to the gamma spectrometry method where the ^{226}Ra parent is measured to derive the supported Pb activities) it must be inferred and subtracted from the measured total activities provided. Normally this is done by coring and analyzing ^{210}Pb activity to depths where sediments are of such a great age that the vast majority of the excess component (only added at the sediment surface) above supported levels (continually produced at depth in the sediments) is gone. This is normally ~5 half-lives, which is about 3% of the original signal. Given the 22.3 y half-life of ^{210}Pb, this means analyzing sediments of greater than 100-125 year age. A series of activities measured in sediments greater than this age will give an activity where total = supported ^{210}Pb levels. In this harbor setting, many of the core records show a surficial harbor mud is replaced at depth with sandier pre-harbor deposition sediments and the surficial layer total activities are still declining at the contact (base of harbor layer is still less than 100-125 years in age). Two cores (GP07 and GP09) showed relatively low activities at the base of the sampled interval and no evidence of a contact with the pre-harbor mud layer from the core logs. The average of the basal samples from these two cores was used to derive a supported level of 0.25 dpm/g that was then applied to all the cores for calculations of sediment accumulation rate.

Sample data was provided as depths in inches and activities in picocuries/gram of sediment. These values were converted to metric depths (cm) and activities to decays per minute (dpm) per gram of sediment for convenience. Hence, results are reported in cm/y of accumulation.

RESULTS

The sediment accumulation rates calculated for each of the 10 core sites is listed in Table 1. Statistical errors and r^2 values are based on the best fit linear regression applied to the excess activity data points utilized in the calculation (shown in plots for each core below). Given that sample porosities were unavailable for these intervals, it was not possible to convert this linear sedimentation rate to a mass accumulation rate ($g/cm^2/y$). Variation in porosity of the sampled interval from site-to-site is a source of variability that impacts the inter-comparability of core accumulation over the entire field area. What follows is a description of the process and assumptions utilized for each of the core sites.

Table 1. Sediment accumulation rate from ^{210}Pb geochronology

Site Core #	R^2	Sediment Accumulation Rate (cm/y)	Rate Error (+/- 1 sd)	Comments
GP01	0.99	0.08	0.003	Rate represents a maximum
GP02	0.95	0.75	0.15	
GP03	0.89	0.18	0.09	Rate represents a maximum
GP04	0.56	2.05	3.51	Marginal correlation but rate "high"
GP05	0.74	0.35	0.60	Poor relationship, unreliable rate
GP06	0.58	2.23	3.37	Marginal correlation but rate "high"
GP07	0.98	0.45	0.05	Excellent profile
GP08	0.85	1.43	0.61	
GP09	0.95	0.14	0.04	Rate represents a maximum
GP10	0.66	0.27	0.15	Variable activity impacted correlation

GP01

The core description form provided with the samples indicates at least 4 major layers of distinct grain size in the sampled interval. As ^{210}Pb is preferentially adsorbed on clay mineral grains (the finest mud fraction), coarser grains are a dilutant in activity (add mass but no excess activity). Hence, core sites with variable grain size downcore often show variable excess ^{210}Pb—as this core does. The sample at 21 cm (third from top) had no excess activity (see Fig. 1a and b). To derive a sediment accumulation rate, it was necessary to assume this interval is the base of excess Pb present, and force the curve to a profile that includes this as the basal point. This yields a maximum rate of accumulation since the base of excess can actually exist anywhere in the interval between this point and the nearest one above. Higher values of total activity below this interval (Fig. 1a) are assumed to be a distinct grain size sediment with different supported ^{210}Pb activity.

GP02

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval but does not reach supported levels. Excess Pb activity decreases steadily downcore, leading to a reliable accumulation rate.

GP03

The core description form provided with the samples indicates at least 2 major layers of distinct grain size in the sampled interval. The sample at 44 cm (third from top) had no excess activity (see Fig. 3a and b). To derive a sediment accumulation rate, it was necessary to assume this interval is the base of excess Pb present, and force the curve to a profile that includes this as the basal point. This method yields a maximum rate of accumulation since the base of excess can actually exist anywhere in the interval between this point and the nearest one above. Higher values of total activity below this interval (Fig. 3a) are assumed to be a distinct grain size sediment with different supported ^{210}Pb activity.

GP04

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval but does not reach supported levels. Excess Pb activity also decreases in general downcore, but the correlation is statistically marginal (r^2=0.56) given only four intervals were analyzed. Another possible reason for variability in excess activity downcore at sites with high accumulation (cm/y) is non-steady state input of activities on particles deposited at the harbor floor. This can be produced by seasonal variability in ^{210}Pb fallout from the atmosphere but is normally "lost in the scatter" in settings where the accumulation rates are less than ~1 cm year.

GP05

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval but does not reach supported levels. Excess Pb activity also decreases in general downcore, but the correlation is statistically marginal (r^2=0.56) given only four intervals are sampled. In order to yield a usable accumulation rate, it was necessary to omit the lowest interval, or it would have given a near infinite accumulation, hence, the results are not quantitative without further intervals being analyzed.

GP06

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval but does not reach supported levels. Excess Pb activity also decreases in general downcore, but the correlation is statistically marginal (r^2=0.58) given only four intervals are sampled. Another possible reason for variability in excess activity downcore at sites with high accumulation (cm/y) is non-steady state input of activities on particles deposited at the harbor floor. This can be produced by seasonal variability in ^{210}Pb fallout from the atmosphere but is normally "lost in the scatter" in settings where the accumulation rates are less than ~1 cm year.

GP07

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval, and the low total activities at the base suggest it is close to supported levels. Excess Pb activity decreases steadily downcore, leading to a reliable accumulation rate.

GP08

The core description form provided with the samples indicates at least 2 major layers of distinct grain size in the sampled interval. The two deepest intervals were below the core log indicator of a sandier layer composition, hence they were discarded and a rate calculated from the upper four

intervals. Excess Pb activity decreases steadily downcore, leading to a relatively reliable accumulation rate, albeit with significant error.

GP09

The core description form provided with the samples indicates this is relatively homogenous harbor mud to the base of the sampled interval, and the low total activities at the base suggest it is close to supported levels. To derive a sediment accumulation rate, it was necessary to assume the third interval is the base of excess Pb present, and force the curve to a profile that includes this as the basal point. This yields a maximum rate of accumulation since the base of excess can actually exist anywhere in the interval between this point and the nearest one above.

GP10

The core description form provided with the samples indicates at least 2 major layers of distinct grain size in the sampled interval. The sample at 55 cm (second from bottom) had no excess activity (see Fig. 3a and b). To derive a sediment accumulation rate, it was necessary to assume this interval is the base of excess Pb present, and force the curve to a profile that includes this as the basal point. This yields a maximum rate of accumulation since the base of excess can actually exist anywhere in the interval between this point and the nearest one above.

HARBOR SEDIMENTATION REGIME

While definitive conclusions cannot be made about the sedimentation trends in the study area because of the impact of dredging and ship-induced resuspension, it is clear that inshore (protected) areas tend to have high accumulation rates (e.g., greater than 0.6 cm/y; GP4, 6, 8, 9 and 10). Inshore areas exposed to wave fetch, and hence to bottom resuspension tend to be lower (e.g., GP1). Sites GP3, 5 and 7 directly under large ship anchorages display a variable rate from site-to-site (0.2-1 cm/y), likely due to the combination of human influences on sedimentation rates.

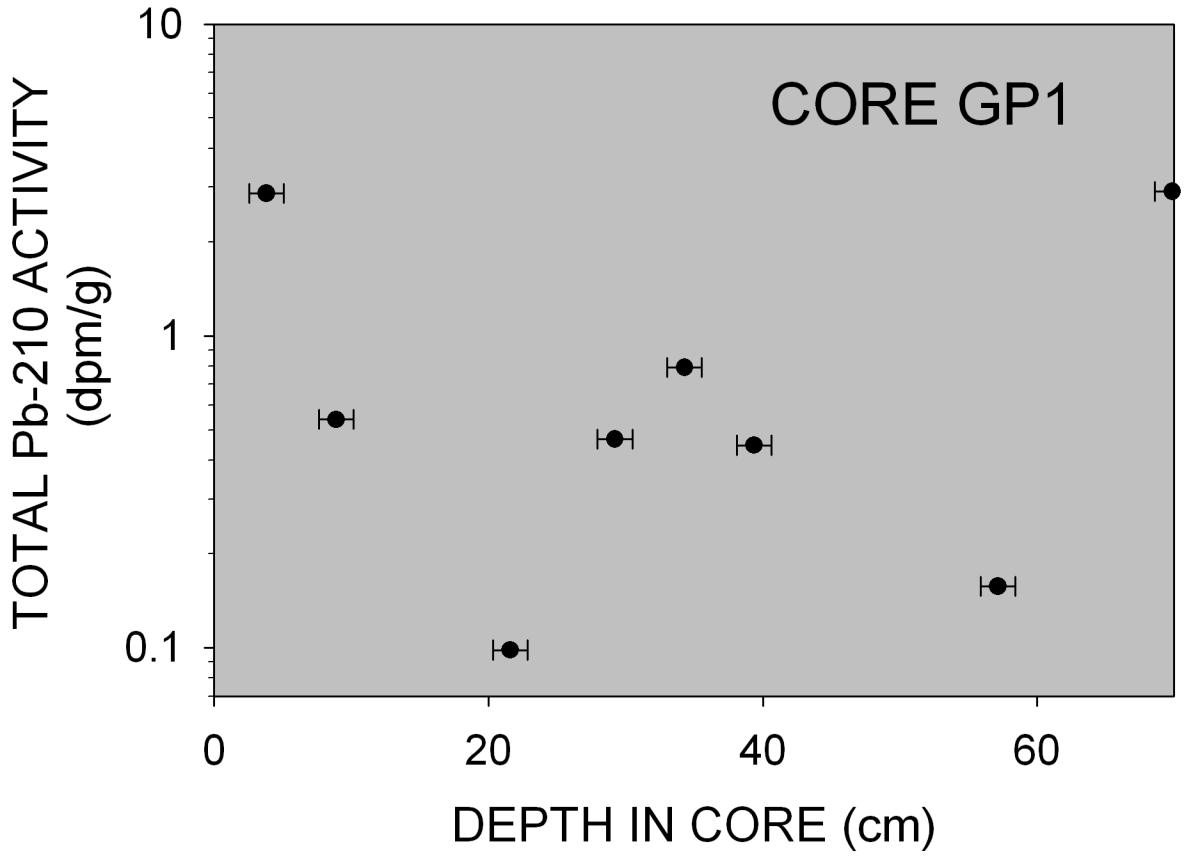


Figure 1a. Total ^{210}Pb activity downcore.

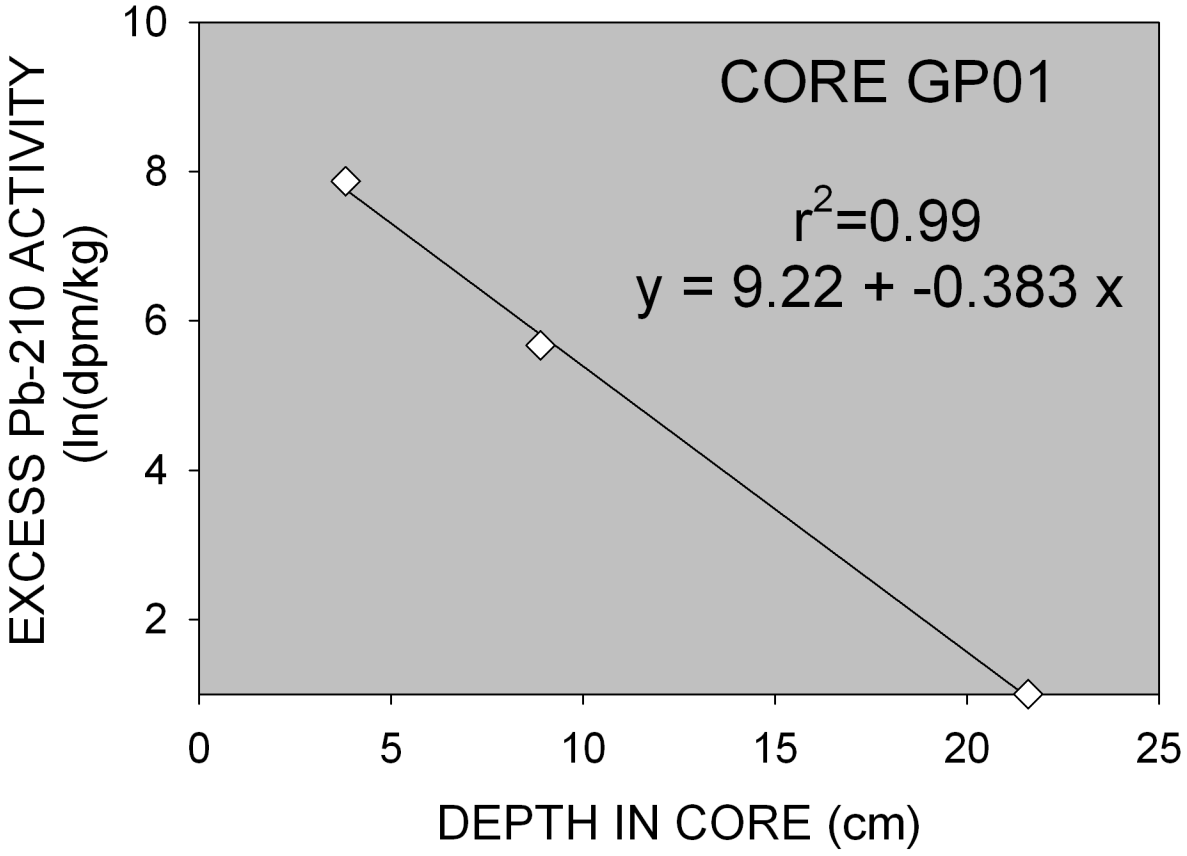


Figure 1b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

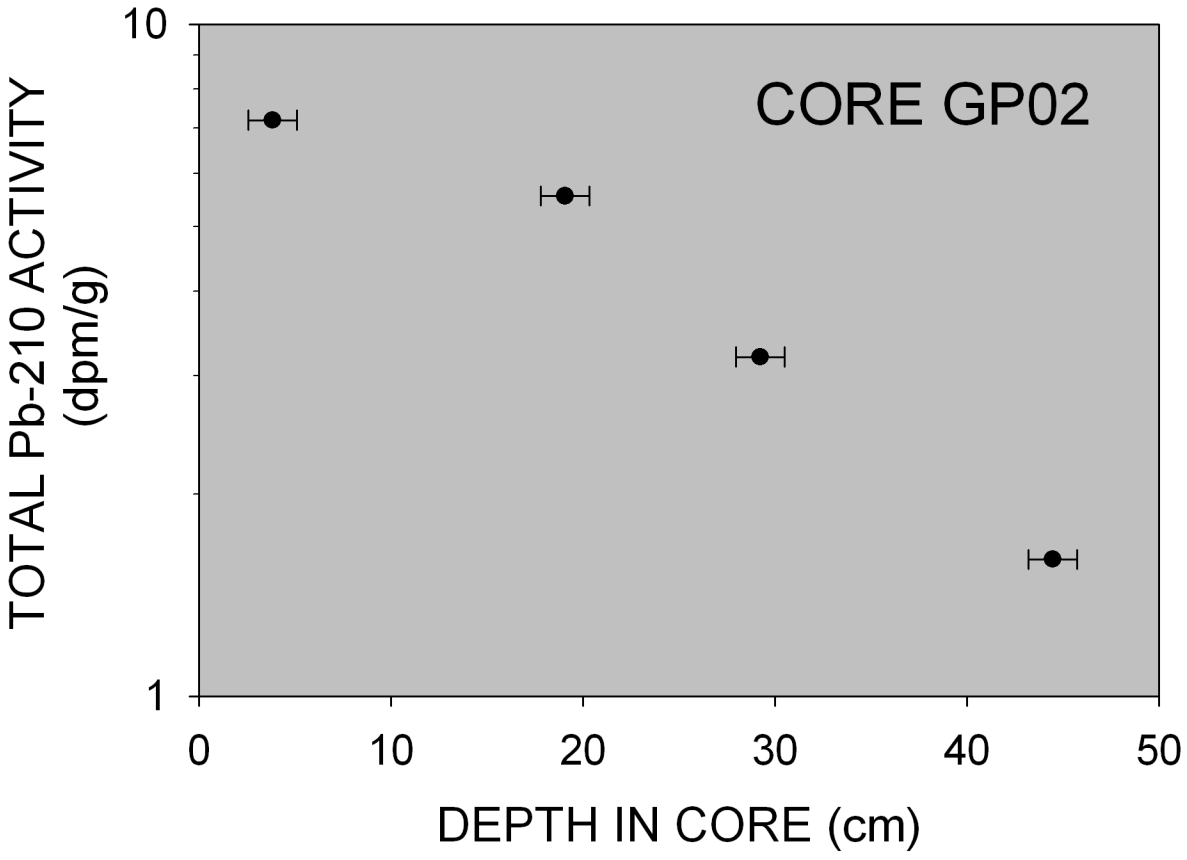


Figure 2a. Total ^{210}Pb activity downcore.

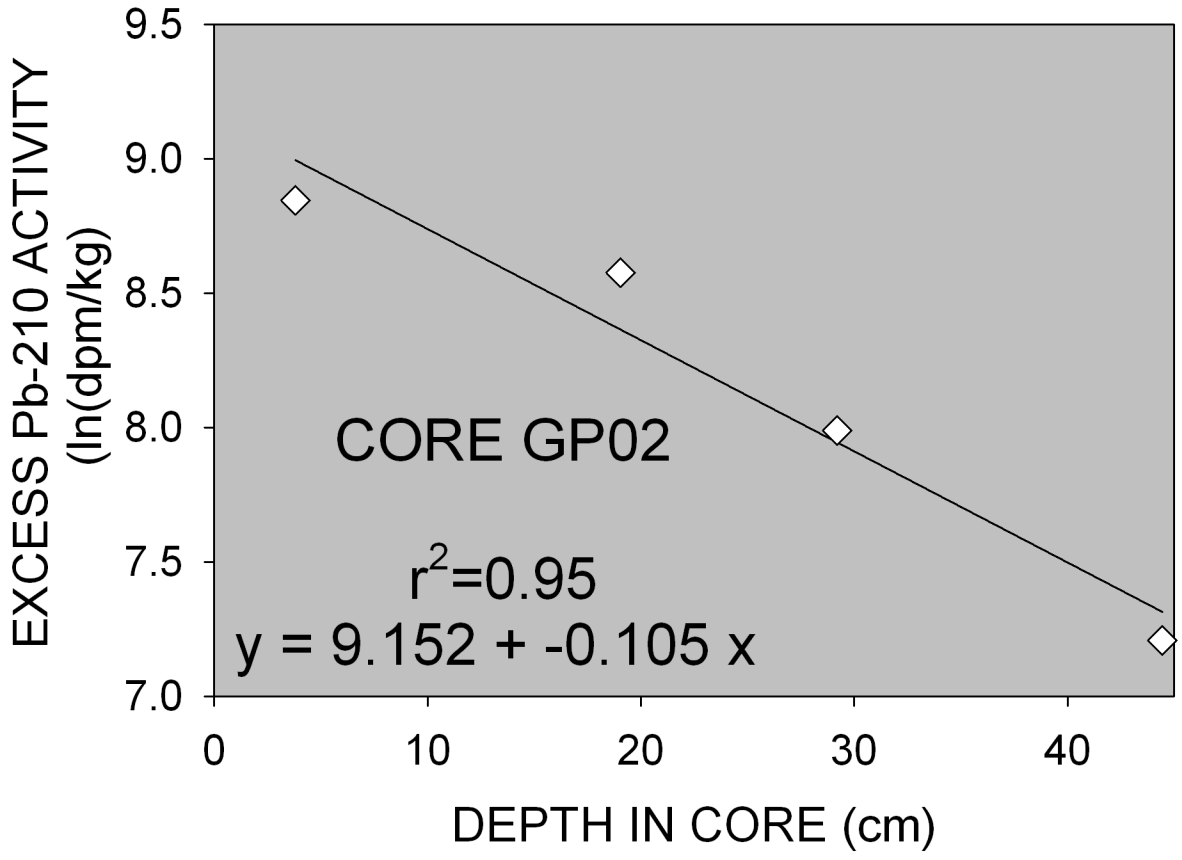


Figure 2b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

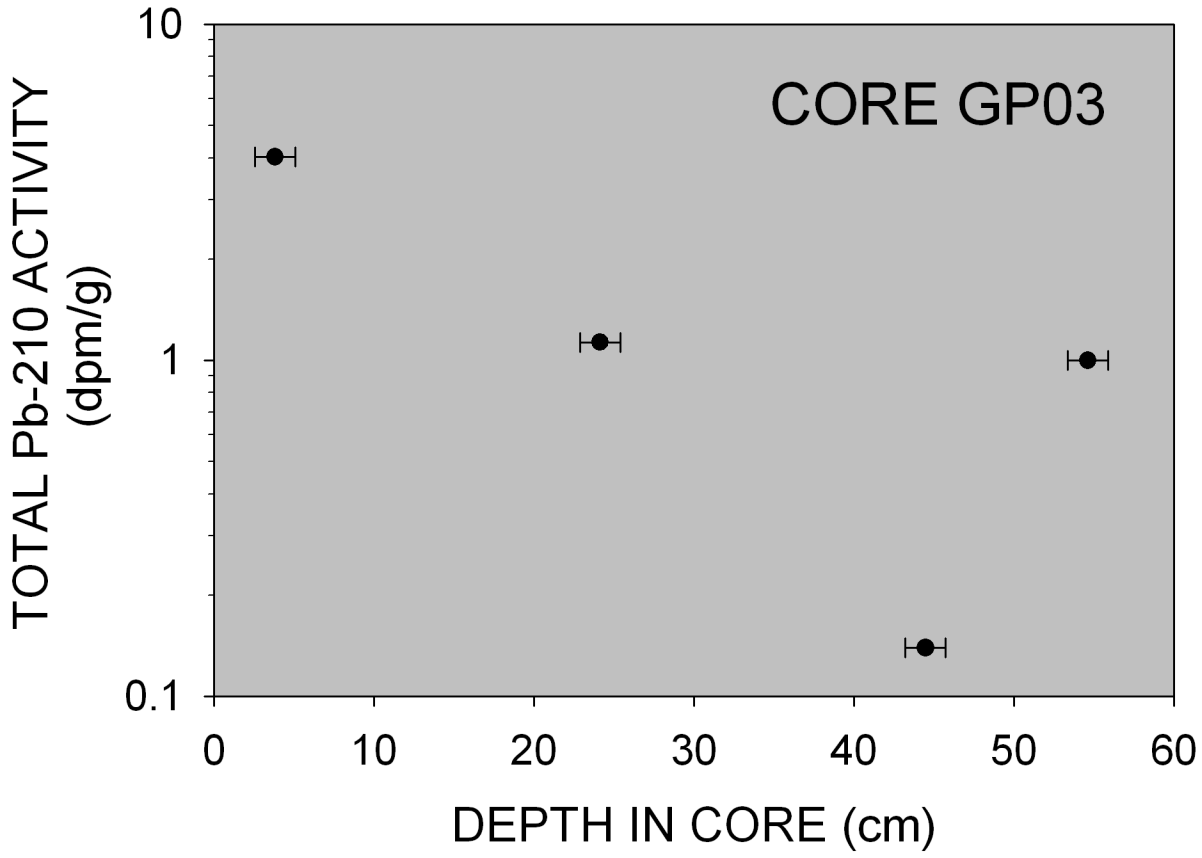


Figure 3a. Total ^{210}Pb activity downcore.

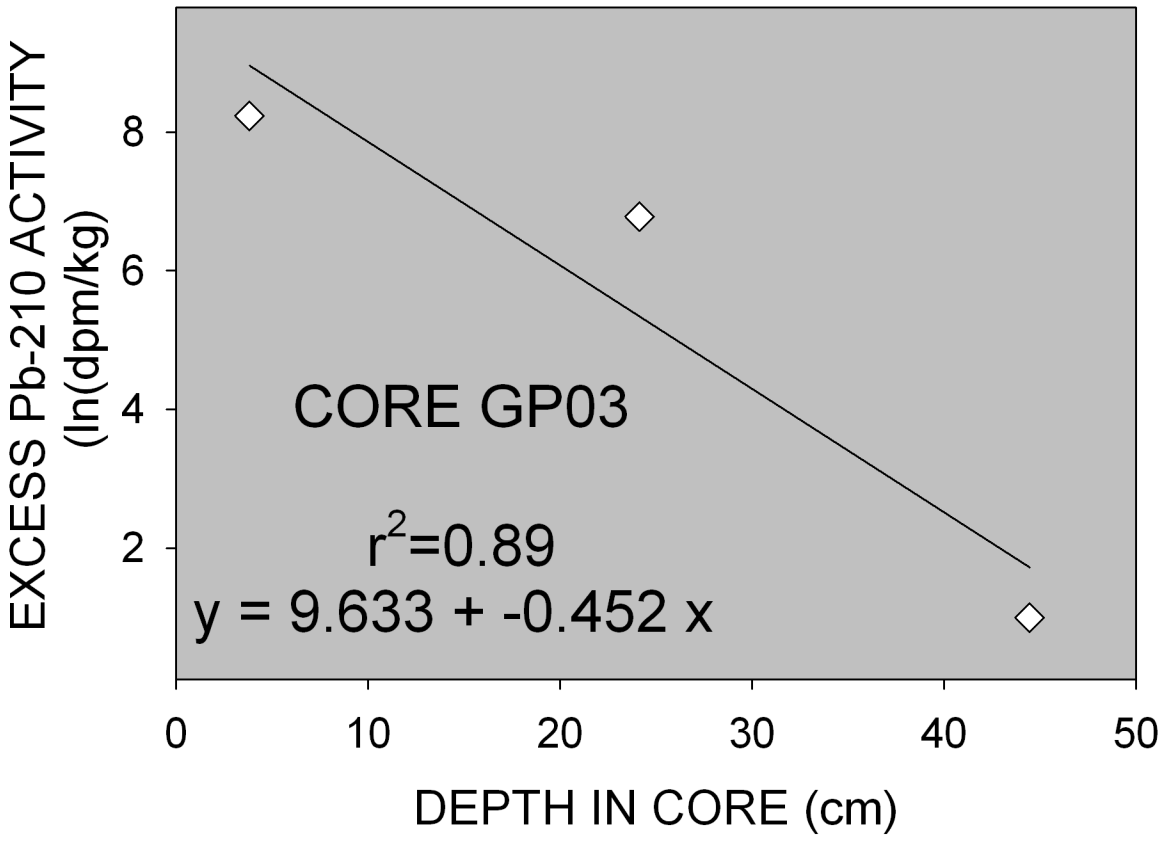


Figure 3b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

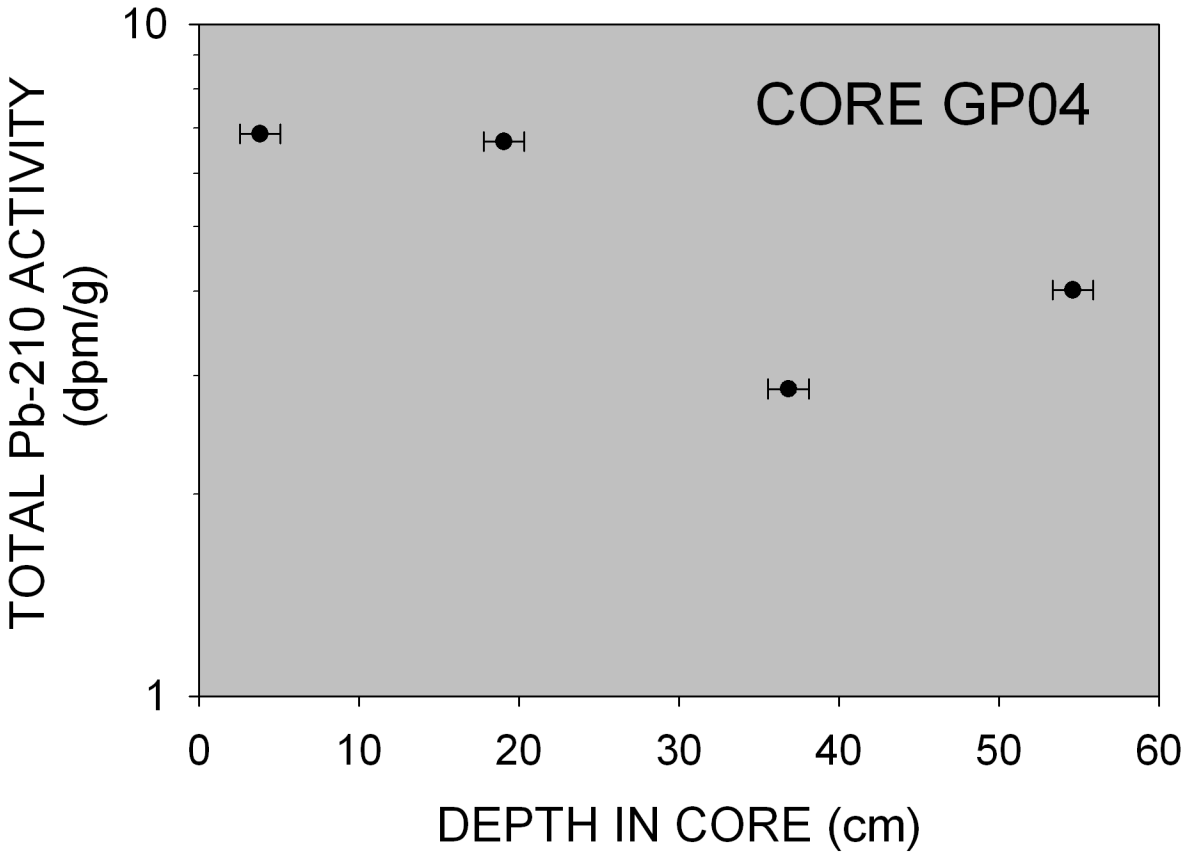


Figure 4a. Total ^{210}Pb activity downcore.

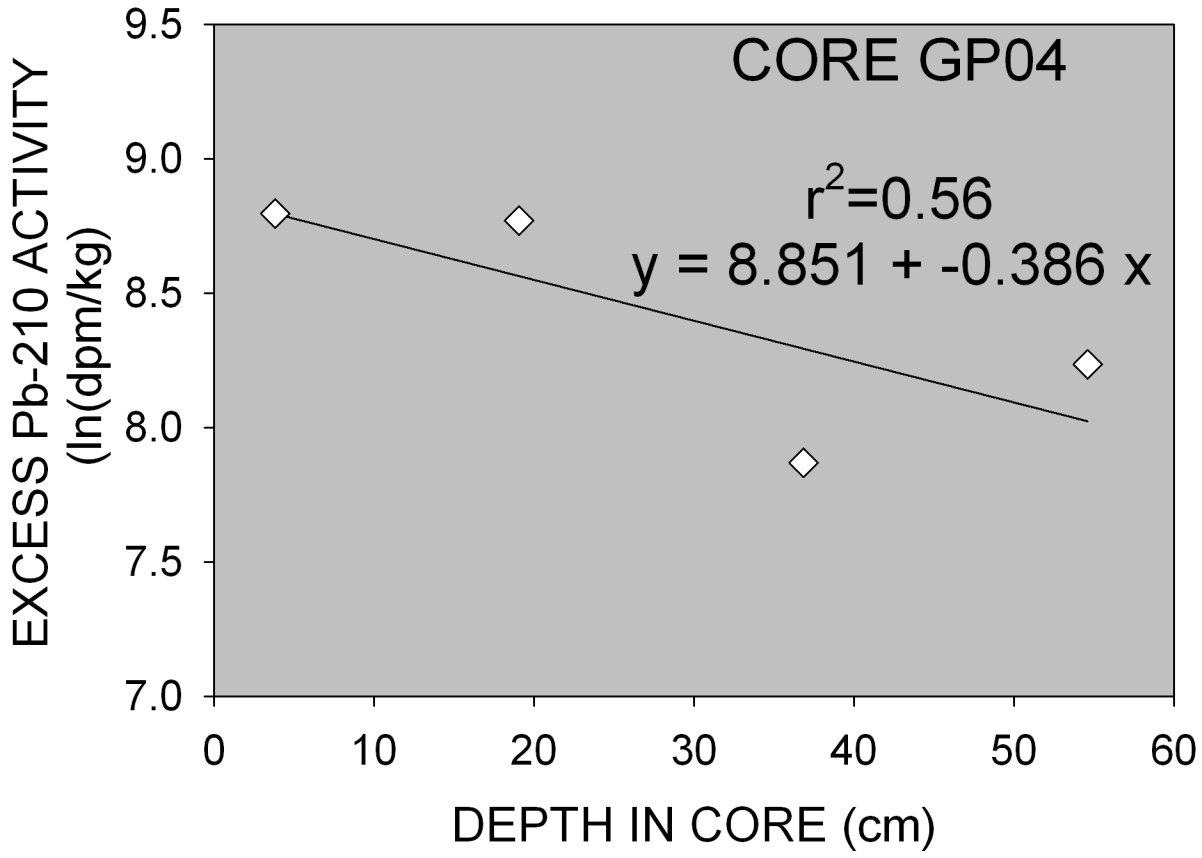


Figure 4b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

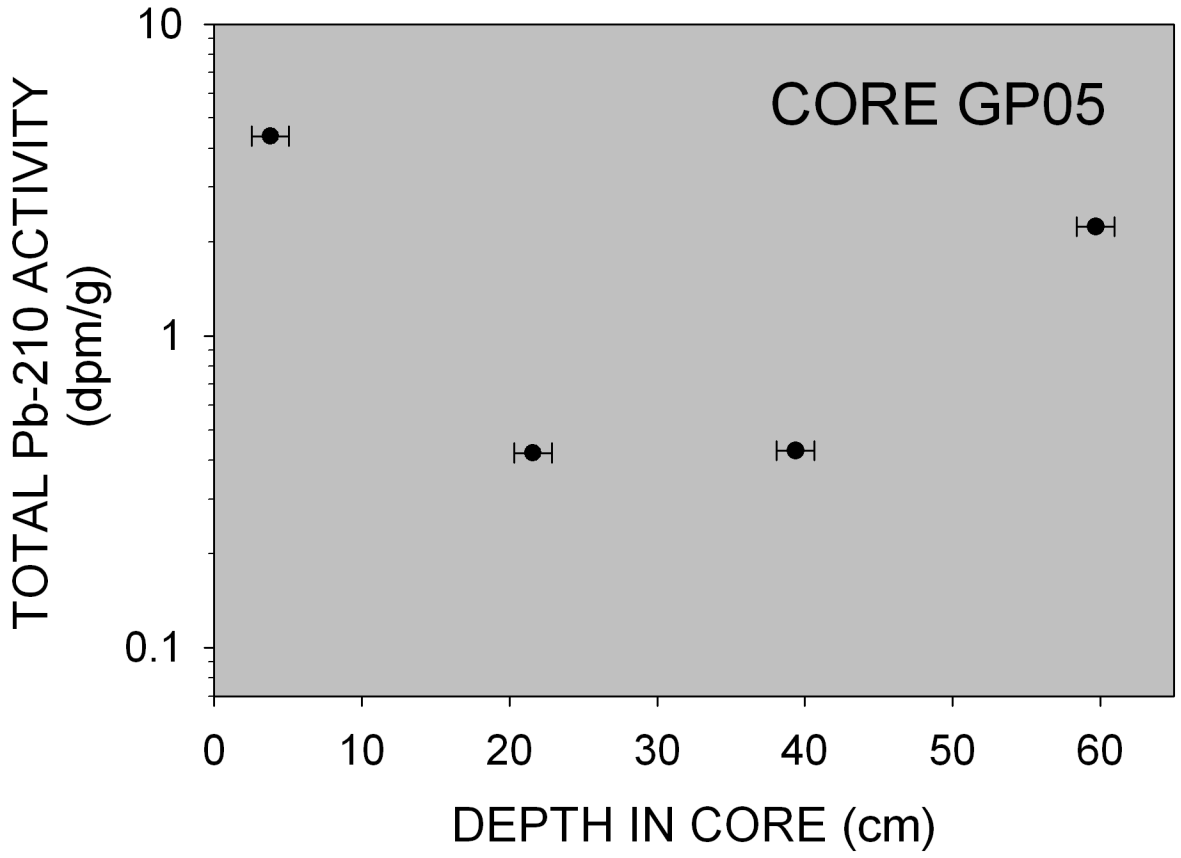


Figure 5a. Total ^{210}Pb activity downcore.

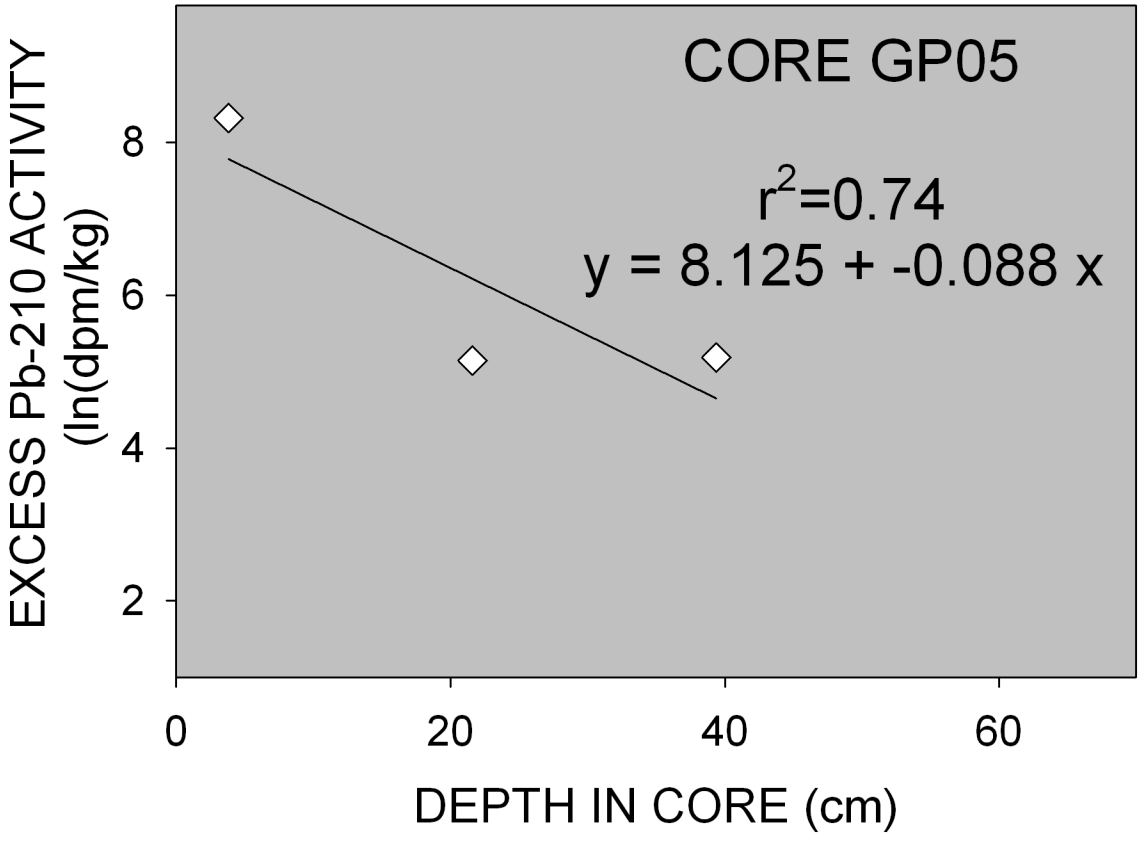


Figure 5b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

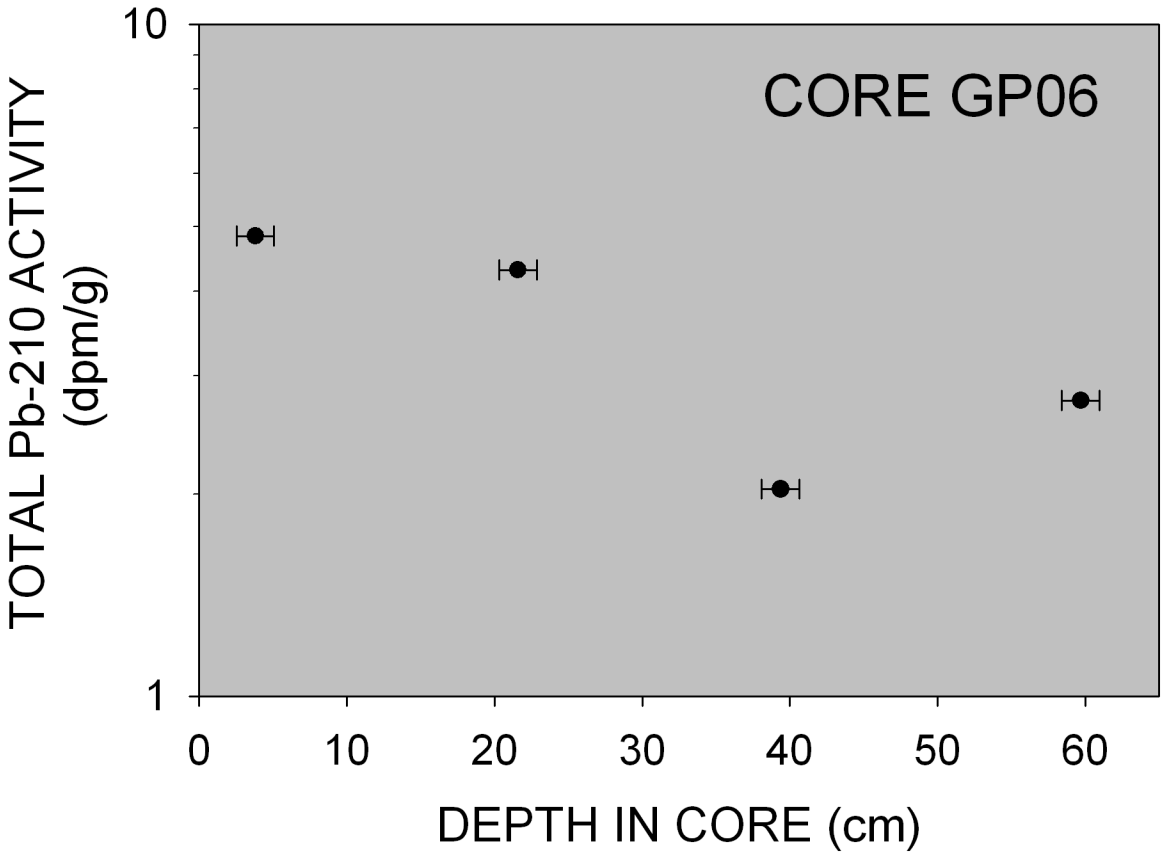


Figure 6a. Total ^{210}Pb activity downcore.

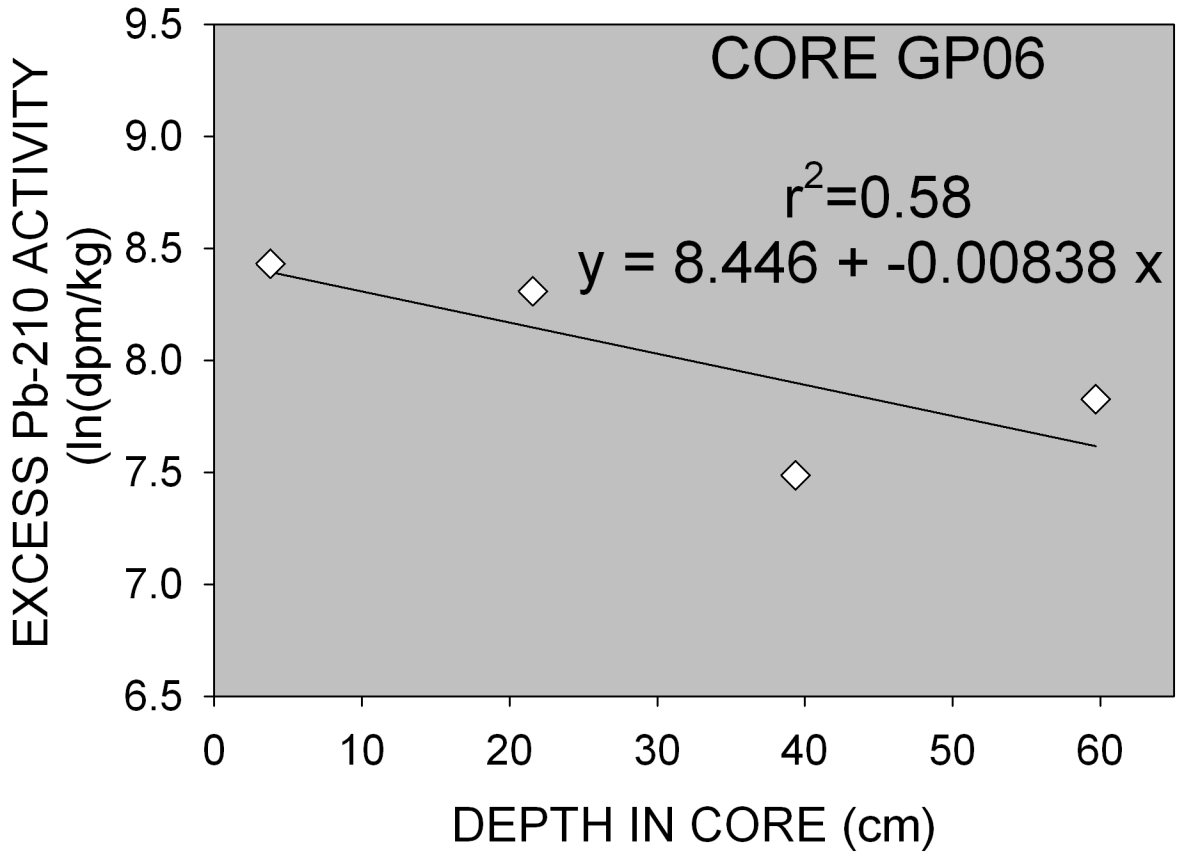


Figure 6b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

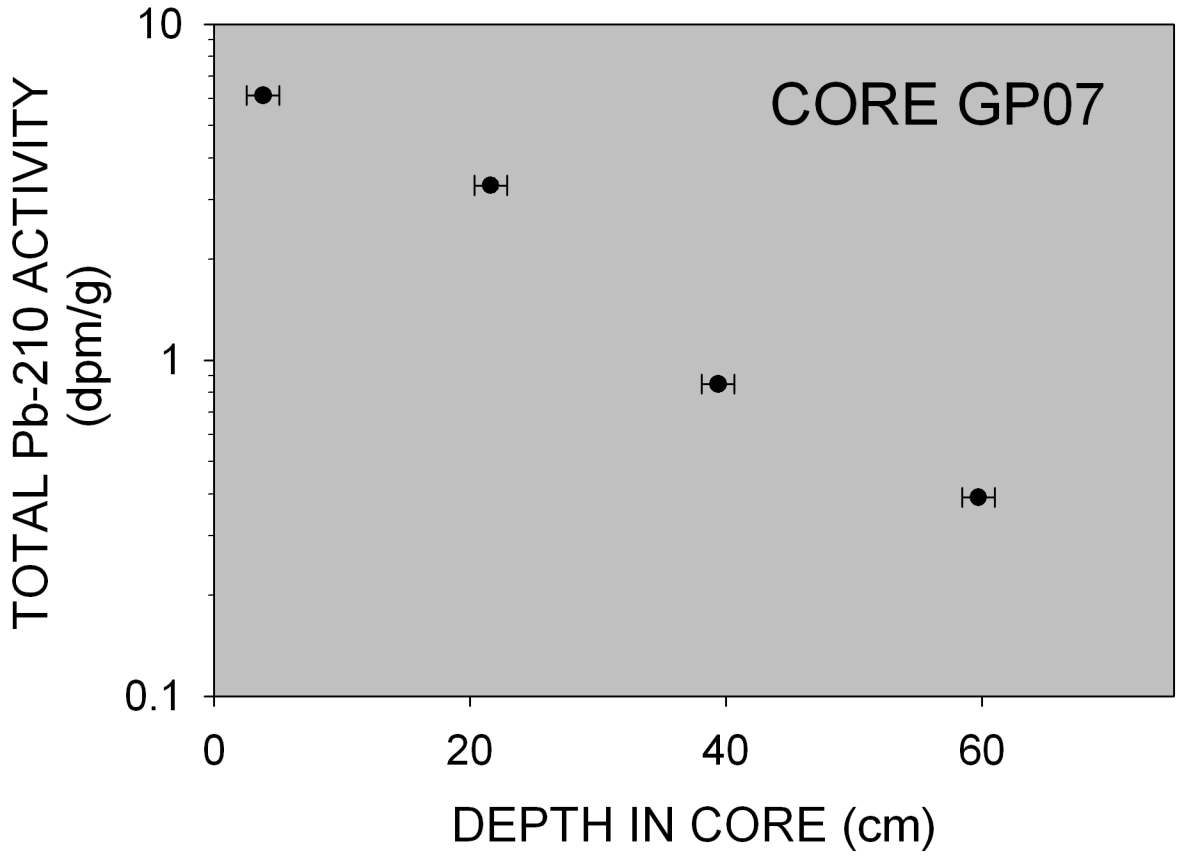


Figure 7a. Total ^{210}Pb activity downcore.

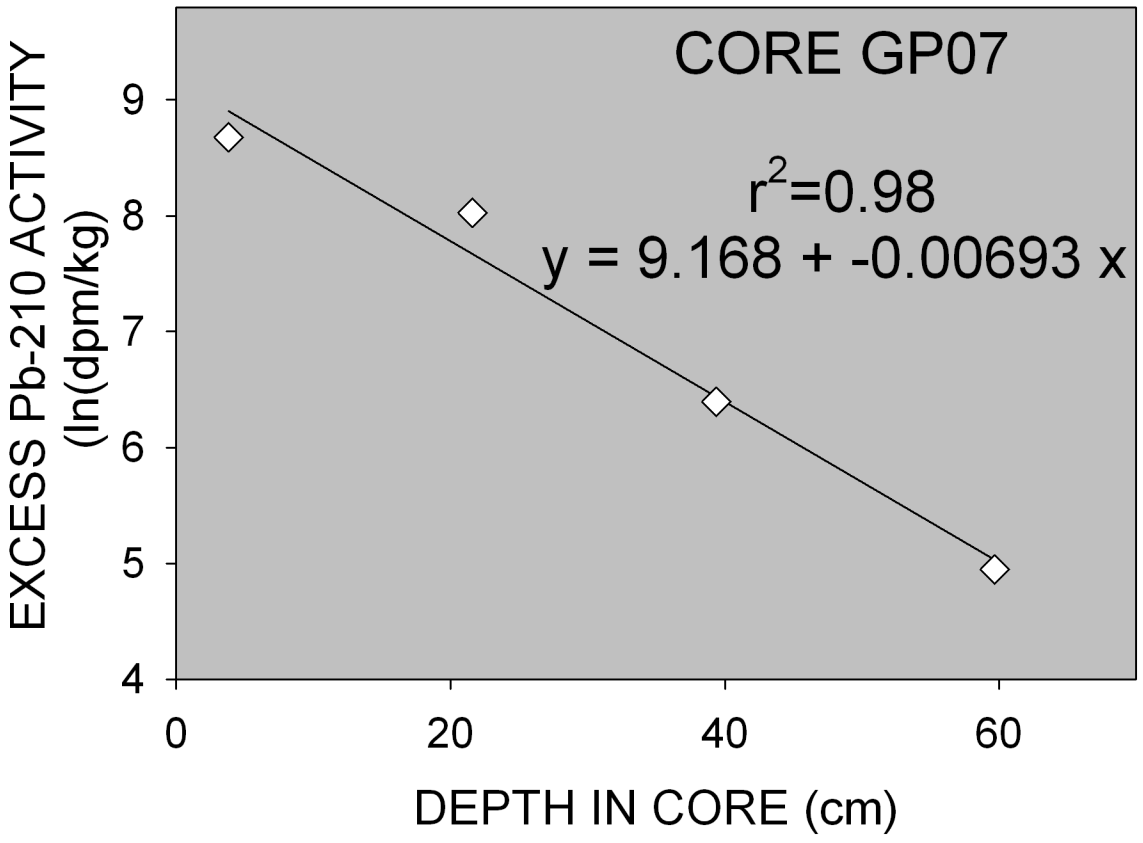


Figure 7b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

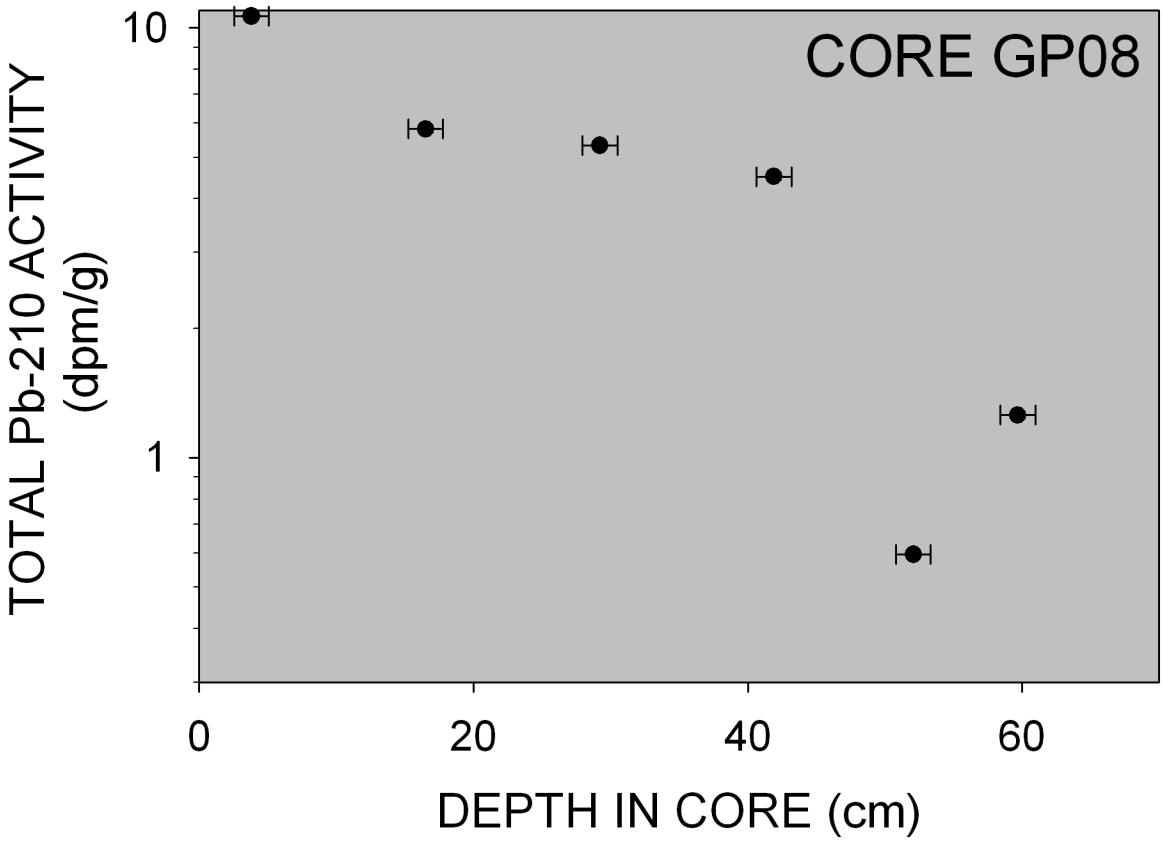


Figure 8a. Total ^{210}Pb activity downcore.

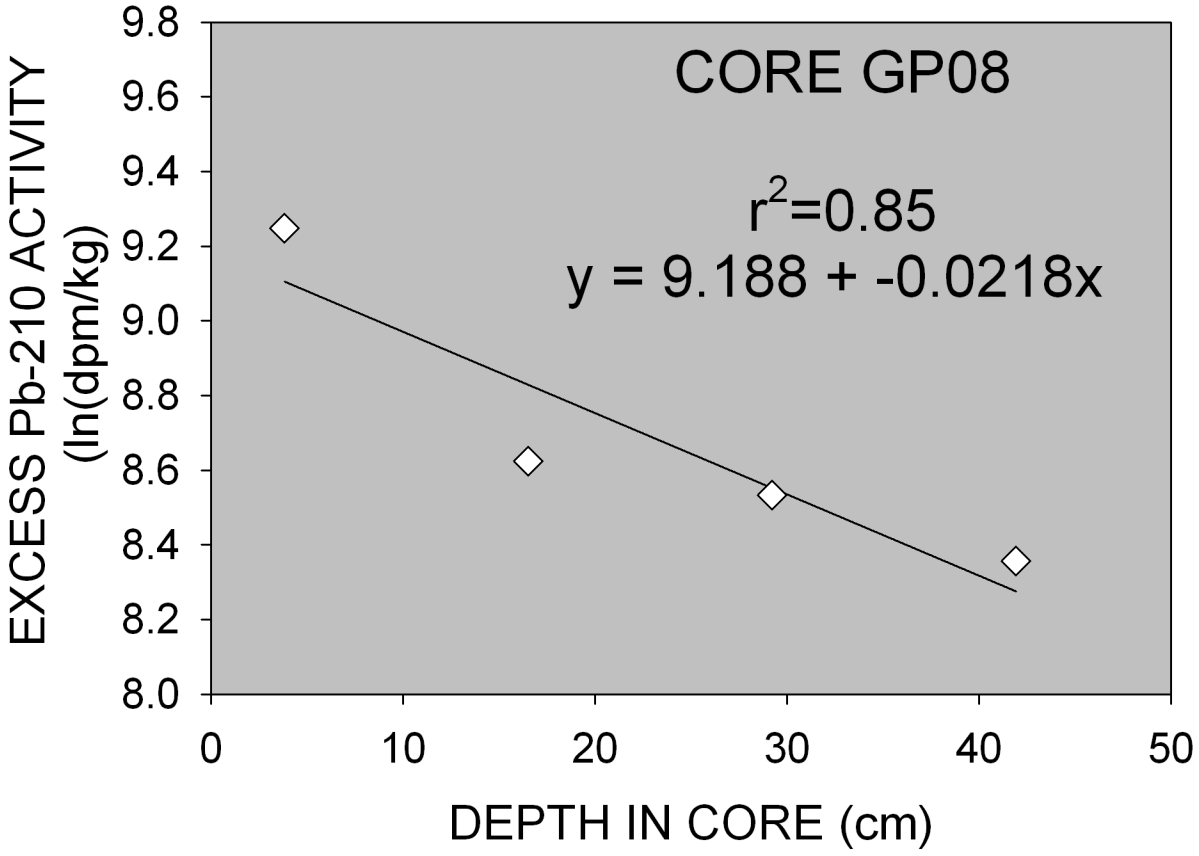


Figure 8b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

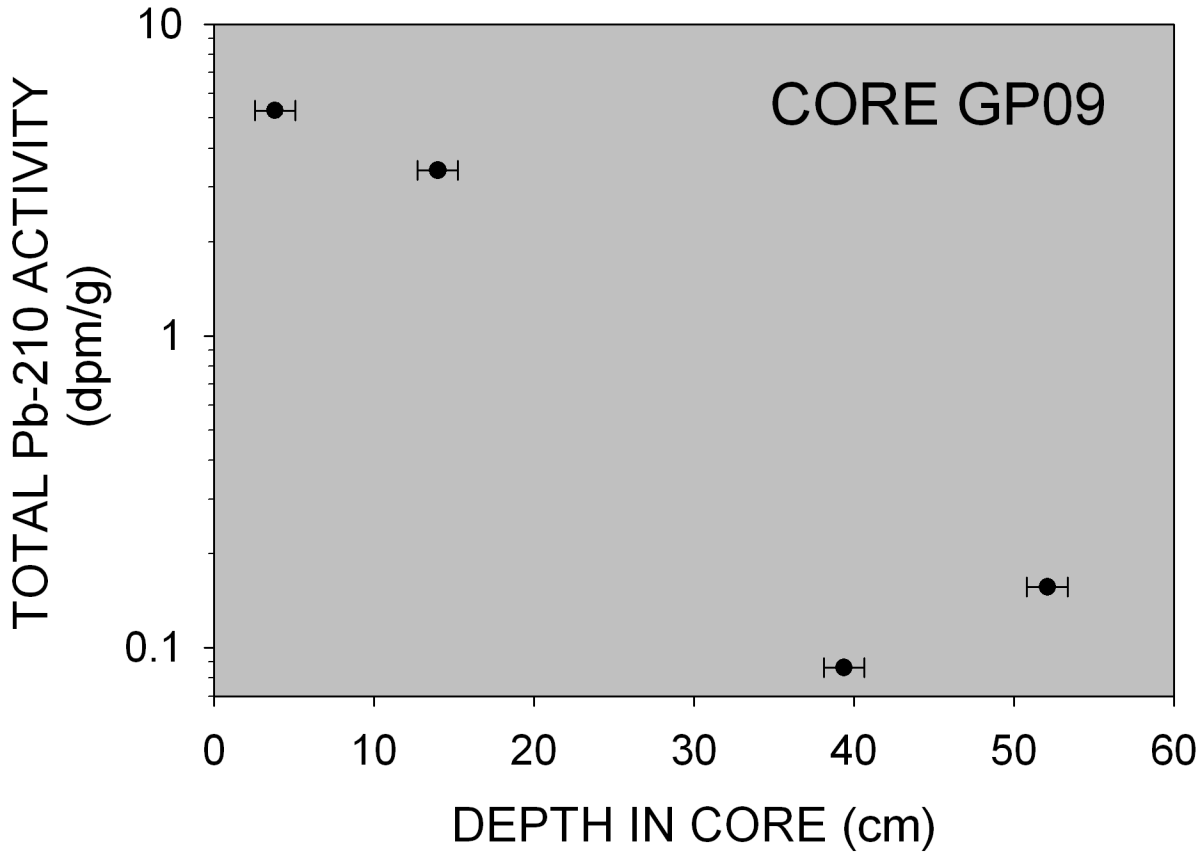


Figure 9a. Total ^{210}Pb activity downcore.

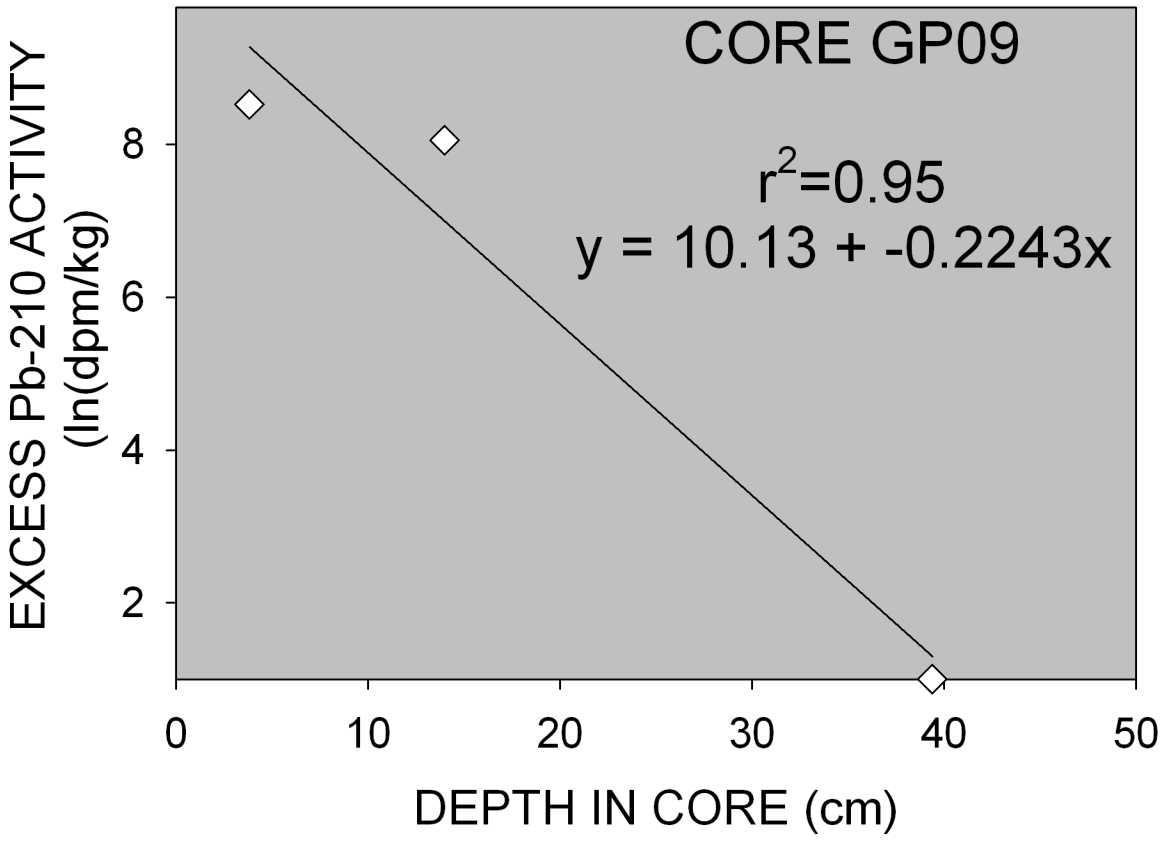


Figure 9b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

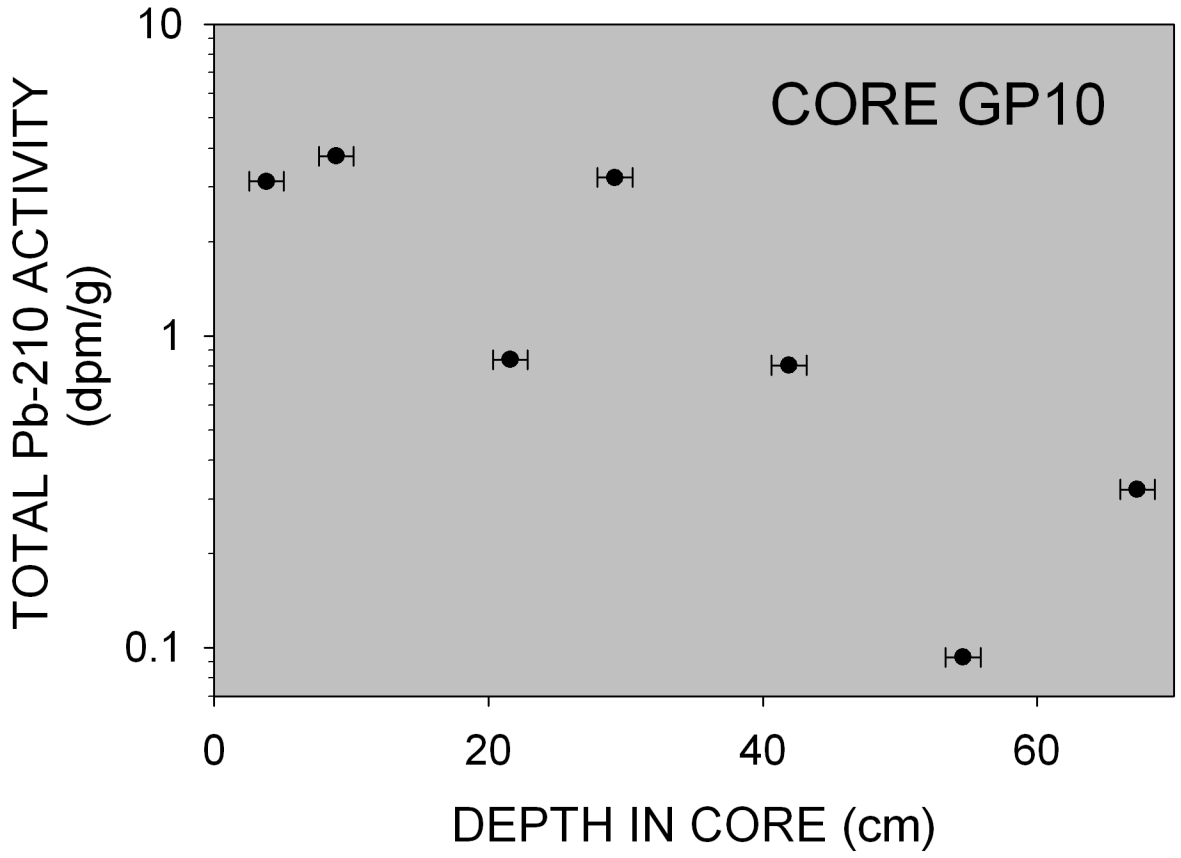


Figure 10a. Total ^{210}Pb activity downcore.

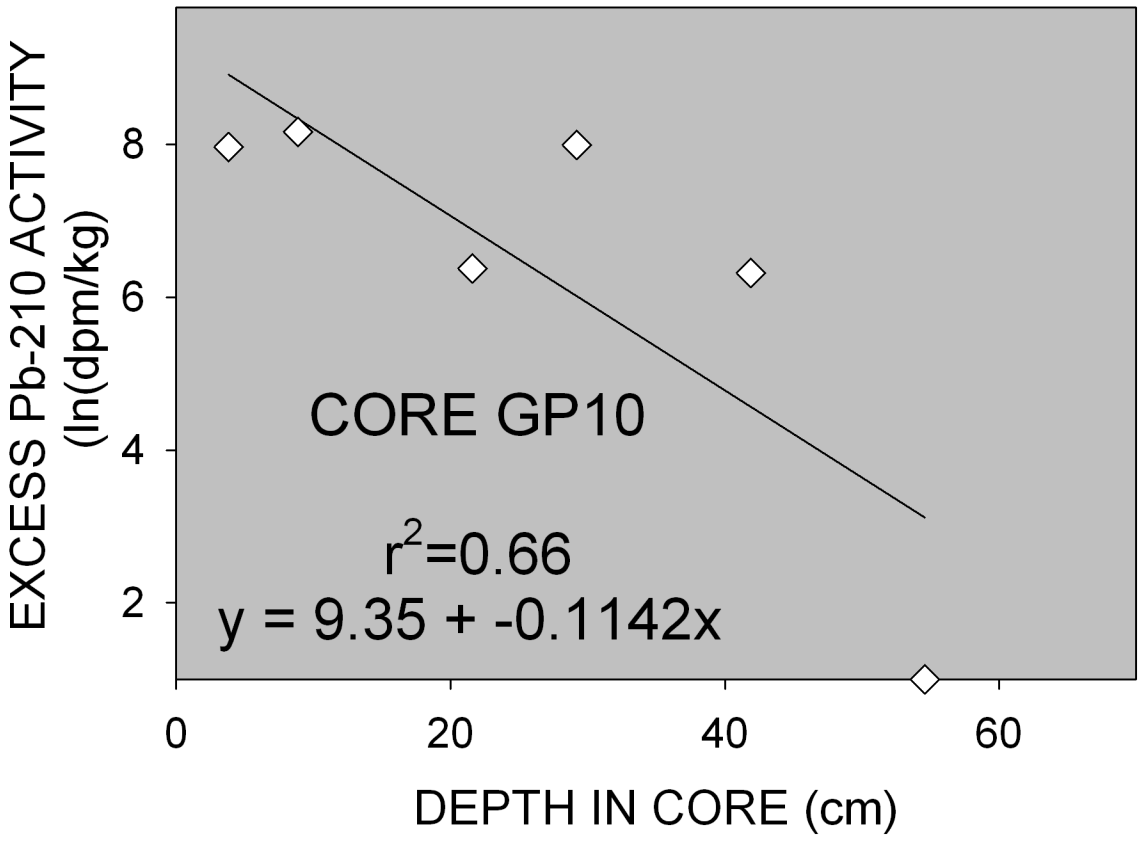
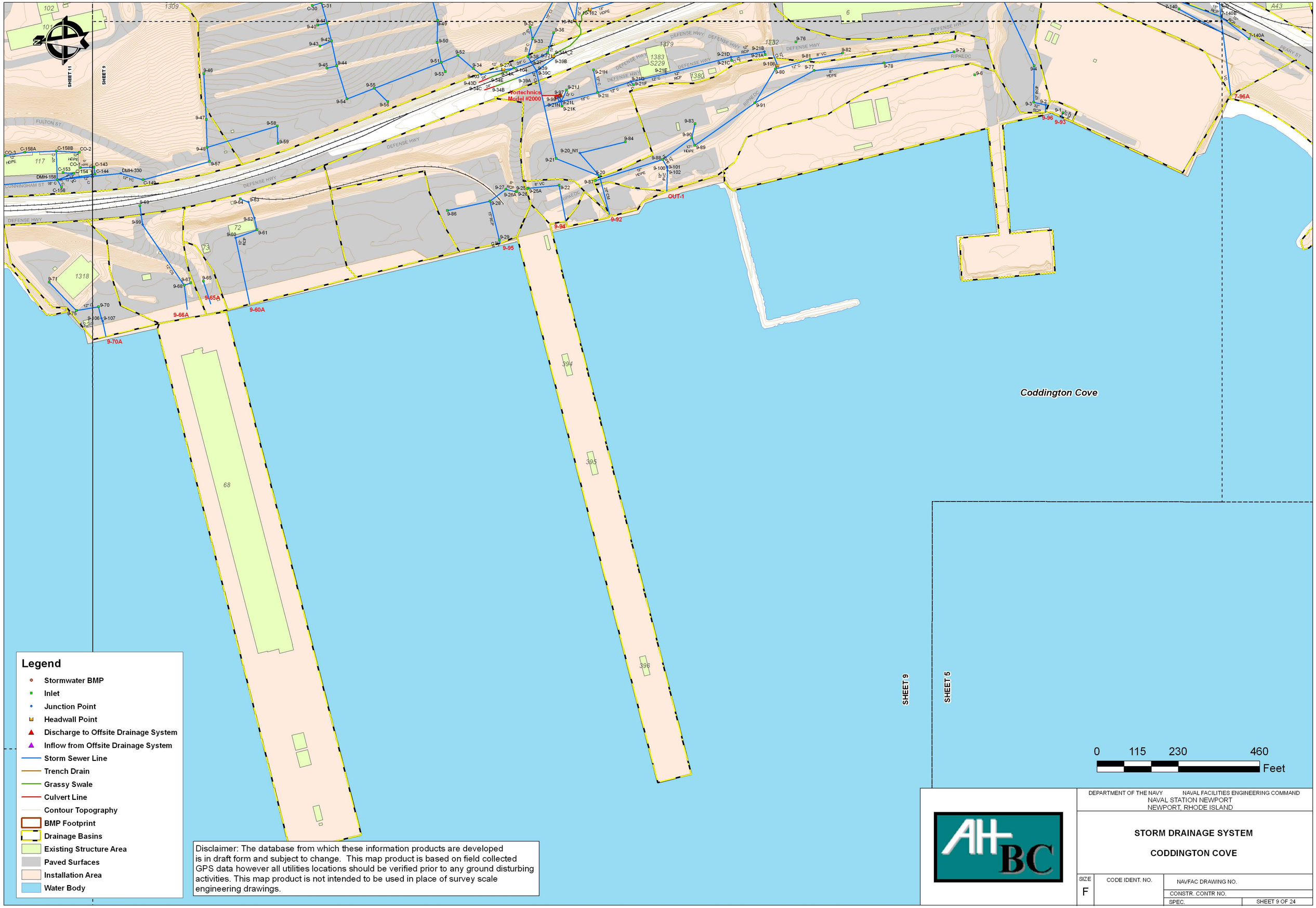


Figure 10b. Excess ^{210}Pb activity and best fit regression utilized for calculating sediment accumulation rate.

C5 STORM DRAIN OUTFALL MAP FOR WATERFRONT OF CODDINGTON COVE



Legend

- Stormwater BMP
- Inlet
- Junction Point
- Headwall Point
- Discharge to Offsite Drainage System
- Inflow from Offsite Drainage System
- Storm Sewer Line
- Trench Drain
- Grassy Swale
- Culvert Line
- Contour Topography
- BMP Footprint
- Drainage Basins
- Existing Structure Area
- Paved Surfaces
- Installation Area
- Water Body

Disclaimer: The database from which these information products are developed is in draft form and subject to change. This map product is based on field collected GPS data however all utilities locations should be verified prior to any ground disturbing activities. This map product is not intended to be used in place of survey scale engineering drawings.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

STORM DRAINAGE SYSTEM

CODDINGTON COVE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F		CONSTR. CONTR NO.
		SPEC. / SHEET 9 OF 24

APPENDIX D

COMMENTS ON DRAFT REPORT

D1 NOAA COMMENTS AND RESPONSES TO COMMENTS

Response to Comments from NOAA
Supplemental Sediment Investigation,
Site 19 - Former Robert E. Derecktor Shipyard
Naval Station Newport, Newport RI
Comments Dated May 4, 2012

Specific Comments

Comment 1: *The entire BPRG inclusion is a puzzle to me. A PRG relates to a cleanup concentration. The BPRG has nothing to do with a cleanup concentration rather, at this site, it's a chemical concentration equal to the Reference area. And although valuable in its own right for RI/ERA purposes, it has no value as a present or future PRG. Please eliminate it From Table 1-1 and in Section 1.4 (Development of Cleanup Goals) or call it something else. In addition, under 4-1F and 4-1G (as well as 4-2F, 4-2G, 4-3F and 4-3G) the legend indicating that these BPRG values have something to do with Project Action Limits (PALs) is misleading.*

Response: The BPRGs are provided in the report only for reference. To clarify, the BPRG is a baseline concentration that was the lowest indication of potential for risk described in the Baseline ERA, but it does not include consideration of reference concentrations. Anthropogenic contaminants, among other factors, are used to develop the RPRGs from the BPRGs. For this project, the BPRGs were selected as the PAL as a part of the analysis program, and only used to determine if the laboratory properly quantified the concentrations measured. The PALs should not be confused with cleanup goals. The BPRGs and the reference to the PALs can be eliminated from Table 1-1, although other reviewers may find them useful, and therefore the Navy proposes to revise the descriptions of the BPRGs and eliminate the reference to the PALs.

Comment 2: *Despite Item 1 above there are three locations of concern within the top 12 inches with zinc concentrations of 823 mg/kg 799 mg/kg and 678 mg/kg at stations W-17, BB-26, and K-05 respectively that deserves some attention. Because the latter matches up with the highest lead found in the study, I assume the sediment at that locale will be removed and no further zinc risk assessment is necessary. However, the Navy should further assess stations W-17 and BB-26 using a biological testing tool to determine if sediment removal is necessary. Of course, if the AVS is above the SEM at these two locations, the chances of finding bioavailable zinc drops considerably and remove the need for such a study.*

Response: The comment is noted, these concerns will be considered during development of the FS.

Comment 3: *In my professional opinion, the copper concentrations are not high enough (as are most of the zinc concentrations) to demand further assessment. Granted both may be additive in the toxicity shown by other chemicals above their respective RPRGs but it appears that the high concentrations of organics and inorganics at the surface are mostly independent of each other. That observation indicates two distinct sources of contamination.*

Response: The Navy is in agreement that copper concentrations do not merit further assessment. Although there could be multiple sources, the Navy has agreed to pursue a cleanup program for the industrialized waterfront given the lack of barriers between areas where contaminants are present.

Comment 4: *PCBs are an enigma given that the concentrations are low everywhere except two locations adjacent to Pier 2. Of concern is the concentration of 17 mg/kg at Station K-13. This station is a combination of high PCBs and lead that puzzles me; likely two independent sources of contamination released relatively near the same time. An obvious sediment removal is necessary but the volume for removal may not be as great as indicated by Figure 4-1C. That because the one high concentration at K-13 results in a large circle because of the distance to the adjoining stations. These red circles may be overestimating the area of concern given the number and location of samples. Another example is the size of the elevated lead area at K-05. Confirmatory sampling preceding sediment removal will likely narrow this area of concern.*

Response: The comment is noted. However, it is presumed at this point that the contaminants found at these positions will be addressed in one manner or another, as was discussed at the meeting 8/16/12, and the alternatives to address them will be presented in the revised FS.

Comment 5: *It seems clear that the TBT is no longer an issue.*

Response: The Navy is in agreement that TBT does not merit further evaluation at the site.

Comment 6: *In my opinion, the major debate will concern the sediment at depth. The Navy has conclusively shown that the sediment below 12 inches should stay in place given steady state conditions. But why will the site remain in steady state? Can't one assume that large ship traffic will displace the sediment sometime in the future. What assurance can the Navy provide that contamination below 12 inches will not get mobilized? And lastly, if the top 12 inches are removed, won't the sediment below it become available given that in some places the highest chemical concentrations in each of the three zones are stacked on top of each other.*

Response: Sediment scouring at depths that would result in sediment with high COC concentrations displaced in a manner that would pose risk is highly unlikely. The radioisotope data, the similarities between the bathymetry measured 2006 and 2011 and the energies measured in 2011 all indicate that such deep scouring has not occurred in the past several decades, despite storms and aircraft carrier movement. Even if such an unlikely event (scouring of sediment to depths greater than 1 foot) were to occur, it is unlikely that the resulting concentrations in the surface sediment would pose a risk. In all likelihood, in an extreme event (say, 100-year flood or storm), there would be so much turbulence and mixing of clean and contaminated sediment, that any resulting distribution is unlikely to be at levels that pose unacceptable risk. Finally, in regards to the last portion of the comment, the removal of upper intervals of sediment would expose deeper sediment, some of which may exceed PRGs, and the area average calculations will need to determine if these exceedances pose risk. Therefore, alternatives will need to be developed with this in mind, and assurance that remaining exposed sediment meets PRGs through backfill of excavated areas, or other means.

Comment 7: *Figure 2-2 shows the Polonium activity bouncing at the bottom of cores 4, 5, and 6, despite no change in grain size. Please explain and indicate if it affects the sedimentation rate?*

Response: Subtle changes in grain size may have been present that were not identified visually through the core barrel. The bottom sections of these cores may also have captured sediment that was disturbed by dredging in the 1950s, thus providing the "bouncing" effect noted. This will be evaluated further and the section will be revised if that evaluation provides new information.

Comment 8: *A minor point but Figure 3-1 shows a confusing legend. Given that the depth is below MLLW, the minimum depth should not have a negative sign (i.e., -2.28 ft = 2.28 ft). In addition, I would place the deeper waters at the bottom and the shallow water at the top (i.e., reverse the colors and the water depths). And in Figure 3-2, a legend (i.e., each color equals a specific bottom depth range) would be helpful as the contour lines and values are hard to read.*

Response: It is possible to have a negative value for the depth. During data collection the MLLW was the zero reference, meaning that if it was high tide and shore areas above the MLLW could be accessed, depth data collected above the MLLW would be represented as a negative number. However, a new figure will be created that presents the depth as height above or below MLLW with an inverted legend

D2 EPA, RIDEM AND USFW COMMENTS (NO RESPONSE)

REGULATORY COMMENTS
DRAFT SUPPLEMENTAL SEDIMENT INVESTIGATION
FORMER DERECKTOR SHIPYARD, SITE 19
NAVSTA NEWPORT, MIDDLETOWN RHODE ISLAND

Attachments A-C present the comments from the USEPA, RIDEM, and USF&W Service on the Draft Supplemental Sediment Investigation Report (the Report). The Report was submitted to the regulatory agencies (United States Environmental Protection Agency, Rhode Island Department of Environmental Management, National Oceanic and Atmospheric Administration & United States Fish and Wildlife) on April 6, 2012 for review. Comments were received from the US Environmental Protection Agency (EPA) on May 23, 2012; comments were received from RI Department of Environmental Management (RIDEM) on June 11, 2012; and lastly comments from US Fish and Wildlife (USFW) were received on May 9, 2012.

In accordance with an agreement made between these agencies and the Navy at the project meeting August 16, 2012, the Navy has agreed to not provide formal responses to these comments, but instead to publish them within an appendix to the report when it is issued as a final document.

In addition, comments were received from the National Oceanic and Atmospheric Administration (NOAA) on May 4, 2012; these comments are provided as Attachment D1. NOAA requested that their comments be addressed formally, and that the report be revised in accordance with those responses. At the meeting August 16, 2012, the Navy agreed to pursue resolution of NOAA's comments and incorporate revisions to the report accordingly. In accordance with this agreement, responses to the NOAA comments are provided in Appendix D1.

ATTACHMENT A: EPA Comments (5/23/2012)

Letter Comments

Comment 1: The sediment stability analysis described in this report is technically flawed for the following three significant reasons:

- The stability analysis only used velocities measured during the low energy conditions that occurred at Derecktor Shipyard during a 17-day period in early September 2011,
- Ship-induced resuspension of contaminated sediment that likely occurs fairly regularly was not analyzed, and
- Sediment resuspension and subsequent transport during a high energy event such as a Nor'easter or tropical storm was not analyzed.

These three reasons lead EPA to conclude that the findings from the sediment stability analysis are not technically defensible. Other problems with the reported sediment stability analysis are identified in Attachment A. For the reasons stated herein, the findings from the reported sediment stability analysis are not technically defensible, and therefore cannot be approved by EPA for use during the FS in the selection and design of potential remedial measures at this site.

Comment 2: Although Derecktor ceased operations at the site several years ago, significant contamination remains in surface sediment. EPA therefore believes that the contention that deposition is an effective remedial action at Derecktor Shipyard remains questionable. While shore-related contamination discharged through the storm sewers may be a recent or continuing source for the near-shore contaminated areas, it is not likely a significant source for the pier-related areas more distant from the shore where significant surface sediment contamination is present.

Comment 3: The deposition rates estimated from the data collected suggest that in many locations it would require 50 to 200 years to accumulate a six-inch cover over existing contamination to make the existing surface sediment generally inaccessible to benthic organisms. However, an even greater clean sediment cover may be needed to be protective of other fauna, including burrowing organisms. Ship traffic was not considered in these estimates, so given the use of the site as an active shipyard, the deposition rates presented in the report are highly uncertain and should not be relied upon to evaluate compliance with EPA's long-term protectiveness and permanence criterion [40 C.F.R. §300.430(e)(9)(iii)(C)].

Comment 4: Given the exceedances detected, the extent of contamination should be better characterized with a pre-design investigation. In particular, the areas requiring further characterization include the western end of Pier 2 extending to the western end of Pier 1; north of the eastern end of Pier 2 beyond the most recent sample locations; and south of the most recent sampling locations south of the middle of Pier 1. In addition, because only a limited number of samples were analyzed for copper and zinc (and based on the significant concentrations detected for zinc surrounding the two piers), the pre-design investigation will need to complete the characterization for these metals as well. Specifically, sampling for copper and zinc should be conducted between the two piers, north of the eastern end of Pier 2, and south of the most recent sampling locations south of Pier 1.

Comment 5: The conclusions from the wave and current monitoring study characterize steady state site conditions over a limited time period and therefore the results of this study have specific, but limited applicability. Non-steady state conditions that are a result of storm surge, high winds, and large waves will likely have significant impacts on sediment mobility that cannot be predicted by the results of this

study. The Navy should use available data to supplement this investigation with an analysis of sediment mobility under non-steady state conditions if it intends to evaluate any remedial alternatives that will leave contamination in place. EPA notes that the aircraft carrier, Saratoga, remains at Pier 1 and is slated to be removed within the next six to eighteen months. EPA is also aware of the Navy's plans to 1) demolish Pier 1 and possibly Pier 2, 2) homeport additional Coast Guard Cutters between Piers 1 and 2, and 3) possibly homeport the JFK aircraft carrier. As stated in EPA's letter to you dated July 16, 2010, it is unreasonable to expect an absence of ship traffic and prop scour in areas under and adjacent to the piers. Virtually no information is provided regarding ship traffic and prop scour induced sediment resuspension and subsequent exposure of buried contaminated sediments. EPA notes that the Report on ^{210}Pb Accumulation Rates of Sediment Cores from Derecktor Shipyard Offshore (Allison, 2012) concludes that sites under large ship anchorages display a variable accumulation/resuspension rate likely owing to the combination of human influences on sedimentation rates.

Comment 6: Please provide a qualitative assessment of the weight of evidence of asbestos at the site. The flow diagram from EPA 2008 Asbestos Framework (OSWER Directive #9200.0-68) http://epa.gov/superfund/health/contaminants/asbestos/pdfs/framework_asbestos_guidance.pdf should be followed to assess exposure to asbestos from the steam pipe under Pier 1. Since a main concern with asbestos is inhalation of the fibers, an evaluation of asbestos-containing materials transported to shore, dried, and becoming friable should be performed.

Comment 7: The Preliminary Remediation Goals (PRGs) for Derecktor Shipyard/Coddington Cove (November 1998) states (p. 3, §2.0): "Implementing aquatic PRGs for a few CoCs exhibiting the maximum observed exceedances of PRG concentrations would be assumed to be protective of all co-located CoCs contributing to risk in the aquatic exposure pathway. The ability to draw such conclusions is critical to the derivation of 'Limiting' PRGs as described throughout Section 2.0." Consequently, in the absence of the co-location of CoCs, the Navy must address the risk from individual CoC concentrations that result in excess risk when such CoCs were not selected as limiting CoCs. The results of the latest sampling at the site indicate that there are locations where the concentrations of copper and zinc are not co-located with limiting CoCs but where such concentrations exceed the baseline PRGs (BPRGs) and in many cases, that exceedance is significant. These locations must be addressed when establishing the scope of the remedial actions required.

Comment 8: As indicated in EPA's comments on earlier Derecktor Shipyard documents, the Navy needs to evaluate the storm water discharges to Coddington Cove as potential on-going sources of COCs that could recontaminate any remedy selected for the site. Since the report identifies new areas with elevated COCs in the surface sediment (page 5-3), it is clear that there are either new sources of contaminants to the area or that existing contamination is mobile.

Comment 9: While EPA recognizes that the Navy's plans are subject to frequent changes, it is important to identify the development plans for Derecktor Shipyard including the fate of the existing piers as this will significantly impact the evaluation of remedies in the feasibility study.

Comment 10: As EPA, RIDEM, and the Navy discussed on October 27, 2010, the data collected as part of the Supplemental Sediment Investigation Report were intended to further delineate and refine the boundaries of areas within Coddington Cove slated for removal. EPA continues to believe that removal should be the primary component to the remedial action for Derecktor Shipyard. EPA is concerned that the Navy continues to pursue monitored natural recovery (MNR) as a remedy for the site despite EPA's objections. Further, the Navy has disregarded the numerous data gaps identified by EPA to determine

whether MNR is occurring. Attachment B to this letter provides EPA's evaluation of monitored natural recovery processes at Derecktor Shipyard.

Comment 11: As discussed on May 16, 2012, it was EPA's understanding that this report was solely intended to be a data report. The draft report presents conclusions drawn from the data that are contrary to EPA's interpretations of the same data. The Navy has the option to either 1) resolve the concerns raised herein through responses, meetings, and revisions to the report or 2) include these comments as an appendix to the report documenting EPA's disagreement with the conclusions presented.

Specific Comments

Comment 1: p. E-3, §E.3. As discussed on October 27, 2010, EPA believes that copper and zinc should be analyzed in addition to PAHs, benzo(a)pyrene, PCBs, and lead when evaluating remedial alternatives for the site. While much of the aerial impact is associated with these COCs, the latest sampling has identified areas with copper and significant zinc contamination that is not co-located with the four PRGs and the sampling has not identified the full extent of the copper and zinc contamination.

Comment 2: p. E-4, §E.5.

a) The first conclusion is hedged by stating "under steady state conditions." Steady state conditions do not exist at Derecktor Shipyard. In fact, some of the Navy's actions (e.g., moving aircraft carriers, removing piers) will cause unsteady conditions at the site. High bed shear stresses caused by the movement of large ships will likely result in resuspension of the bedded sediment. The investigation has not adequately accounted for non-steady state conditions that will have a significant impact on the site sediment. In particular, storms will provide disruptive forces that are expected to mobilize surface sediment and ship and tug traffic can also potentially mobilize sediment especially closer to shore. These forces need to be evaluated in detail for any alternatives that propose to leave contaminated sediment in place.

b) The second conclusion references contaminated sediment in the 24-48-inch depth interval south of the center of Pier 1 that has been buried, suggesting that this supports the Navy's conceptual model that the site is depositional. There are areas with contamination at depth without overlying contaminated sediment that are located beneath the two aircraft carriers and Pier 1. These artificial depositional areas will no longer exist when the ships are moved and when Pier 1 is razed. EPA further notes that at Pier 2, large areas of surface sediment are present at the center and western end of the pier without any deep contamination. This suggests that burial may not be a significant process farther from the shore.

Comment 3: p. 2-1, §2.0. If correct, please add a statement to the last paragraph indicating that "other than these field modifications, all requirements of the SAP were satisfied."

Comment 4: p. 2-7, §2.3.2. Describe both types of samplers that were used. Include a table that gives the elevation of each surface water sample above the sediment bed and the total water depth at the times when samples were collected.

Comment 5: p. 3-1, §3-1. Please correct the discussions that refer to dredging depths. The references to depths in feet of elevation should refer to depth below mean lower low water.

Comment 6: p. 3-2, §3.2.1. Please edit depth references to refer to depths as "below MLLW."

Comment 7: p. 3-4, §3.2.3. In general, EPA agrees that "accumulation tends to be higher where there are flow impedances," yet even in this small data base of ten sediment accumulation rates there are some

exceptions to the specific statement that stations that are closest to shore have the highest sedimentation rates. For example, Station 10 (also located close to shore) had a rate that was approximately eight times lower than that at Station 6. Station 2, which is the station farthest from shore, had a rate almost three times higher than at Station 10. Station 1, which is also close to shore, had the lowest sedimentation rate of all 10 stations. These three examples demonstrate that sedimentation rate is affected by more natural and anthropogenic factors than just those listed in this section.

Comment 8: p. 3-5, §3.3.1. Please include a figure that shows the exact location or portion of Coddington Cove where the higher velocities were measured (i.e., at the mouth of the cove near the end of the breakwater).

Comment 9: p. 3-5, §3.3.1. The highest sand content given in Table 3-1 is 63.5 percent, and only at two stations was the sand content higher than 40 percent. The third paragraph should be changed to indicate the correct percentages.

Comment 10: p. 3-5, §3.3.1. It is not apparent why the third paragraph is included because it is not a hydrographic discussion. Please move it to a more appropriate section of the report.

Comment 11: p. 3-6, §3.3.2.

a) Regarding the third full paragraph, the text states that "..few storms occurred during the deployment period…" Please clarify if any significant storms occurred during the ADCP deployment.

b) Regarding the partial paragraph at the bottom of the page, it appears that the ADCP monitoring occurred during a relatively tranquil time that is not representative of non-steady state conditions that occur at the site. Consequently, the conclusions drawn based on the data collected must be recognized as limited in scope. Please draw on other available information regarding conditions at the site to supplement the conclusions regarding wave heights, currents, and wind speeds in order to present a more accurate depiction of the impacts of these parameters on site sediment during non-steady state conditions.

Comment 12: p. 3-6, §3.3.2. While it is correct that "faster ebb currents are more capable of initiating particle suspension and transport" in an ebb-dominant water body, the text needs to be changed to define what is meant by flushing, and to explain why "ebb-dominant systems typically flush sediment more readily" as opposed to what occurs in flood-dominant systems that have higher flood currents than ebb currents.

Comment 13: p. 3-6, §3.3.2. The description in the third paragraph regarding current direction and tides needs to be greatly expanded to be of any quantitative use. Figures should be used to describe the tidal circulation in the cove over a tidal cycle. Specifically, figures with velocity vectors that show the different current patterns in the cove at four or more different stages of a tidal cycle would be helpful. Also, a two panel figure that has a time series of measured water surface elevations in the top panel, and a time series of measured surface currents in the bottom panel would be extremely helpful in explaining the tidal circulation.

Comment: p. 3-6, §3.3.2. Quantify what is meant by "low amplitude" in the last paragraph on this page.

Comment 14: p. 3-7, §3.3.2, ¶1. Were any of the waves measured during the hydrographic investigation either intermediate or shallow water waves? If so, then the bed shear stresses at those locations at the times when these waves were measured would need to be calculated using the near bottom currents from both tides and waves.

Comment 15: p. 3-7, §3.3.2, ¶2. Explain what is meant by "steady state" in the first sentence. What time interval was used to calculate the mean flow velocities? Where did the maximum flow velocities occur within the cove and at what position in the water column, and at which stage of the tidal cycle did they occur?

Comment 16: p. 3-7, §3.3.2, ¶3. Specify the unit of the depth listed in the second column of Table 3-2. The report should state that the r^2 values given for the last three sample locations reveals that no quantitative relationship was found between TSS and ADCP backscatter at these stations.

Comment 16: p. 3-7, §3.4, ¶2 Change "Ziegler, Lick and Jones" to "Jones and Lick." Also, delete "and deposition velocity" since a Sedflume study does not measure the settling/deposition velocity of suspended sediment.

Comment 17: p. 3-8, §3.4, ¶2. Change 'flow rate' to 'flow velocity' in the second sentence. Provide the calculation that equates a flow velocity of 28.7 cm/s to a bed shear stress of 0.2 Pa.

Bed shear stresses are a function of the near-bed velocity, the distance above the bed the velocity is measured, and the roughness of the bed surface. They are also a function of the flow depth since near-bed velocities are a function of the flow depth. As seen in the cores collected during the studies reported herein, the roughness of the sediment bed surface at this site is spatially variable as the bed roughness is a function of the median sediment size, presence of clam shells, etc. As such, it is not valid to assign a single velocity (especially one to three significant digits) as the one and only velocity that would generate a bed shear stress equal to 0.2 Pa. Typically, the range of flow velocities that are measured at a given distance above the bottom that produce a specific bed shear stress are reported, where the range of velocities accounts for the varying bed roughnesses at the site. To base an entire sediment stability analysis on a single velocity is not correct for many reasons, one of which is that it does not account for the uncertainty associated with the determination of the critical shear stress for erosion or the uncertainty in the measurements of the currents using an ADCP. In addition, the comparison of a single velocity, i.e., 28.7 cm/s, to the maximum current speeds in the table that gives the near bottom flow statistics at the locations where the ten cores were collected should not be done unless the elevations above the bottom where the velocity measurements were made are known and the bottom friction coefficients at these sites have been determined. These factors would be required to calculate the bed shear stresses generated by the reported maximum velocities.

Comment 18: p. 3-8, §3.4, last ¶. Change 'sheer' to 'shear' in the second and third sentences, and change 'the flow rate required erode' to 'the flow rate required to erode' in the third sentence.

Comment 19: p. 4-9, §4.2.2.6. Please indicate that the sample where asbestos was found in excess of the criterion was located beneath the eastern end of Pier 1.

Comment 20: p. 5-3, §5.1.5.

a) Please clarify the third sentence of the second paragraph that ends with "but not others."

b) The last sentence in the fourth paragraph should be changed to "…burial was occurring at the site." With the removal of the Forrestal it is not apparent that burial is continuing to occur south of the west-central portion of Pier 1 or that the burial that was measured still exists. Burial may continue near shore because of discharges from storm sewers.

c) Please include a map of the areas described in this section.

Comment 21: p. 5-4, §5.3. The third sentence in the second paragraph states that copper and zinc concentrations in sediment were found at levels similar to previously-collected samples. Please support this statement by comparing the concentrations found in this investigation with concentrations found in previous sampling events.

Comment 22: p. 5-5, §5.3. The first full paragraph states: "Although the zinc PRG was exceeded in the ERA, the avian predator would have to spend its entire life feeding in the affected area for true risks to occur." This statement neglects the migratory nature of the avian receptor. The analysis in the ERA assumed the avian would only be present at the site for 60% its life owing to seasonal migration, but it assumed that all its food would be obtained from the site while in the site vicinity. Because the range of the birds is variable with some ranging only within one kilometer of the nest while others range tens of kilometers, the rationale for disregarding risk from zinc is not clearly justified. If the Navy believes the zinc PRG is too conservative based on the assumptions it used in its calculations, it should revise them to produce a viable PRG rather than dismissing zinc without appropriate rationale.

EPA questioned the rationale for limiting the PRGs to the recommended PRGs (RPRGs) in the 1998 SAIC document in its original review of this document, and the matter has never been entirely resolved. In the event that a contaminant poses a risk to a receptor in the BERA, the only rationale for not developing and using a PRG is if contaminants are co-located, such that removal of RPRG contaminants would effectively eliminate the risk posed by chemicals for which a RPRG was developed. In the case of copper and zinc, the distribution is distinctly different from that of the RPRG contaminants. It is unclear why copper and zinc baseline PRGs should not be carried forward, unless the underlying assumptions for ecological risk are in need of revision, as discussed above for zinc. Copper posed a risk from resuspension, so the BPRG should be carried forward for this chemical.

Comment 23: p. 5-6, §5.5.1. Except for the first sentence, the discussion in the third paragraph needs to be rewritten or deleted. Because the Navy does not know how much sediment was originally deposited beneath the two ships, it cannot know that the outlines are similar to the original depths. It may be that a large deposit was originally present and most of it has now been eroded. Alternatively, it may be that the current sediment outlines are almost identical to the original outlines indicating that almost no sediment has been deposited in these areas since the ships departed.

Comment 24: Table 1-1. The RPRG selected for benzo(a)pyrene is set at hazard quotient of 10 based on human health risk endpoint. A PRG based on hazard quotient of 1 should be selected to meet the NCP requirement.

Comment 25: Figure ES-2. At the eastern end of Pier 2, there is a small green circular area located within a larger green circular area. Is the small green area redundant? If so, should it be deleted?

Comment 26: Figure 2-1. This figure shows the planned sample locations. Since the Navy was not able to collect all samples at the planned locations, please provide a figure depicting the actual sample locations. An appendix identifying the coordinates of the sample locations would be beneficial.

Comment 27: Figure 3-1. Based on the better quality image e-mailed to EPA on May 17, 2012, EPA was able to more clearly see some of the bathymetric features shown in Coddington Cove. Of particular note are: 1) prop scour furrows that follow the curving arcs of maneuvering, 2) linear ridges that are likely a result of dredging/construction of the piers, 3) ridges from dredging, 4) pock marks from anchoring, and 5) a ridge that looks to be the extent of a second 'deepening' dredging south of Pier 2.

Comment 28: Appendix C2. Please correct the text for Figure 2 because the Saratoga was present during the ADCP monitoring.

Comment 29: Appendix C2 (p. 14, ¶3). Were the waves with the peak significant wave heights given in Table 6 either intermediate or shallow water waves? Please determine this and include it in the report.

Comment 30: Appendix C4. EPA notes the conclusion from the Report on ^{210}Pb Accumulation Rates of Sediment Cores that states: "While definitive conclusions cannot be made about the sedimentation trends in the study area because of the impact of dredging and ship-induced resuspension, it is clear that inshore (protected) areas tend to have high accumulation rates. Inshore areas exposed to wave fetch, and hence to bottom resuspension tend to be lower."

ATTACHMENT B: RIDEM Comments (6/11/2012)

This section provides responses to comments provided to the Navy by RIDEM.

Specific Comments

Comment 1: p. E-4, Section E.4, Physical Characteristics; 2nd paragraph.

The statement that "Bioturbation and resuspension do not appear to be influencing sediment accumulation" is unsupported. Please provide additional information to support this assertion.

Comment 2: p. 1-7, Section 1.4, Development of Cleanup Goals (PRGs), 1st sentence.

Please replace "benzo(a)anthracene" with "benzo(a)pyrene", which is a limiting COC.

Comment 3: p. 2-1, Section 2.0, Study Area Field Investigations; 1st paragraph, last sentence.

Please delete "Division of Site Remediation" after RIDEM.

Comment 4: p. 2-5, Section 2.1.3, Field Measurements and Observations – Sediments for Chemical Analysis.

"At a total of 18 sediment sample locations, either a sheen or a petroleum-like odor or both were observed in sediments."

We believe it is evident that there is TPH contamination in the sediment at this site; therefore, remedial objectives should be developed for TPH.

Comment 5: p. 3-2, Section 3.2.1, Figure 3-1, Bathymetric Survey Results (color scale).

Are the numerous small depressions indicated on the multibeam data presented in Figure 3-1 indicative of biological activity or are they potentially related to sudden, small-scale releases of trapped, subsurface, biogenic gas? In either case, is there the potential for resuspension of sediments during such events and would resuspended sediments be expected to travel far under current conditions? Please provide additional information in this section of the report.

Comment 6: p. 3-4, Section 3.2.3, Radioisotope Analysis Results.

The statement that "Bioturbation and resuspension do not appear to be influencing sediment accumulation" is unsupported. Please provide additional information to support this assertion.

Comment 7: p. 3-4, Section 3.3, Hydrographic Information.

Figure 2-1 depicts the locations of samples collected for sedimentation rates and for deployment of ADCP units to measure velocity, turbidity, and other parameters related to currents in Coddington Cove. The locations are positioned such that the closest location to a pier is on the order of 100 feet away. Figures 4-1A through 4-3G indicate that much of the contamination exceeding standards is present adjacent to or beneath the piers. Given the upper limit of measured flow of approximately 28 cm/sec, what is the predicted flow increase due to current diversion around pier pilings and is it enough to scour and resuspend contaminated sediments from beneath the piers?

Comment 8: p. 3-4, Section 3.3, Hydrographic Information.

All conclusions appear to be made relative to steady-state conditions. What is the potential for remobilization during extreme events such as during hurricanes, tropical storms and extreme flooding events? In addition, the affects of boat traffic should also be considered.

Comment 9: p. 3-5, Section 3.3.1, Hydrographic Survey – URI, 1995.

Please note that flow data were collected when there were no significant wind events. Therefore, estimated flow velocities may not be representative of high-energy (e.g., storm) events that could affect

scouring, especially in areas of relatively low deposition and a silty, fine-grained matrix. Please add a discussion to this section in regards to this, or correct the text as stated in comment 11 below discussing the wind event on September 16th.

Comment 10: p. 3-6, Section 3.3.2, Hydrographic Investigation (ADCP) – 2011; last paragraph.

On page 3-6, the report states "no significant wind events occurred during the duration of deployment". However, the 3rd paragraph on page 3-7 states "the only wind event that occurred during deployment was on September 16th". Please revise this section for consistency.

Comment 11: p. 3-8, Section 3.4, Sediment Stability and Cohesion, 2nd paragraph.

Does the flow rate estimated for the surface layer (28.7 cm/sec) reflect an average flow rate across cores? Please clarify.

Comment 12: p. 4-1, Section 4.1, Data Validation and Usability Assessment.

Please note that the data validation report was not included in the pdf version of Appendix B-2. Please include this in the Draft Final document.

Comment 13: p. 4-3, Section 4.2. Analytical Results; 1st paragraph after bullets, "Spline with Barriers".

Depending on the objectives of the spatial interpolation (contouring), it may be prudent to compare the results of the spline interpolation with those of a geostatistical method (i.e., kriging) that takes into consideration the spatial correlation of the data and quantifies uncertainty in the predictions (i.e., prediction standard error). Prediction standard error estimates are very helpful in assessing areas of greatest interpolation uncertainty. In addition, in the geostatistical analyst extension to ArcGIS, kriging can be performed after detrending and/or transforming the data to produce more reliable estimates. Grid clipping can be used to account for the shoreline, or if the use of a barrier is essential to the interpolation itself, Surfer by Golden Software supports kriging with breaklines. Cross-validation can then be used to compare the two models (spline interpolation vs. kriging).

Comment 14: p. 4-10, Section 4.2.2.8, Zinc in the 12- to 24-inch Sediment Interval.

The statement that zinc may be attributed to natural geochemistry is unsupported. Samples located in the outermost reaches of the study area demonstrate lower levels of zinc than those located nearest the piers/shoreline, where there are other co-located contaminants. This comment also applies to Section 4.2.3.8. Please add additional support or eliminate this statement from the text.

Comment 15: p. 4-11, Section 4.2.3.1, HMW PAHs in the 24- to 48-inch Sediment Interval.

The discrepancy in PAH concentrations between 1995 and 2011 could also be attributable to typical high variability in sediment composition, rather than contaminant burial. Please include this statement in this section of the report.

Comment 16: p. 5-1, Section 5.5.1, PAHs; 1st paragraph.

Do you mean to state that highest concentrations of PAHs were found at Pier 2? (see Table 4-1; sample J30 had the maximum HMW PAH concentration.) Please clarify.

Comment 17: p. 5-1, Section 5.1.2, Benzo(a)pyrene.

This section states that the levels of benzo(a)pyrene and size of affected area decrease with increasing depth. While this is generally true across the study area, this does not hold true for Pier 1 where elevated concentrations were observed at depth (at the west end). This area of elevated benzo(a)pyrene is also co-located with an area of elevated HMW PAHs. Please update this section of the report.

Comment 18: p. 5-2, Section 5.1.3, Total PCBs.

The 4th sentence states that PCB levels in the 24-48" interval are below RPRGs; is this sentence specific to Pier 2? There is an area by Pier 1 where deep samples are between 2-5 times the PRG. (This is also indicated in the last sentence of this paragraph.) Please clarify this sentence.

Comment 19: p. 5-3, Section 5.1.5, Site-Wide Distribution of Elevated COCs.

Elevated lead, copper and zinc concentrations are more widespread than organic contaminants throughout the study area. However, because there are no recent data for the areas beyond the piers and the T-Wharf, it may be prudent to further characterize extent of copper and zinc in these areas. It would also be useful in this document to show a map with historical COC concentrations, for comparative purposes. Please provide this figure in the response to comments. The figure should also depict the depth of the historical contaminant levels.

The last paragraph of this section states that vertical distribution of data indicates contaminant burial is taking place. However, the data do not support this statement. As indicated on Table 4-1 and the relevant Section 4 figures, the overall highest COC concentrations are found in surface (0-12") sediments.

Furthermore, sediment deposition takes place at an average rate of <1 cm year (based on Pb-210 analysis), but samples for chemical analysis were collected over one-foot depth intervals, across a span of up to four feet. Based on this deposition rate, the upper foot represents approximately 30 years of sediment accumulation, versus Navy operations of approximately 50-60 years. Because surface samples represent decades of sediment accumulation, and depth profiles indicate that the highest concentrations are in the top foot of sediment, we do not feel it is appropriate to make a conclusion from these data about contaminant trends versus sediment deposition. Therefore, please remove the statements that burial of contaminants is occurring throughout the site.

Comment 20: p. 5-5, Section 5.3, Levels of Copper and Zinc in Sediment, 1st full paragraph.

The discussion of PRG/RPRG for zinc is based on the avian predator exposure pathway. While we are not providing comments on the basis of this PRG, we do recommend adding in a statement to this paragraph regarding whether risk to invertebrates and other ecological receptors was considered, because many of the observed zinc concentrations are well above published sediment benchmarks (such as the NOAA ER-L and ER-M).

Comment 21: p. 5-7, Section 5.6, Conclusions.

RIDEM has concerns with respect to the stated depositional rates and the conclusion that burial of contaminants is occurring at the site. In addition, the report did not consider the artificial effects that the berthing of the carriers (the last of which is scheduled to be removed from the site) may have on flow patterns and depositional rates at the site.

Even if the conclusions concerning the depositional rates at the site are accepted, the elevated concentrations of COCs, coupled with the generally slow rate of sediment deposition (at most, 1-2 cm/year) and potential for disturbance/resuspension as a result of storm events, suggest that natural recovery through burial may not be an adequately protective remedy. As discussed in comment 19 above, the chemical analytical results show elevated concentrations for many COCs in the most surficial layer of sediment, and currently do not support contaminant burial.

ATTACHMENT C: USFW Comments (5/9/2012)

This section provides responses to comments provided to the Navy by USFW.

Specific Comments

Comment 1: Figure ES-2 provides a good overview of the wide-ranging core contaminant issues associated with the shipyard, supported by all the individual COC at depth figures. Grid points on this figure would aid in comparing figures and data tables.

Comment 2: Section 2.1.3/Table 2-3/Table 4-2/4-3/4-4: Table 2-3: Location SD-J24 is noted as having a petroleum sheen, odor and product smear on the core tube. However, Table 4-2 does not denote elevated BaP or tPAH concentrations (100 ppb/1681 ppb) in the 0-12" category. Also, core refusal is stated to be at 10" and should be stated as such on Table 4-2. Also, Table 4-3 reports the same 0-12" data, for the 12-24" data table, while denoting 0-12". It would be better not to include data for J-24 on Table 4-3. There are numerous inconsistencies between petroleum odor and sheen observed in the core samples and elevated/non-elevated analytical detections of BaP/tPAHs. Table 2-3: Sample SD-K13, slight petroleum-like odor and sheen, BaP<161ppb, tPAH <2941ppb; sample SD-W24, petroleum-like odor, BaP<357 ppb, tPAH <4901 ppb; Sample SD-BD26, no petroleum-like odor or sheen, elevated hit at 0-12", BaP 1260, tPAH 16600 ppb; Sample SD-BE30 no petroleum-like odor or sheen, elevated hit at 0-12", BaP 9000 ppb, tPAH 117000 ppb; Sample SD-J30, no petroleum-like odor or sheen, elevated hit at 0-12", BaP 8800 ppb, tPAH 186000 ppb; etc. It is unclear why odors and sheens were observed at lower BaP and tPAH concentrations and not at elevated concentrations. Hopefully, this is not an indication of elevated BaP/tPAH concentrations being present in field observed samples and not captured in the sample sent for analysis. For locations that had odor or sheen observed that were not elevated analytically for BaP or tPAHs, it would be good to recheck laboratory data or potentially re-run samples if the laboratory still has them. Further discussion on this topic is warranted.

Comment 3: Section 4.2.1.8: Elevated metals levels (Pb, Cu and Zn) seem to be associated with the pier areas, as assumed. As shown in Figure 4-1G, much of the area around Piers 1 and 2 exceed the Zn PRG, and ecological sediment criteria (TEL/PEL= 124/271 ppm, ERL/ERM= 150/410 ppm). It is conjectural to assert that zinc levels may be attributed to natural mineral content of the sediments in the bay, as stated. Further data should be provided to support this assertion. Zinc alloys are commonly used on ship hulls and Navy technical manuals actually describe their use and applicability. In addition to ship hull use, zinc alloys are also commonly used by the Navy inside ballast tanks, heat exchangers, bilges, collection, holding and transfer tanks and various machinery. So it is highly plausible that zinc contamination associated with the pier areas is related to shipyard activities.

Comment 4: Figures 4-1A through 4-3G: We realize that PRG exceedance footprints are based on node concentrations, are approximate for all figures and were determined using spline interpolation, as described. However, in instances where PRGs are exceeded at a node, modeled PRG footprints should extend conservatively past the node. Traditionally, this has resulted in including area at least 1/2 way to the next node, if the next node is below a PRG. In many cases this does not appear to be the case (i.e. 0-12" tPAH, SD-BC30, SD-BB26, etc.) so further examination of spline interpolation modeling may need to be conducted by the regulatory agencies. We are unsure if pre-design or post-removal confirmational sampling to refine removal boundaries will be conducted but these would help to verify modeled data.

Comment 5: Section 5.3: It is unclear why zinc was not included as a risk driver in the PRG document based on risk to benthic invertebrates, considering it exceeds PRGs and sediment benchmarks in numerous instances. It would be good to know if this was based on toxicity test results or some other rationale. As depicted in Figures 4-1G/2G, areas included in and above 5x the PRG may be problematic for the benthic community. However, only five locations exceed the liberal benchmark of the ERM for Zn (410 ppm) in the 0-12" depth interval. Four of these are co-located with either high tPAH or high lead concentrations and contribute to total risk but would be eliminated via sediment removal for these other core COCs. Location W-17, the highest detected concentration of Zn (823 ppm) is only co-located with

elevated Cu (167 ppm). Figure ES-2 denotes this area as exceeding the core PRGs at 12-24" but this does not appear to be substantiated in Table 4-3.

Comment 6: Section 5.5.3: We acknowledge that sediment contamination is getting buried onsite based on the Navy's polonium 210 analysis. However, the majority of sedimentation rates are quite low and suggest that existing contamination in areas such as Pier 1 will not be effectively buried for many years, assuming no additional contaminant discharges and clean suspended sediment loads.

Comment 7: Section 5.6: TBT and asbestos do not appear to be significantly contributing to total risk. PCBs are elevated in limited locations and are co-located with other core COCs in most locations. Cu and Zn do contribute additive risk to the pier areas and are also co-located with core COCs in many instances but may qualify for separate remedial action at higher range concentrations.

Comment 8: Deposition is occurring in all areas of the site with some contaminated locations reflecting moderate sediment accumulation rates, but maximum rates are less than one inch per year. Many other contaminated areas are experiencing low depositional rates which will result in minimal burial over an extended time period. Remedial actions at areas with core COCs exceeding PRGs is therefore warranted, especially in areas with additive COC risk above PRGs. Contaminated sediment removal may lead to exposure of sub-surface contamination above PRGs, so additional management options will need to be considered post-removal, such as clean capping to original elevations, unless all contaminated sediment at depth above PRGs is removed. SSI hydrographic and stability data suggests that remediated areas will not be subject to future erosion due to currents, except potentially in near shore areas from wave and tidal action. However, institutional controls may need to be mandated for ship traffic areas or areas envisioned to require dredging in the future.